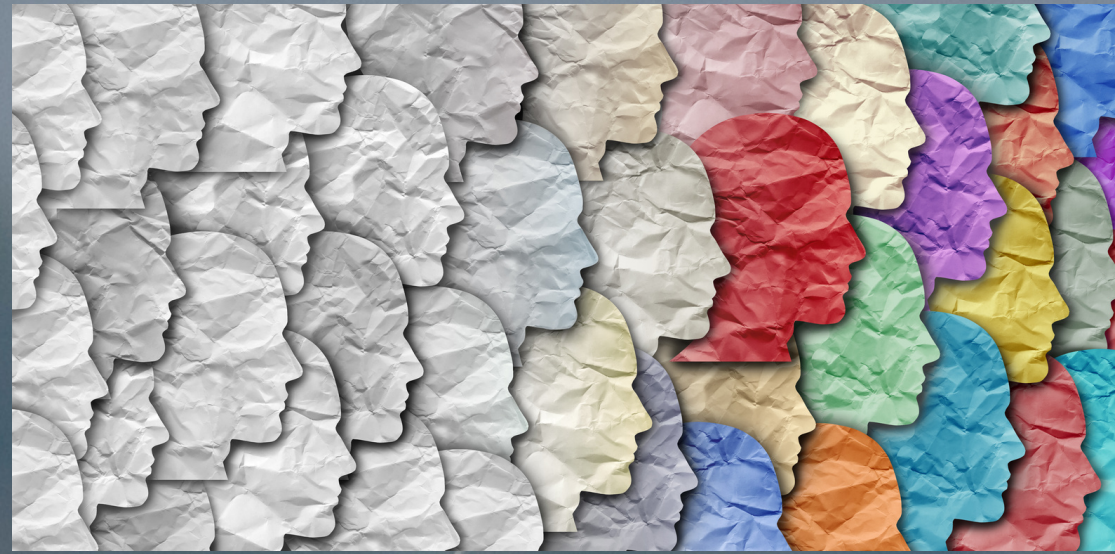




Abode for Affordable Success



**FIRST WEEK JUNE 2023 2023**  
**CURRENT AFFAIRS**





**FIRST WEEK JUNE 2023 CURRENT AFFAIRS**  
**(29<sup>th</sup> May -04June)**

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### GLOBAL BUDDHIST SUMMIT 2023

#### 1. Context

The two-day Global Buddhist Summit 2023 concluded successfully in New Delhi today with the New Delhi Declaration. Earlier on 20<sup>th</sup> April 2023, Prime Minister Shri Narendra Modi inaugurated the summit. The Declaration reinforces the points highlighted by the Prime Minister in his opening address.

The focus of the Global Buddhist Summit was on modes of disseminating and internalizing universal values and to find ways to work together, to address the burning challenges both within and globally and offer a sustainable model for future of the world.

Every Shakyas is engaged in a different path today, yet is bound by one phenomenon. But it is rare for individuals, or the tribe, or even Nepal to feature in a congregation of Buddhists such as the Global Buddhist Summit, which took place in New Delhi in April

#### 2. Background

- The Shakyas who ruled Kapilavastu after Buddha's Parinirvana did not have an army, and many were massacred in Sagarahawa. Eventually, the remaining Shakyas fled to different parts of Greater Magadha and to far-flung places like Gandhara (modern-day Afghanistan) and Burma (Myanmar).
- Many also went to the Kathmandu valley and were granted a status comparable to that of the Vajracharya priests, but they were not permitted to practise priesthood outside of their families
- Therefore, in Hiranyavarna Mahavihara (Golden Temple) Shakyas alternate as temple caretakers and conduct all the rituals
- Aside from the Kumari temples, this is one of the few temples in the Kathmandu valley where a 1,000-year-old tradition continues
- When Nepal accepted a grant from the Government of India to renovate portions of the Golden Temple complex, it created a controversy.
- Many locals believe that India was only interested in this project because, after Lumbini, the birthplace of Buddha, this is the temple



complex most frequently visited by Chinese tourists, indicating vested interests and strategies

### 3. Key takeaways

There has been general agreement that the basic fundamental which can provide inspiration and guidance in the light of Buddha's message of Peace, Well-being, Harmony and Compassion for Universal Peace need to be highlighted and worked upon as follows:

**1. Aim:** In the present world scenario, the human race has been in great need to be free from conflict, ill-feeling, greed, selfishness and uncertainty of life. We are in dire need of peace and harmony both, in our personal life and at the global level. The texts, doctrines and philosophy of Buddha Dhamma are best guide for inter-faith dialogue, harmony and universal peace.

**2. Peace:** We recognize that peace is the foundation for human happiness and well-being, and that conflicts and violence are a significant threat to peace. We call upon all nations, organizations and individuals to work towards creating a world free from conflict, violence and war.

**3. Environment Sustainability:** We recognize that environmental degradation is one of the most pressing challenges facing humanity today. We affirm our commitment to protect the environment and promote sustainable development. We urge governments and individuals to take action to reduce carbon emissions, protect biodiversity, and preserve natural resources for future generations.

**4. Wellbeing:** We acknowledge that true happiness arises from inner peace and contentment. We encourage individuals to cultivate mindfulness, compassion, and wisdom, which are essential for promoting happiness and well-being.

**5. Buddhist Pilgrimage as Living Heritage:** We recognize the significance of Buddhist pilgrimage as a living heritage that promotes spiritual growth, cultural understanding and social harmony. We call upon governments to preserve and protect the sacred sites of Buddhism and promote their accessibility to people of all backgrounds.

**6. Recommendations:** There is a crucial need for a paradigm shift in human attitude towards nature. Drawing upon the Teachings of the Buddha for the welfare of all sentient beings, Members of the Sangha, Buddhist leaders, Scholars, followers and institutions can play a significant and effective role in addressing this multi-faceted crisis. Continuation of annual Global Buddhist Summit is one such important step in this direction.

**7. Nalanda**, one of the greatest seats of Dhamma education for nearly 700 years between the 5th and 12th centuries AD, precedes the modern system of university education. It was famous for value education and character building. These values need to be inculcated among youths to rejuvenate the society towards “Vasudeva Kutumbakam”.

#### **4. India's Buddhism**

- For India, Buddhism provided an identity of peace and tranquillity during the formation of the Republic, which was a time of intense violence and division between the country's two key religions, Hinduism and Islam
- Due to such usage and evidence, India likes to claim Buddhism as its own, It convened the Global Buddhist Summit in April primarily to provoke China by promoting Tibetan Buddhism and the Dalai Lama. There were no Nepal representatives present
- The summit was hosted by the International Buddhist Confederation, a Buddhist organisation based in India, which has neither a patron nor a member of the Supreme Dhamma Council from Nepal
- Nobody from Bhutan, a Buddhist nation, was present either. Therefore, the geopolitical tool for India seems to be the promotion of Tibetan Buddhism, which has greater Western appeal.

#### **5. China's Buddhism**

- China is home to around 245 million Buddhists, 28,000 Buddhist monasteries, 16,000 temples, and 2,40,000 Buddhist monks and nuns
- This makes Buddhism an important soft power for China. By adding religious overtones to China's existing portfolio of cultural and linguistic diplomacy, the state religious system has become increasingly involved in Xi Jinping's efforts to support the growing political and economic power of China abroad
- Beijing pursues a multifaceted and flexible approach to promote Chinese Buddhism abroad, with its specific modalities varying depending on whether the target country is Buddhist-majority, Western, or one of China's Asian competitors
- As a source of Buddhism, the Chinese look to Nepal rather than India, as the popular temples in Beijing have a connection with Nepal, whether through the use of Newa Ranjana scripts on the pillars or the association of these temples with Nepali artist Arniko, who is revered in China



- China utilised Buddhist narratives alongside infrastructure investments in Sri Lanka, just as Cambodia, Laos, and other Buddhist countries in Southeast Asia do

## GS-1 Medieval Indian History

### AHILYABAI HOLKAR

#### 1. Context

Marking the 298th Birth anniversary of Maratha queen **Ahilyabai Holkar** on May 31, Maharashtra Chief Minister Eknath Shinde announced that his government would rename Ahmednagar after her. The government has decided to name Ahmednagar district after Punyashlok Ahilya Devi Holkar.

Ahilya Devi's work was as big and great as the Himalayan mountains. Giving her name will increase the honour of this district.

#### 2. How did Ahmednagar get its name?

- Located in the Western region of Maharashtra, Ahmednagar has been a part of some prominent kingdoms, starting from 240 BC, "When the vicinity is mentioned about the Mauryan Emperor Ashok.
- In the Medieval period, the region was ruled by the **Rashtrakuta Dynasty, the Western Chalukyas and then the Delhi Sultanate.**
- In the last case, the rule was not direct and a revolt by Afghan soldier **Alladin Hasan Gangu** led to the establishment of the **Bahmani Kingdom** in the Deccan.
- In the following years, Ahmednagar, then known as Nizamshahi, became one of the five independent kingdoms to emerge from that empire.
- In 1486, Malik Ahmad Nizam Shah assumed the Bahmani Sultanate's prime minister position.
- He successfully defeated the king of the Bahmani kingdom, who tried to dislodge him for power, in 1490.
- Four years later, he laid the foundation of a city close to where he had defeated the army, on the left bank of **Sina River**. This city was named after him: Ahmednagar.

- Nizam Shah also later captured the fort of Daulatabad and stationed his army there.
- By his kindness, peaceful demeanour and efficiency, he could win the loyalty of the local and foreign Muslims and also of the Maratha peasants and warriors.
- Since his origin was Hindu, he found no difficulty in winning over the confidence of Brahmins, who were highly regarded by the Hindus.
- Jawaharlal Nehru, in his book **A Discovery of India** (1946), wrote of him, "Ahmad Nizam Shah, the founder of Ahmadnagar in 1490, was the son of Nizam-ul-Mulk Bhairi, a minister of the Bahmani kings.
- This Nizam-ul-Mulk was the son of a Brahmin accountant named Bhairu. Thus the Ahmednagar dynasty was of indigenous origin.



**Image source: News on air**

### **3. About Ahilyabai Holkar**

- Ahilyabai was born in Chondi village of Ahmednagar to the village head Mankoji Shinde, who ensured that his daughter received an education, which was quite rare at that time.
- Malhar Rao Holkar, the army commander to Peshwa Bajirao, is believed to have spotted eight-year-old Ahilyabai at a temple service in Chondi.
- Impressed by her devotion and character, he decided to get his son, Khande Rao, married to her.



- After her husband died in the **Battle of Kumbher** against the king of Bharatpur in 1754, Ahilyabai took control of Malwa.
- She excelled at administrative and military strategies under the guidance of her father-in-law, who believed she should lead her people and not die by Sati after Khande Rao passed away.
- After the death of her father-in-law and son a few years later, she petitioned the Peshwa to become the ruler, backed by the support of her army.

#### 4. Role in administration and temple-building

- In his book, Nehru said Holkar's rule, which lasted for thirty years (1765-1795) was almost legendary as a period during which perfect order and good government prevailed and the people prospered.
- She was a very able ruler and organizer, highly respected during her lifetime.
- Notably, her role in restoring Hindu temples is often discussed.
- When Prime Minister Narendra Modi inaugurated the Samudra Darshan Path and the Somnath Exhibition Gallery they showcase the ruins of ancient Somnath, the temple built by Holkar in 1783.

## RAVIDASSIA COMMUNITY

### 1. Context

In California, members of an under-the-radar, minority religious community are stepping into the public eye to advocate for making the state the first in the nation to outlaw caste bias.

They are the Ravidassia followers of Ravidass, a 14th-century Indian guru who preached caste and class equality.

There are about 20, 000 members of the community in California, most of them in the Central Valley.

### 2. Key points

- Guru Ravidass belonged to the lowest rung of the caste system formerly considered untouchable and also known as Dalit, which means "broken" in Hindi.

- Today, many Ravidassia members share that caste identity, but they are hesitant to make that widely known, fearing repercussions for being exposed to the larger community as "lower-caste".
- Members of the Fresno Ravidassia community say publicly championing the anticaste bias legislation is worth the risk, noting that fighting for equality is part of their history and their spiritual DNA.
- The faith itself emerged in response to the societal exclusion of the lowest caste members, including persistent roadblocks to land ownership. Caste-based discrimination was outlawed in India in 1947.



### 3. About Guru Ravidass

- Ravidass was an Indian guru, mystic and poet who was one of the most renowned figures in the **North Indian Bhakti Movement**, which placed love and devotion to god above all and preached against the caste system.
- Ravidass was born in the 14th century in a village near Varanasi, India, to a family of cobblers and tanners who belonged to the then-untouchable or leather-working caste known as "**Chamars**".
- The Guru Granth Sahib, which is the sacred text of Sikhism, bears 40 verses or Shabads of Ravidass.

### 4. Ravidassia temple

- A Ravidassia place of worship is called a sabha, dera, gurdwara or gurughar, which could all be translated as a temple.
- Adherents cover their heads and remove their shoes before entering the prayer hall or place of worship.

- In California Ravidassia temples, the Guru Granth Sahib is the focal point of the prayer hall.
- The temples serve a post-worship meal as Sikh Gurdwaras also do, which is known as langar.
- Ravidassia temples often display idols and or pictures of Guru Ravidass in the prayer halls.

## 5. Identity of Ravidassia's

- The Ravidassia identity is challenging to pin down because it cannot be compartmentalized.
- More recently, they have been trying to carve out a separate identity for themselves. But they also follow Sikh traditions.
- Many male Ravidassia members wear long hair in a turban and carry sikh articles of faith such as the Kada or bracelet, Kangha or wooden comb and kirpan, the sheathed, single-edged knife.
- Many men and women in the community also have Sikh last names, Singh and Kaur.
- The idols and images of Ravidass, however, can only be seen in a Ravidass temple.
- In addition, the community celebrates the birthday of their guru, which typically falls in February.
- Many Ravidass temples also observe the birth anniversary of B.R. Ambedkar.
- The faith also has followers who are Hindu and those who are from different parts of India.
- Ravidassia community members in California are largely of Punjabi descent.

## 6. Relationship with Sikhism

- The Ravidassia community's relationship with Sikhism is "flexible and nuanced". It is a much more complex idea of what their faith means to them.
- Some Ravidassia temples are autonomous spaces but in many cases, it is blended or overlapping rather than something entirely independent. There is still a commitment to this larger Sikh project.
- The path to unity may lie in making meaningful structural changes. The issue is that often, caste is not even acknowledged as a problem.



## GS- 2 Polity and Governance

### CENSUS

#### 1. Context

Recently, Amit Shah inaugurated the new **Janganana Bhavan** (Census building) in New Delhi and released a report, "**The Treatise on Indian Censuses Since 1981**" containing details about the questions to be asked in the forthcoming Census and other aspects.

The report said that self-enumeration for Census will be provided to only those households that have updated the NPR online.

#### 2. Key Points

- India had conducted the Census every 10 years since 1881, but in 2020, the decennial exercise for Census 2021 had to be postponed due to the pandemic.
- Though the government has not announced fresh dates for the Census, the groundwork is being laid and details are emerging about some of the features.
- It will be the first digital Census allowing citizens to "self-enumerate". The **NPR** (National Population Register) has been made compulsory for citizens who want to exercise the right to fill out the Census form on their own rather than through government enumerators.
- For this, the Office of the **Registrar General of India** (RGI) has designed a "self-enumeration, Aadhaar or mobile number will be mandatorily collected.

#### 3. Status of the Census exercise

- A January 2 notification extending the deadline for freezing administrative boundaries in States until June 30 has ruled out the exercise at least till September.
- As preparation and training take at least three months, the Census will have to be pushed to next year.
- Around 30 lakh government officials will be assigned as enumerators and each will have the task to collect the details of 650-800 people through both online and offline modes, covering an estimated population of 135 crore people.

- The Lok Sabha election is due in April-May 2024 and it is unlikely that the Census will be carried out before that since the same workforce will be dedicated to the elections.
- The completion of both phases of the Census will take at least 11 months, even if done at an accelerated pace from October 1.

#### 4. Holding up the Census

- One reason which is holding up the exercise is the amendments proposed to the **Registration of Births and Deaths Act, of 1969**.
- The government wants to have a centralised register of births and deaths that can be used to update the population register, electoral register, Aadhaar, ration card, passport and driving license databases.
- The centrally stored data will be updated in real-time without a human interface leading to addition and deletion from electoral rolls when an individual turns 18 and after an individual's death respectively.
- A Bill to link the births and deaths registered with the population register and others are expected to be tabled in the next session of Parliament.

#### 5. NPR

- The NPR, unlike the Census, is a comprehensive identity database of every "usual resident" in the country and the data proposed to be collected at the family level can be shared with States and other government departments.
- Though Census also collects similar information, the Census Act of 1948 bars sharing any individual's data with the State or Centre and only aggregate data at the administrative level can be released.
- According to Citizenship Rules 2003 under the Citizenship Act, 1955, NPR is the first step towards a compilation of the National Register of Indian Citizens (NRIC/NRC).
- Assam is the only State where an NRC has been compiled based on the directions of the Supreme Court, with the final draft of Assam's NRC excluding 19 lakhs of the 3.29 crores applicants.
- Assam Government has rejected the NRC in its current form and demanded re-verification of 30 per cent of names included in the NRC in areas bordering Bangladesh and 10 per cent in the remaining State.
- In 2020, the NPR was opposed by several State governments such as West Bengal, Kerala, Rajasthan, Odisha, Bihar, Andhra Pradesh, Telangana, Punjab and Chhattisgarh and Civil Society Organisations due to its link with the proposed NRC as it might leave many people stateless for want of legacy documents.

- There are apprehensions that the Citizenship Amendment Act 9 (CAA), 2019 allows citizenship based on religion to six undocumented religious communities from Pakistan, Afghanistan and Bangladesh who entered India on or before December 31, 2014, will benefit non-Muslims excluded from the proposed citizens' register, while excluded.
- Muslims will have to prove their citizenship. The government has denied that the CAA and NRC are linked and there are currently any plans to compile a countrywide NRC.

### **5.1. The current status of NPR**

- The NPR was first collected in 2010 when the Congress government was in power at the Centre.
- It was updated in 2015 and already has details of 119 crore residents.
- In March 2020, the Ministry of Home Affairs (MHA) amended the Census Rules framed in 1990 to capture and store the Census data in an electronic form and enabled self-enumeration by respondents.
- The NPR is scheduled to be updated with the first phase of Census 2021.
- For this phase (house listing and household phase), 31 questions have been notified, while for the population enumeration, the second and main phase 28 questions have been finalised but are yet to be notified.
- The NPR is expected to collect details on 21 parameters of all family members, up from 14 questions in 2010 and 2015.
- The Sub-heads include passport number, relationship to head of the family, whether divorced/ widowed or separated, mother tongue if non-worker, cultivator, labourer, government employee, daily wage earner among others.
- The form also has a column on Aadhar, mobile phone, Voter ID and driver's licence.
- Though the government has claimed that the NPR form has not been finalised yet, the sample form is part of the Census of India 2021 Handbook for Principal/District Census Officers and Charge Officers in 2021.
- The NPR has retained contentious questions such as "mother tongue, place of birth of father and mother and last place of residence", possible indicators to determine inclusion in the Citizenship register.
- The questions were opposed by the State governments of West Bengal, Kerala, Rajasthan and Odisha in 2020.
- The final set of questions of both the phases and NPR was asked during a pre-test exercise in 2019 in 76 districts in 36 States and Union Territories covering a population of more than 26 lakhs.



## 6. Expected expenditure for Census

- The initial draft was prepared by the office of the Registrar General of India and circulated to key Ministries and the Prime Minister's Office called for the conduct of Census 2021 at a cost of ₹9, 275 crores and not the NPR.
- The draft **Expenditure Finance Committee** (EFC) not was then revised and a financial provision of ₹4, 442.15 crores for updating the NPR was added on the directions of the MHA "subsequently".
- The proposal was cleared on August 16, 2019, and it received the Union Cabinet's nod on December 24, 2019.
- It was decided that the enumerator engaged for Census would also collect details for NPR.
- The Covid-19 pandemic struck in March 2020 and since then both exercises are on hold.
- Now, the NPR has been made compulsory if citizens want to exercise the right to fill out the Census form on their own.
- The deleted Handbook said that it is "mandatory for every usual resident of India to register in the NPR".
- Census is also mandatory and giving false information is a punishable offence.

## PRIMARY AGRICULTURAL CREDIT SOCIETIES (PACS)

### 1. Context

Recently, the union cabinet approved the constitution and empowerment of an **Inter-Ministerial Committee (IMC)** for the facilitation of the "**World's largest Grain Storage Plan in the Cooperative Sector**" through the convergence of various schemes of the **Ministry of Agriculture and Farmers Welfare, Ministry of Consumer Affairs, Food and Public Distribution and Ministry of Food Processing Industries.**

### 2. Key points

- To ensure time-bound and uniform implementation of the Plan in a professional manner, the Ministry of Cooperation will implement a pilot project in at least 10 selected Districts of different states/UTs in the country.

- The Pilot would provide valuable insights into the various regional requirements of the project, the learnings from which will be suitably incorporated for the country-wide implementation of the Plan.
- All efforts should be made to leverage the strength of the cooperatives and transform them into successful and vibrant business enterprises to realize the vision of "**Sahakar-se-Samriddhi**".
- To take this vision forward, the Ministry of Cooperation has brought out the "World's Largest Grain Storage Plan in Cooperative Sector".
- The plan entails setting up various types of agri-infrastructure, including warehouses, custom hiring centres, processing units etc. at the levels of PACS, Thus transforming them into multipurpose societies.
- Creation and modernization of infrastructure at the level of PACS will reduce food grain wastage by creating sufficient storage capacity, strengthening the food security of the country and enabling farmers to realise better prices for their crops.
- There are more than 1, 00, 000 PACS in the country with a huge member base of more than 13 crore farmers.
- Given the important role played by PACS at the grass root level in transforming the agricultural and rural landscape of the Indian economy and leveraging their deep reach up to the last mile, this initiative has been undertaken to set up decentralized storage capacity at the level of PACS along with other agri infrastructure, which would not only strengthen the food security of the country but would also enable PACS to transform themselves into vibrant economic entities.

### 3. About Primary Agricultural Credit Societies

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

## **4. Implementation**

- An Inter-Ministerial Committee (IMC) will be constituted under the Chairmanship of the Minister of Cooperation with the Minister of Agriculture and Farmers Welfare, Minister of Consumer Affairs, Food and Public Distribution, Minister of Food Processing Industries and Secretaries concerned as members to modify guidelines and implementation methodologies of the schemes of the respective Ministries as and when the need arises, within the approved outlays and prescribed goals, for facilitation of the "World's Largest Grain Storage Plan in Cooperative Sector" by the creation of infrastructure such as godowns, etc, for Agriculture and Allied purpose, at selected "viable PACS".
- The Plan would be implemented by utilizing the available outlays provided under the identified schemes of the respective Ministries.

The following schemes have been identified for convergence under the Plan:

### **4.1. Ministry of Agriculture and Farmers Welfare**

1. Agriculture Infrastructure Fund (AIF)
2. Agricultural Marketing Infrastructure Scheme (AMI)
3. The mission for Integrated Development of Horticulture (MIDH)
4. Sub Mission on Agricultural Mechanization (SMAM)

### **4.2. Ministry of Food Processing Industries**

1. Pradhan Mantri Formalization of Micro Food Processing Enterprises Scheme (PMFME)
2. Pradhan Mantri Kisan Sampada Yojana (PMKSY)

### **4.3. Ministry of Consumer Affairs, Food and Public Distribution**

1. Allocation of food grains under the National Food Security Act



## 2. Procurement operations at Minimum Support Price

### 5. Benefits of the Plan

- The plan is multi-pronged and it aims to address not just the shortage of agricultural storage infrastructure in the country by facilitating the establishment of godowns at the level of PACS, but would also enable PACS to undertake various other activities, viz:
  1. Functioning as Procurement centres for State Agencies or Food Corporation of India (FCI).
  2. Serving as Fair Price Shops (FPS)
  3. Setting up custom hiring centres
  4. Setting up common processing units, including assaying, sorting and grading units for agricultural produce etc.
- Further, the creation of decentralized storage capacity at the local level would reduce food grain wastage and strengthen the food security of the country.
- By providing various options to the farmers, would prevent the distressed sale of crops, thus enabling the farmers to realise better prices for their produce.
- It would hugely reduce the cost incurred in the transportation of food grains to procurement centres and again transporting the stocks back from warehouses to FPS.
- Through a "whole of Government" approach, the Plan would strengthen PACS by enabling them to diversify their business activities, thus enhancing the incomes of the farmer members as well.

### 6. Time frame and manner of implementation

- National Level Coordination Committee will be formed within one week of the Cabinet approval.
- Implementation guidelines will be issued within 15 days of the Cabinet approval.
- A portal for the linkage of PACS with Govt. of India and State Governments will be rolled out within 45 days of the Cabinet approval.
- Implementation of the proposal will start within 45 days of the Cabinet approval.

## ANAEMIA POLICY

### 1. Context

Questions related to anaemia are slated to be dropped from the National Family Health Survey (NFHS-6) is scheduled to begin on July 6.

### 2. Key points

- The omission comes after health experts questioned the efficacy of the method being used to estimate haemoglobin levels.
- India's anaemia burden has grown alarmingly with NFHS-5 (2019-21) finding that 57 per cent of women in the age group 15-49 and 67 per cent of children between six months and 59 months are anaemic (from the corresponding 53 per cent and 58.6 per cent respectively in NFHS-4 (2015-16).
- The Health Ministry has noted that anaemia is a public health challenge and accurate estimates are needed to tackle the crisis.

### 3. Causes of anaemia

- According to the **World Health Organization** (WHO), anaemia is a condition in which the number of red blood cells or the haemoglobin concentration within them is lower than normal.
- Haemoglobin is needed to carry oxygen and if there are too few red blood cells or not enough haemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body's tissues, resulting in symptoms such as fatigue, weakness, dizziness and shortness of breath among others.
- Anaemia, according to WHO, may be caused by several factors.
- The most common nutritional cause of anaemia is iron deficiency although deficiencies in folate, **vitamins B12 and A** are also important causes.
- According to the Health Ministry, assessment of anaemia in India is being shifted to the new Diet and Biomarkers Survey in India (DABS-I), launched last year to map diet, nutrition and health status and provide the correct estimate of anaemia among the rural and urban population.

### 4. Prompted changes

- Researchers cautioned that there is a danger of anaemia being over-diagnosed in India as follows WHO cut-offs for haemoglobin which may not be suited to India because the cut-off point depends on age, gender, physiological status, altitude and other factors.

- The WHO defines anaemia in Children aged under five years and pregnant women as a haemoglobin concentration <110 g/L at sea level and anaemia in non-pregnant women as a haemoglobin concentration <120 g/L.
- The study by the Indian team also pointed to differences in the way blood is drawn for sampling in NFHS.
- The NFHS survey measured haemoglobin in a drop of capillary blood that oozes from a finger prick.
- As per the report, this can dilute the blood and give a falsely lower value. The recommended method of venous blood sampling and the report gives a more accurate value.

### 5. National-level dietary survey

- The Health Ministry says DABS-I is a comprehensive national-level dietary survey, which will define food and nutrient adequacy by collecting individual dietary intake data of different age groups of people from all States and UT across the country.
- The study will also provide nutrient composition data on cooked and uncooked foods from various regions of the country for the first time.
- On the other hand, NFHS provides information on population, health and nutrition for India and each State and UT.
- Besides providing evidence for the effectiveness of ongoing programmes, the data from NFHS helps in identifying the need for new programmes with an area-specific focus.

### 6. Reasons for focus on anaemia

- Data on anaemia remains an important indicator of public health since anaemia is related to morbidity and mortality in population groups usually considered to be the most vulnerable pregnant women and children under five.
- A prevalence study on anaemia is useful to monitor the progress of reproductive health.
- Also, iron deficiency anaemia reduces the work capacity of individuals and entire populations, with serious consequences for the economy and national development.
- The proposed method of screening under DABS-I is likely to provide better estimates of anaemia.
- There will be appropriate screening but through a different survey and we are hopeful that in the coming years, we will be able to make a dent in the prevalence of anaemia across different age groups.

- NFHS's strength lies in its ability to provide a broader understanding of the issue and facilitate evidence-based policy-making and targeted interventions.

## GS- 2 International Relations

### FIPIC SUMMIT

#### 1.Context

A video of the **Papua New Guinea Prime Minister James Marape bending down to touch Prime Minister Narendra Modi's feet** last Sunday has drawn a lot of interest. This happened right after the Indian PM landed in the capital city of Port Moresby for his first visit to the country, the first by any Indian prime minister, for the Forum for India-Pacific Islands Cooperation (FIPIC) summit, 2023.

#### 2. What is FIPIC?

The Forum for India–Pacific Islands Cooperation (FIPIC) was launched during PM Modi's visit to Fiji in November 2014

FIPIC includes 14 island countries – **Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu** – that are located in the Pacific Ocean, to the northeast of Australia

#### 3.Objectives

- a. Provide necessary information and facilitation regarding prospects of Trade and Investment
- b. Facilitate meetings between the concerned businessmen from both sides
- c. Exchange of business delegations between India and Pacific Islands Countries
- d. Online & Offline Match Making Services
- e. Organising Events / Trade Fairs



#### 4. Idea behind FIPIC

- According to the group's website- despite their relatively small size and considerable distance from India, many of these islands have large exclusive economic zones (EEZs)
- EEZs is the distance up to which a coastal nation has jurisdiction over the ocean, including both living and non-living resources. It generally goes to 200 nautical miles or 230 miles (around 370 km) beyond a nation's territorial sea
- As the website notes, India's larger focus is on the Indian Ocean where it has sought to play a major role and protect its strategic and commercial interests
- The references to "developments in the Indo-Pacific region" and a "vision for a free, open and inclusive Indo-Pacific" are believed to be related to China's **increasing assertion in the region**
- Based on 2021-22 data, the total annual trade between India and Pacific Island countries is valued at \$570 million, in commodities such as plastics, pharmaceuticals, sugar, mineral fuel and ores. Among them, Papua New Guinea is the biggest trade partner in terms of value

#### 5. FIPIC Summit

- This was the third FIPIC summit to be held
- FIPIC-I, in 2014, took place at Suva, Fiji's capital city. India announced various development assistance initiatives and other cooperation projects in areas of climate change, trade, economy, telemedicine and teleeducation, IT, grants for community development projects, etc
- **At FIPIC-II in 2015 in Jaipur**, India again announced similar initiatives
- India also approached the event from a large diplomatic perspective, calling for a "dedicated seat for Small Island Developing States in an expanded and reformed UN Security Council in both categories".
- In 2019, the India-Pacific Small Island Developing States (PSIDS) Leaders' Meeting (comprising delegations of 12 out of the 14 Pacific Islands countries) was held on September 24, 2019 in New York on the sidelines of the 74th UN General Assembly.
- The Indian government then announced an allocation of \$12 million grant (\$1 million to each PSIDS) towards implementation of high-impact developmental projects in the area of their choice

- In addition, a concessional Line of Credit of \$150 million, which can be availed by the PSIDS for undertaking solar, renewable energy and climate related projects based on each country's requirement, was announced

## 6.2023 FIPIC Summit

- The third FIPIC summit was to be held in early 2020 but was postponed because of the Covid-19 pandemic
- **Announced Initiatives by Indian Government are as follows:**
- Establishment of a super-specialty cardiology hospital in Fiji, The Indian government will bear the full cost of this mega greenfield project
- Sea ambulances will be provided to all the 14 Pacific island countries
- Jaipur Foot Camp was conducted in Fiji where prosthetic limbs were provided free of cost to more than 600 people
- Similar camp will be set up in Papua New guinea this year and starting from 2024, two such camps will be organised every year in the Pacific island countries.
- Pledged to provide desalination units for the people of every Pacific Island country

## CONGO BASIN

### 1. Introduction

The Congo Basin is a region of Central Africa that is drained by the Congo River and its tributaries. It is the second largest rainforest in the world, after the Amazon Rainforest. The Congo Basin spans across six countries: Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Equatorial Guinea, and Gabon.

Nigeria, South Sudan, and Uganda are not part of the Congo Basin. Nigeria is located in West Africa, while South Sudan and Uganda are located in East Africa.

There are approximately 10, 000 species of tropical plants in the Congo Basin and 30 percent are unique to the region. Endangered wildlife, including forest elephants, chimpanzees, bonobos, and lowland and mountain gorillas inhabit the lush forests. 400 other species of mammals, 1,000 species of birds, and 700 species of fish can also be found here.

The Congo Basin has been inhabited by humans for more than 50,000 years and it provides food, fresh water, and shelter to more than 75 million people. Nearly 150 distinct ethnic groups exist and the region's Ba'Aka people are among the most well-known representatives of an ancient hunter-gatherer lifestyle. Their lives and well-being are linked intimately with the forest.



Image source: Google

## 2. People and Communities

- Humans have inhabited the forests of the Congo Basin for tens of thousands of years. Today, the Congo Basin provides food, medicine, water, materials, and shelter for over 75 million people.
- Among some 150 different ethnic groups, the Ba'Aka, BaKa, BaMbuti, Efe, and other related groups often referred to as Pygmies are today's most visible representatives of an ancient hunter-gatherer lifestyle.
- They possess an incredible knowledge of the forest, its animals, and its medicinal plants.
- Most people in the Congo Basin remain heavily dependent on the forest for subsistence and raw materials, as a complement to agricultural activities. As populations rise, pressure on forests continues to increase.
- Forest edges of the forest-savanna mosaic bear the brunt of the population density, along with the banks of the larger navigable rivers, including the Congo and Ubangi Rivers.

- The construction of roads has greatly facilitated access to the interior of the forest, and many people have relocated close to roads. But logging, oil palm plantations, population growth, and road development have strained the traditional resource management system.
- The Congo Basin covers some of the poorest countries on Earth. By focusing on the protection and sustainable use of natural resources, WWF seeks to ensure that the Congo Basin's forest and freshwater ecosystems will continue to be a major source of livelihood improvement for the region's people.

### **3. Demand for Natural Resources**

- The Congo Basin is abundant in natural resources such as timber, diamonds, and petroleum, but current methods and rates of extracting these resources are unsustainable and threaten the future of this vast wilderness area.
- In addition, unsustainable hunting of wildlife for the commercial bushmeat market threatens to wipe out many species.
- The Congo Basin is extremely rich in wood, oil, and minerals such as diamonds, gold, and coltan (used to make cell phones).
- Many people depend on such resources for their livelihoods, and the global demand for these materials is increasing.
- A large and growing percentage of the Congo Basin is under concession to logging and mining companies.
- Such industries bring large groups of people to the forest and with that come their need for food, including bushmeat and fuelwood. Related infrastructure projects such as roads and dams have environmental impacts and increase access to remote forest areas for hunters.

### **4. Illegal wildlife trade**

- The leading cause of wildlife loss in the Congo Basin is the commercial bushmeat trade, driven by an ever-increasing market. In the DRC alone, over a million tons of bushmeat are consumed each year.
- Alarmingly, this lucrative business is causing the forest to become empty of species. Animals like monkeys and antelope are common targets, although species such as gorillas and bonobos are also at risk.
- Combating the bushmeat trade presents many challenges. In remote areas, bushmeat is the primary source of income for families, as it is the only export that will earn a profit. WWF works with communities to create alternatives.



- The international demand for ivory still drives the killing of elephants, leading to local extinctions and threatening to eliminate elephants.
- WWF plays an important role in fighting illegal trade, including through TRAFFIC, the world's largest wildlife trade monitoring network.

## 5. Deforestation

- In the Democratic Republic of Congo (DRC), refugees from armed conflict are forced to live off the land with severe impacts on forests and wildlife.
- For example, the demand for fuelwood and charcoal has led to deforestation in Virunga National Park, the oldest national park in Africa.
- Palm oil plantations and other commercial agriculture operations are a growing threat, putting greater pressure on the Congo's forests and rivers.



## NEW PANDEMIC TREATY

### 1. Context

Negotiations on new rules for dealing with pandemics are underway at the World Health Organization (WHO), with a target date of May 2024 for a legally binding agreement to be adopted by the U.N. health agency's 194 member countries.

A new pact is a priority for WHO Chief Tedros Adhanom Ghebreyesus who called it is a "generational commitment that we will not go back to the old cycle of panic and neglect" at the U.N. agency's annual assembly.

It seeks to shore up the world's defences against new pathogens following the COVID-19 pandemic has killed nearly 7 million people.

### 2. About Pandemic Treaty

- The WHO already has binding rules known as the International Health Regulations, which in 2005 set out countries' obligations where public health events have the potential to cross borders.

- These include advising the WHO immediately of a health emergency and measures on trade and travel.
- Adopted after the 2002-2003 SARS outbreak, these regulations are still considered appropriate for regional epidemics, such as Ebola but inadequate for a global pandemic.
- These regulations are also being reviewed in the wake of COVID-19.
- For the new more wide-reaching pandemic accord, member states have agreed that it should be legally binding for those who sign up, overcoming early reservations from the United States.
- It would be only the second such health accord after the 2003 Framework Convention on Tobacco Control, a treaty which aims to reduce smoking via taxation and rules on labelling and advertising.
- However, the proposed treaty has come under fire on social media, mostly from right-wing critics warning it could lead to countries ceding authority to the WHO.
- The body strongly refutes this, stressing that governments are leading the negotiations and are free to reject the accord.

### 3. Views on the pact

- The European Union, which proposed the accord is seen as its biggest backer.
- Developing countries, especially in Africa are keen to use the negotiations to secure better access to vaccines following allegations of "vaccine apartheid" from the WHO's Director-General Tedros.
- After five rounds of formal negotiations, the latest 208-page draft of the treaty still includes thousands of brackets, which mark areas of disagreement or undecided language, including over the definition of the word "pandemic".
- With so many member countries involved, securing an agreement may be tricky.

### 4. Regulations

- It is not yet clear how the 2005 regulations and the new pandemic accord might fit together.
- One suggestion is that they should be complementary so that existing rules apply to local outbreaks with the new rules kicking in if the WHO declares a pandemic something it does not currently have a mandate to do.
- It is also not yet clear what happens if the measures are not followed.
- A Co-chair of the talks said it would be preferable to have a peer-review process, rather than sanction non-compliant states.

## 5. Reforms in the work

- Separate talks on reforming the 2005 rules are taking place, with countries proposing some 300 amendments.
- Washington's initial proposals aimed to boost transparency and grant the WHO quicker access to outbreak sites.
- China did allow WHO-led expert teams to visit the COVID-19 epicentre in Wuhan, but the WHO says Beijing is still withholding clinical data from early cases that may hold clues about the origins of the SARS-CoV-2 virus.
- Negotiators privately grumble about the overlap between the two sets of talks and a joint meeting to clarify their agendas is planned.

## DE-RISKING

### 1. Context

The Trump era focus of the U.S. to decouple from China is being phased out by a new concept. The U.S. has expressed that it is shifting its policy on China from decoupling to derisking. The EU has already declared that its approach to China will be based on derisking. The recently concluded G7 summit at Hiroshima, through its Leader's Communique, has also expressed the grouping's consensus on derisking.

### 2. What is De-risking?

- De-risking, a finance concept that is a diplomatic buzzword currently, refers to a reduction of reliance on China in the economic sphere while not turning inwards or trying to prevent Chinese growth. Decoupling is used here as an alternative to an economic boycott.
- The US State Department describes de-risking as the phenomenon of financial institutions terminating or restricting business relationships with clients or categories of clients to avoid, rather than manage risk.
- Simply put, de-risking is to move businesses away from areas that are considered risky in terms of the returns they could generate.
- In the context of China, de-risking can be interpreted as a reduction of the reliance on China in the economic sphere- for the supply of

materials or as a market for finished goods- so that potential risks to trade and disruption of supply chains are reduced.

### **3. What is Decoupling?**

- The objective is to sever or significantly reduce economic and trade ties with a specific country or region.
- Decoupling Focuses on reducing economic interdependence for political, security, or strategic reasons.
- Emphasizes the creation of alternative supply chains, markets, and partnerships outside the targeted country or region.
- This may have negative economic consequences for both the target country and the decoupling country.

### **4. How is de-risking different from Decoupling?**

- Decoupling refers to the deliberate dismantling- and eventual re-creation elsewhere of some of the sprawling cross-border supply chains that have defined globalization.
- An expert has explained the two terms using an analogy from an investment perspective: Decoupling means cashing out your whole portfolio; de-risking means selling what you consider the riskiest assets, say, deleveraging on your margins.
- Derisking ties with China became a more regular part of the diplomatic conversation after the European Commission president said that it is neither viable nor in Europe's interest to decouple from China.
- India too has endorsed de-risking. India's Foreign Minister said, " In this era of volatility and uncertainty, its important to de-risk the global economy and yet to ensure that there is very responsible growth.

### **5. China's view on recent shift of US**

- China considers the actions of US to actually be of de-coupling nature and not de-risking.
- It has been facing pressure from the US in fields of information technology and manufacturing.
- US ban on export of certain advanced chips- which have military or AI applications to China.
- Histroy of de-risking in context of financial sector, but same sense applies to China also.
- Banks de-risk by denying services to aid agencies that work in places like syria that are under sanction.



- With regard to finance as per experts De-risking can create further risk and opacity into the global financial system, as the termination of account relationships has the potential to force entities and persons into less regulated or unregulated channels.

## 6. Why does G7 prefer De-risking and Not Decoupling?

- **Economic Interdependence:** The G7 countries recognise the significant economic interdependence between themselves and china. Decoupling would result in major disruptions to global supply chains and trade, potentially causing economic harm to all parties involved.
- **Market Opportunities:** China represents a large and growing market for G7 countries exports. By pursuing de-risking instead of decoupling, the G7 aims to maintain access to the Chinese market and continue benefiting from trade and investment opportunities.
- **Global Economic Stability:** Decoupling from China could have adverse effects on global economic stability. The G7 countries understand the importance of maintaining stable and predictable economic relations to promote global growth and prosperity.
- **Diplomatic Engagement:** The G7 countries believe in engaging with China diplomatically to address concerns and promote mutually beneficial cooperation. De-risking allows for constructive dialogue and negotiation, which can lead to more favourable outcomes for both sides.
- **Global Interest:** The G7 emphasizes that a growing and responsible China, playing by international rules, is in the global interest. They recognise that economic resilience requires a balance between managing risks and fostering economic cooperation with China.

## DIPLOMACY IN SOUTHEAST ASIA

### 1. Context

Due to its intensifying geopolitical competition with the U.S. and its security interests in the region, China is expanding its military outreach to Southeast Asian countries. The Chinese

People's Liberation Army (PLA)'s global activities and influence campaigns are part of its broader reform process initiated by Chinese President Xi Jinping in 2015, and form a fundamental element of China's overall foreign policy.

## **2. What is the People's Liberation Army (PLA) currently undertaking?**

- The PLA and the Laotian People's Armed Forces (LPAF) have recently concluded their bilateral military exercise, Friendship Shield 2023. The drills aim to foster interoperability to effectively “counter transnational armed criminal groups based in jungles and mountains.”
- This week-long exercise comes on the heels of Laos' Foreign Affairs Minister Saleumxay Kommasith's visit to China last month. The PLA Southern Theatre Command (PLA STC) is leading a massive delegation to the LPAF's Kommadam Academy for the exercise.
- This includes 200 troops from the 75th Group Army's combined-arms brigade, assault vehicles such as the 4x4 MRAP Dongfeng CSK141 (Mengshi), as well as equipment for maritime replenishment, mine clearance, explosive disposal, and epidemic prevention.
- Before this, in 2023, the PLA STC conducted the ‘Golden Dragon’ drills with Cambodia from late March to early April. This too came on the heels of a high-level meeting held between Zhang Youxia, Vice-Chairman of the Chinese Central Military Commission (CMC), and the army commander of the Royal Cambodian Army, Hong Manai, in February this year.
- All of these joint military endeavors were preceded by a visit from a Chinese Ministry of National Defence working group to Laos, Vietnam, and Brunei, where the two sides discussed “the relationship between the two militaries and regional security issues of common concern”.
- These are a few of the many instances of China's military diplomacy with Southeast Asian countries. And in the past couple of months, the frequency of Chinese military drills with its ASEAN partners appears to have increased for two primary reasons.
- Firstly, Xi Jinping has put excessive emphasis on defence diplomacy under his flagship Global Security Initiative (GSI).
- Second, China's threat perception of expanding the United States military engagement with countries in the Asia-Pacific region, especially those countries that China has disputes with the South and East China Seas region.

## **3. Initiatives by China to Enhance Engagement in South Asia:**

According to the American Enterprise Institute's China Global Investment Tracker, China has committed around 100 billion USD in the economies of Afghanistan, Bangladesh, the Maldives, Pakistan, Nepal, and Sri Lanka. China is now the largest overseas investor in the Maldives, Pakistan, and Sri Lanka.

- **Afghanistan:** Beijing was a part of the trilateral China-Pakistan-Afghanistan foreign ministers dialogue which focuses on facilitating Afghan domestic political reconciliation, enhancing regional connectivity, and improving regional common development. The trilateral discussions also agreed to push “forward under the Belt and Road Initiative (BRI)” and “to enhance connectivity by extending the CPEC to Afghanistan”.
- **Bangladesh:** China and Bangladesh pledged to deepen defense cooperation, especially in the areas of “defense industry and trade, training, equipment, and technology. China is also the largest arms supplier of the Bangladeshi military, providing 71.8% of weapons from 2008 to 2018.
- **Bhutan:** It does not have diplomatic relations with China.
- **Maldives:** China’s relationship with the Maldives is near-exclusively focused on leveraging BRI to develop Maldives as well as to raise Chinese influence there to counter India.
- **Nepal:** Chinese President went to Nepal in 2019. This was the first visit by a Chinese head of state in 23 years. The countries have signed agreements to accelerate Infrastructure building in Nepal and improve connectivity between them. Both countries have also announced the launch of a feasibility study of the China-Nepal cross-border railway.
- **Sri Lanka:** Sri Lanka handed over Hambantota port on a 99-year lease to China to repay its loan to China. Hambantota is geostrategically located on the Indian Ocean, potentially bolstering Beijing’s String of Pearls.

#### 4. How does the GSI challenge the ASEAN's cohesiveness?

- The GSI invited varied responses from the ASEAN, which reflect the classic divergences in intra-association stances on bandwagoning and hedging between China and the U.S.
- First, in November 2022, during the ASEAN-China Summit in Cambodia, all parties cautiously agreed to “take note of the GSI proposed by China with core elements consistent with the principles and spirit of the Treaty of Amity,” and “looked forward to further details of the GSI.”
- Over the past few months, the divergences have become visible. As per ISEAS’s ‘State of Southeast Asia Survey 2023’, on average, 27% of those surveyed in the 10 ASEAN place confidence in the GSI.
- These figures, alone, are not enough to determine how ASEAN countries respond to China’s expanding comprehensive national power. For example, China’s heavy Belt and Road investments have been welcomed by Indonesia.

- Moreover, despite tensions in the South China Sea, Indonesia has been proactively applauding Chinese support in the advancement of its vaccine programme and its high-speed rail network.
- On the other hand, in Myanmar, despite a majority of observers placing little to no confidence in the GSI, China is making political, military and economic inroads.
- Since the junta takeover, the development of the China-Myanmar Economic Corridor has only accelerated, while new satellite imagery shows China building a surveillance military base on Great Coco Islands in Myanmar.
- This also impacts India because the Great Coco Islands lie just 55 km north of the Andaman and Nicobar Islands, and their militarisation by China poses a strategic threat to India's national security.

### **5. Increasing proximity of the U.S. with the Philippines**

- China continues to face competition from the U.S. in its bid to establish a sphere of influence over Southeast Asia.
- The Proximity of the U.S. with the Philippines, with whom China shares a disputed maritime border in the Luzon Strait in the South China Sea, is worrisome for China.
- What has perhaps recently irked China the most is the Philippines' decision to provide the U.S. with access to four military bases in addition to the five bases the U.S. already had access to, under the 2014 Enhanced Defence Cooperation Agreement between the two sides.
- China has accordingly structured the message around its exercises with Cambodia, Singapore, and Laos as a warning to the Philippines, with a Chinese military commentator Fu Qinghao saying that these exercises " make a model for other countries in the region, including the Philippines, which has been leaning towards the U.S.

### **6. China's aggressive behavior in Southeast Asia**

- To defend its claims and interest in the region, China is likely to pursue both aggressive military posturing and diplomacy in Southeast Asia.
- In early May, for example, Chinese surveillance vessel Xiang Yang Hong 10, accompanied by a contingent of eight other maritime vessels, attempted to intimidate the navies of India and ASEAN countries engaged in the first edition of a multilateral naval drill in the South China Sea.



- Satellite intelligence also shows China preparing a new naval base in the Ream region of Cambodia.
- However, despite China's military and economic inroads in the region, it must prove to ASEAN countries sitting on the fence that it can exercise restraint and act by the provisions of a Code of Conduct in the South China Sea (which has yet to come into force).
- This is also essential for it to win the ASEAN's confidence for the GSI, which will otherwise, and for good reason, continue to cautiously hedge and balance between American and Chinese influence operations in the region.

## **BRICS**

### **1. Context**

External Affairs Minister S Jaishankar is in Cape Town, South Africa, to attend a meeting of the foreign ministers of BRICS – a grouping comprising Brazil, Russia, India, China and South Africa, which is seen as the closest that the ‘Global South’ has come to organising itself as a collective to challenge a western global narrative.

The foreign ministers’ meeting will finalise the agenda for the 15th BRICS summit scheduled to be held in South Africa in August. Two items on the agenda are attracting notice for their potential for a greater geopolitical consolidation of the grouping: a plan to expand the membership of BRICS, and a common currency.

South Africa, which is in the chair this year, is hosting a Friends of BRICS meeting on Friday, with 15 foreign ministers from Africa and the Global South.



## 2. Multipolarity

- As many as 19 countries are said to be in the queue to join BRICS
- Among the countries that have been mentioned frequently since last year: Argentina, Nicaragua, Mexico, Uruguay, Venezuela from Latin America; Nigeria, Algeria, Egypt, Senegal, Morocco from Africa; Saudi Arabia, the UAE, Türkiye, Syria, Iran from West Asia; Kazakhstan from Central Asia; Bangladesh and Afghanistan from South Asia; and Indonesia and Thailand from South-east Asia
- It is not clear which countries might be admitted, but any expansion can be seen as strengthening the group's heft as a spokesperson of the developing world
- By admitting some key countries in the list, BRICS could lay claim to representing more than half the world's population. Significantly, the list includes big oil producers Saudi, Iran, the UAE, Nigeria, and Venezuela.
- There is considerable anti-US sentiment in the world, and all these countries are looking for a grouping where they can use that sentiment to gather together
- There is a lot of appetite for multipolarity, for a platform where countries of the Global South can express their solidarity

## 3. China in BRICS

- The idea of BRICS came between 2001 and 2003 from then Goldman Sachs chief economist Jim O'Neill, who projected that the four emerging markets of Brazil, Russia, India, and China would be the future economic powerhouses of the world, with South Africa being added later

- While the economic performance of BRICS has been mixed, the war in Ukraine which has brought the West together on the one hand and strengthened the China-Russia partnership on the other has turned it into an aspiring bloc that appears to be challenging the Western geopolitical view
- Significantly, China does not use the word multipolarity instead using “multilateralism” whenever it hits out at “US hegemony”
- The theme of BRICS 2023 is: “BRICS and Africa: Partnership for Mutually Accelerated Growth, Sustainable Development, and Inclusive Multilateralism”

#### 4. India in BRICS

- If India’s presence at the G7 summit in Hiroshima, where Prime Minister Narendra Modi also participated in an informal Quad summit, was seen as a sign of New Delhi’s US tilt, the importance it attaches to the “anti-West” BRICS is an apparent contradiction much like the several others it has negotiated through the last year
- On contrary, India should not be seen as ganging up with an anti-West coalition, India is also part of the Shanghai Cooperation Organisation (SCO), and despite problems, it has relations with Russia, with China
- Some analysts see BRICS as an improbable grouping, with hostiles like India and China unlikely to ever find common ground a situation that could get pronounced as it adds members

#### 5. Common Currency

- The idea of a common currency was proposed by Russia’s President Vladimir Putin at the Beijing BRICS summit last year
- The idea got a cautious reception, with the leaders deciding to set up a committee to study its viability
- The last year of war has seen economies around the world feel the impact of the sanctions on Russia, the resultant spike in energy prices, combined with the rising value of the dollar
- An insulation from the dollar is a tempting proposal, but not all members believe that it is an idea whose time has come
- There are other complications, such as the setting up of a common central bank of member countries that have different economic and political systems and are located on different continents
- An option is for members to trade with each other in their respective currencies — but as the India-Russia example has shown, this is not easy either

- Moscow wants payments in dollars because it does not import enough from India to use rupee payments

## 6. Significance of BRICS

- **BRICS is an acronym for the grouping of the world's leading emerging economies, namely Brazil, Russia, India, China and South Africa.**
  - The BRICS Leaders' Summit has convened annually. It does not exist in the form of an organisation, but it is an annual summit between the supreme leaders of five nations.
  - BRICS is successfully expanding its external relations that were established at the Durban meeting between the five BRICS leaders, the leaders of the **African Union and the leaders of eight leading African integration associations.**
- **BRICS is an important grouping bringing together the major emerging economies from the world, comprising:**
  - **41%** of the world population,
  - **24%** of the world GDP
  - over **16%** share in world trade.
  - The total combined area of **29.3%** of the total land surface of the world
- BRICS countries have been the main engines of global economic growth over the years.
- **Over a period of time, BRICS countries have come together to deliberate on important issues under the three pillars:**
  - political and security,
  - economic and financial and
  - cultural and people to people exchanges.
- During the **Sixth BRICS Summit in Fortaleza (Brazil) in 2014**, the leaders signed the Agreement establishing the New Development Bank (NDB - Shanghai, China). They also signed the BRICS Contingent Reserve Arrangement to provide short-term liquidity support to the members.

## 7. New Development Bank



- During the Sixth summit of BRICS in **Fortaleza (2014)**, leaders signed an agreement to establish a new bank. **New Development Bank was established in 2015 by BRICS Countries.**
- New Development Bank aims to ensure that all projects financed by its funds are implemented sustainably and their ESG impacts are assessed, minimised and mitigated during project implementation
- **It is headquartered in Shanghai, china**
- In 2018, NDB received observer status in United Nations General Assembly
- Each participant will have the vote and no other countries have veto power unlike World Bank
- Bank will mobilise resources for infrastructure and sustainable development projects in BRICS Countries and other economies as well as in developing countries too

## US-BANGLADESH VISA TUSSLE

### 1. Context

On May 24, the U.S. Secretary of State Antony Blinken announced a “new visa policy” which threatens to restrict visas to Bangladeshis who undermine the democratic election process at home. The notification said the restriction would apply to current and former Bangladeshi officials, members of progovernment and opposition political parties, and members of law enforcement, the judiciary, and security services.

### 2. What does the notification Specify?

The new visa policy specifies that actions that undermine the democratic election process include "rigging, voter intimidation, the use of violence to prevent people from exercising their right to freedoms of association and peaceful assembly, and the use of measures designed to prevent political parties, voters, civil society, or the media from disseminating their views.

### 3. Relations between US and Bangladesh

- The US is the biggest destination for Bangladesh's garment exports, and Bangladesh is the third largest exporter of garments to the US after China and Vietnam.
- As the industry is the backbone of the country's economic growth, it is seeking a GSP-Plus status with the US and Europe for its readymade garment exports.
- The EU's Generalised Scheme of Preferences Plus (GSP+) gives developing countries a special incentive to pursue sustainable development and good governance, in return for cuts in import duties.
- The US is the top foreign investor in Bangladesh. However, the mutual unhappiness in the US-Bangladesh relationship has been no secret for some years.
- For example, Sheikh Hasina's recent visit to Washington to mark 50 years of diplomatic ties with the US, included no big-ticket meetings.
- The PM of Bangladesh even said in Parliament that the US was seeking regime change in Bangladesh.
- The US government, on the other hand, has conveyed its concern over democratic erosion, and also about the two previous elections in Bangladesh.

### 4. What is the view of Bangladesh's government and the opposition to the US's new visa policy?

- The opposition in Bangladesh said that The policy will play a supporting role in holding the next polls in a fair and credible manner, The policy will change the diplomatic ties between Bangladesh and the United States.
- The government on the other hand said that the US was seeking regime change in Bangladesh and demanded such visa policies should not be applied arbitrarily in a non-objective manner.

### 5. Some of the other hurdles

- Prime Minister Hasina has followed a policy of zero tolerance against terrorism and extremism since being sworn to power in 2009.
- She has uprooted insurgents of northeast India who had maintained a base in Bangladesh for decades.
- In that part, Islamist radicals were also consistently targeted by security agencies especially the RAB (Rapid Action Battalion).

- Her actions, however, have drawn criticism from various quarters including the U.S. which has accused Bangladesh of violating human rights and for enforcing the disappearance of around 600 individuals.
- In December 2021, serving and former top officials of the RAB were sanctioned by the U.S. Treasury Department.
- Additionally, Bangladesh maintains a neutral policy on the Ukraine crisis, with Ms. Hasina repeatedly by arguing against interference in the affairs of sovereign countries.
- On the ground, multiple projects indicate strong competition between Dhaka and Moscow.
- Russia is building the first nuclear power project in Rooppur which is expected to be operational later this year.

### **6. What will be the implications of the US's new visa Policy?**

- The US is the biggest destination for Bangladesh's garment exports, and Bangladesh is the third-largest exporter of garments to the US after China and Vietnam. The industry is the backbone of the country's economic growth.
- A (Generalised System of Preference) GSP-Plus status with the US and Europe for its ready-made garment exports is crucial when Bangladesh graduates out of the least developed country category in 2006.
- Bangladesh's government is working hard for this tag. But the new Policy might hamper its recognition.

### **7. Implications of these developments on India**

- The US position on the Bangladesh elections could complicate India's diplomacy in Bangladesh.
- New Delhi, wants Shiekh Hasina - a leader who has acted on its security concerns swiftly, back in Power in Dhaka.
- She is seen as having given away too much - land transit rights to the Northeastern states, a favorable coal power deal to an Adani company, etc., while Bangladesh itself has been awaiting Teesta water for many years.
- Over the last few years. the US and India were seen as acting in tandem in Bangladesh, especially as their security objectives converged.
- The Visa policy is a sign that this may be changing. A Post-Afghanistan US seems more open than India to political change in Dhaka.

- For now, India may prefer to keep silent on the linking of the US visa policy in Bangladesh to free and fair elections in the country.

## GS – 3 (Economy)

### CLEAN NOTE POLICY

#### 1. Context

The Reserve Bank of India (RBI) has decided to withdraw the Rs 2000 denomination banknotes from circulation. But existing notes will continue to be legal tender, the RBI announced. The central bank has advised the public to deposit Rs 2000 banknotes, which were introduced after Rs 500 and Rs 1000 notes were withdrawn during the demonetization exercise six years ago, into their bank accounts and /or exchange them into banknotes of other denominations at any bank branch.

#### 2. Why has the RBI withdrawn Rs 2000 notes?

- The Rs 2000 note was introduced in November 2016 under section 24(1) of the RBI Act, 1934, primarily with the objective of meeting the currency requirements of the economy expeditiously after the legal tender status of Rs 500 and Rs 1000 notes was withdrawn.
- With the fulfillment of that objective, and once notes of other denominations were available in adequate quantities, the printing of Rs 2000 notes was stopped in 2018-19.
- The RBI issued the majority of the Rs 2000 denomination notes before March 2017; these notes are now at the end of their estimated lifespan of 4-5 years.
- This denomination is no longer commonly used for transactions besides, there is adequate stock of banknotes in other denominations to meet currency requirements.

#### 3. Clean Note Policy

- The Clean Note Policy seeks to give the public good-quality currency notes and coins with better security features, while soiled notes are withdrawn out of circulation.



- The RBI had earlier decided to withdraw from circulation all banknotes issued before 2005 as they have fewer security features as compared to banknotes printed after 2005.
- However, the notes issued before 2005 continue to be legal tender. They have only been withdrawn from circulation in conformity with the standard international practice of not having notes of multiple series in circulation at the same time.

#### **4. Will the Rs 2000 banknotes continue to be legal tender?**

- The Rs 2000 banknote will continue to maintain its legal tender status, the RBI has said.
- Members of the public can continue to use Rs 2000 banknotes for their transactions and also receive them in payment.
- However, they are encouraged to deposit and/ or exchange these banknotes on or before September 30, 2023, the RBI said.

#### **5. Exchanging and Depositing Rs 2000 Notes**

- The exchange limit for Rs 2000 banknotes is set at Rs 20,000 at a time. Non-account holders can also exchange these banknotes at any bank branch.
- Deposits into bank accounts can be made without limitations, subject to compliance with know your customer (KYC) norms and other applicable regulations.

#### **6. Impact**

- The RBI governor stated that the impact of the withdrawal of 2000 rupees notes will be "very very marginal" on the economy because it accounts for only 10.8% of currency in circulation.
- The withdrawal will not cause disruption "either in normal life or in the economy" as there is an adequate stock of banknotes in other denominations.
- Some economists said that the withdrawal of the higher-value note is "a sensible form of demonetization" and could boost bank deposits at a time of high credit growth.
- The withdrawal could ease the pressure on deposit rate hikes and could also result in a moderation in short-term interest rates and would help to curb black money and corruption.

## 7. Is there a limit on how much money you can exchange or deposit?

- You can exchange Rs 2000 banknotes up to a limit of Rs 20,000 at a time. You don't have to go to your bank a non-account holder of a bank also can exchange Rs 2000 banknotes up to a limit of Rs 20,000 at a time at any bank branch.
- The exchange of Rs 2000 banknotes can also be made through business correspondents up to a limit of Rs 4000 per day for an account holder.
- Deposits into bank accounts can be made without restrictions subject to compliance with extant Know Your Customer (KYC) norms and other applicable ones.

## 8. Could there be a repeat of the demonetization chaos of 2016?

- It is unlikely that bank branches will witness chaos and long queues like in 2016 this time. The printing of Rs 2000 notes was stopped in 2018-19, and they are no longer commonly seen by the public, unlike the ubiquitous Rs 500 and Rs 1000 notes in 2016.
- Also, the decision to withdraw Rs 500 and Rs 1000 notes was announced suddenly, taking the public by surprise. The exchange of Rs 2000 notes will begin only on May 23, so banks and the public have sufficient time.

## 9. What is Legal tender in India?

- A legal tender is a form of currency that is recognized by law as an acceptable means for settling debts or obligations.
- RBI is responsible for determining which forms of currency are considered valid for transactions.
- It consists of coins issued by the Government of India under Section 6 of The Coinage Act, 2011, and banknotes issued by the Reserve Bank of India under Section 26 of the RBI Act, 1934.
- Govt issues all coins up to ₹ 1,000, and 1 Rupee Note. RBI issues currency notes other than ₹ 1 Note.

## 10. Types of Legal Tenders in India

- Legal tender can be limited or unlimited in character.
- In India, coins function as limited legal tender. Coins with denominations equal to or higher than one rupee can be used as legal tender for amounts up to one thousand rupees.

- Additionally, fifty paise (half a rupee) coins can be used as legal tender for amounts up to ten rupees.
- Banknotes function as unlimited legal tender for any amount stated on them.
- However, A new Section 269ST was added to the Income Tax Act as a result of the measures taken by the Finance Act 2017 to curb black money.
- A cash transaction was restricted by Section 269ST and was only allowed to be worth up to Rs. 2 Lakh per day.

## INDIA'S GROWING POPULATION

### 1. Context

The annual State of World Population report from the UN Population Fund (UNFPA) says that India will have 1,428 million people by the middle of 2023. India's population has been slowly growing over the years, and experts have different views about whether this is a dividend or a burden.

### 2. Demographic Dividend

- According to United Nations Population Fund (UNFPA), demographic dividend means, the economic growth potential that can result from shifts in a population's age structure.
- India has one of the youngest populations (62.5% of its population in the age group 15-59) in an ageing world.
- The demographic dividend leads to an increased labour supply that will increase the production of goods and boost savings and investment on the other.

### 3. Opportunities related to Demographic Dividend

- The first benefit of the young population is the increased labour supply, as more people reach working age. However, the magnitude of this benefit depends on the ability of the economy to absorb and productively employ the extra workers.
- As the number of dependents decreases individuals save more. This increase in national savings rates increases the stock of capital in

developing countries and provides an opportunity to create the country's capital through investment.

- Decreases in fertility rates result in healthier women and fewer economic pressures at home. This provides an opportunity to engage more women in the workforce and enhance human capital.
- Another opportunity is produced by increased domestic demand brought about by the increasing GDP per capita and the decreasing dependency ratio.
- This leads to demand-driven economic growth. Growth, education, better economic security, and a desire for more durable goods are the cause and consequences of young demographics.
- Increased fiscal space created by the demographic dividend enables the government to divert resources from spending on children to investing in physical and human infrastructure.
- Most sectors of the Indian economy would require a more skilled workforce than the present. It would be both a challenge and an opportunity for India to provide its workforce with the required skill sets and knowledge to enable them to contribute substantially to its economic growth.

#### **4. The Pattern of Demographic Shift in India**

- India's working-age population is rising and stood at 68% compared with 67.3% in 2020 and 66% in 2015, according to the UNFPA's State of World Population Report 2023.
- China, on the other hand, has a working-age population of 69%, but it is declining from 70.3% in 2020 and 73% in 2015.
- India's population in 2023 stood at 1,428.6 million compared to China's 1,425.7 million, according to the UN report on world population.
- While India is a young country, the status and pace of population ageing vary among states, according to the UNFPA. Southern states, which are advanced in demographic transition, already have a higher percentage of older people.
- These differences in age structure reflect differences in economic development and health, and remind us of states very different starting points at the outset of the 2030 sustainable development goals Agenda, according to the UN report.

#### **5. Challenges of Demographic Dividend**

- India ranks 130 out of 189 countries in UNDP's Human Development Index, which is alarming. Life expectancy at birth in India (68 years) is

much lower than in other developing countries. The mean years of schooling and expected years of schooling need to be improved.

- Poor human capital formation is reflected in low employability among India's graduates and postgraduates. According to ASSOCHAM, only 20-30% of engineers find a job suited to their skills. Thus, a low human capital base and a lack of skills are a big challenge.
- The informal nature of the economy in India is another challenge in reaping the benefits of demographic transition in India. Nearly 216 million people are engaged in the agriculture sector and are in the informal economy where not only do they earn lower wages, but with little social security and few days of employment in a year.
- There is a mounting concern that future growth could turn out to be jobless due to deindustrialisation, de-globalization, the fourth industrial revolution and technological progress. As per the NSSO periodic labour force survey 2017-18, India's labour force participation rate for the age group 15-59 years is around 53%, that is around half of the working-age population is jobless.
- The growth in the working-age ratio is likely to be concentrated in some of India's poorest states and the demographic dividend will be fully realised only if India can create gainful employment opportunities for this working-age population.
- Declining female labour force participation: According to data from the International Labour Organisation and World Bank, India's female labour force participation rates have fallen from 34.8% in 1990 to 27% in 2013. Without women's participation India cant dream of reaping a demographic dividend.

## **SERVICE SECTOR**

### **1. Context**

India's Gross Domestic Product (GDP) clocked a higher-than-expected growth rate of 6.1 percent in January-March 2023, in turn pushing up the growth estimate for the full year 2022-23 to 7.2 percent, according to data released Wednesday by the National Statistical Office (NSO). This is higher than NSO's advance estimates of 7 percent for 2022-23



The January-March GDP growth reflected a broad-based strengthening of the growth impulse across segments, especially agriculture, and the services sector output, and capital formation appears to be gaining strength on the expenditure side. An area of concern remains the struggling private consumption demand.

## **2. What is Service Sector?**

- The service sector produces intangible goods, more precisely services instead of goods, and according to the U.S. Census Bureau, it comprises various service industries including warehousing and transportation services; information services; securities and other investment services; professional services; waste management; health care and social assistance; and arts, entertainment, and recreation.
- Countries with economies centered around the service sector are considered more advanced than industrial or agricultural economies.
- The service sector is the third sector of the economy, after raw materials production and manufacturing.
- The service sector includes a wide variety of tangible and intangible services from office cleaning to rock concerts to brain surgery.
- The service sector is the largest sector of the global economy in terms of value-added and is especially important in more advanced economies.

## **3. Understanding service sector**

- The service sector, also known as the tertiary sector, is the third tier in the three-sector economy, Instead of product production, this sector produces services maintenance and repairs, training, or consulting.
- Examples of service sector jobs include housekeeping, tours, nursing, and teaching.
- By contrast, individuals employed in the industrial or manufacturing sectors produce tangible goods such as cars, clothes, or equipment.
- Among the countries that place heavy emphasis on the service sector, the United States, the United Kingdom, Australia, and China rank among the top.
- In the United States, the Institute for supply management (ISM) produces a monthly index that details the general state of business activity in the service sector.
- This index is regarded as a metric for the overall economic health of the country because approximately two-thirds of U.S. economic activity occurs in the service sector.

#### 4. Service sector in the three-part economy

- The service or tertiary sector is the third place of a three-part economy.
- The first economic sector, the primary sector, covers the farming, mining, and agricultural business activities in the economy.
- The secondary sector covers manufacturing and business activities that facilitate the production of tangible goods from the raw materials produced by the Primary sector.
- The service sector, though classified as the third economic sector, is responsible for the largest portion of the global economy's business activity.

#### 5. Technology in the Service Sector

- Technology, specifically information technology systems, is shaping the way businesses in the service sector operate.
- Businesses in this sector are rapidly placing more focus on what is becoming known as the Knowledge economy, or the ability to surpass competitors by understanding what target customers want and need, and operate in a way that meets those wants and needs quickly with minimal cost.
- In nearly all industries within the sector, businesses adopt new technology to bolster production, increase speed and efficiency, and cut down on the number of employees required for operation. This cuts down on costs and improves incoming revenue streams.

## GREEN DEPOSITS

### 1. Context

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

### 2. Key takeaways

- The Reserve Bank of India issued detailed guidelines for acceptance of 'green deposits' by banks and NBFCs wherein the funds could be used

for financing activities like renewable energy, green transport and green buildings.

- The financial sector can play a pivotal role in mobilising resources and their allocation thereof in green activities/projects
- Climate change has been recognised as one of the most critical challenges and globally, various efforts have been taken to reduce emissions as well as promote sustainability
- The purpose and rationale for the framework are to encourage Regulated Entities (REs) to “offer green deposits to customers, protect the interest of the depositors, aid customers to achieve their sustainability agenda, address greenwashing concerns and help augment the flow of credit to green activities/projects”
- The projects must encourage energy efficiency in resource utilisation, reduce carbon emissions and greenhouse gases, promote climate resilience and/or adaptation and value and improve natural ecosystems and biodiversity
- The projects or activities which are on the list where REs could allocate the proceeds raised through green deposits are renewable energy, energy efficiency, clean transportation, climate change adaptation, sustainable water and waste management, and green buildings
- Some of the projects are excluded from the list such as new or existing extraction, production and distribution of fossil fuels; nuclear power generation; and direct waste incineration
- Renewable energy, energy efficiency, clean transportation, climate change adaptation, sustainable water and waste management, and green buildings, are among the list of projects/activities where REs could allocate the proceeds raised through green deposits
- RBI has also mentioned about a list of ‘exclusions’ for REs, This includes projects involving new or existing extraction, production and distribution of fossil fuels; nuclear power generation; and direct waste incineration
- Banks and NBFCs will have to put in place a comprehensive board-approved policy on green deposits.

### 1.5 DEGREE CELSIUS TARGET

#### 1. Context

The World Meteorological Organization (WMO) released two reports titled “Global Annual to Decadal Climate Update 2023-2027” and “State of Global Climate 2022.” The decadal predictions of the WMO said that the annual mean global surface temperature between 2023 and 2027 will be 1.1-1.8 degree Celsius higher than the baseline temperature of 1850-1900 or preindustrial levels. In 2022, it was 1.15 degrees above the baseline, and by 2027, the average will exceed 1.5 degrees, a critical point beyond which there may be no return.

#### 2. What is the 1.5 Degree Celsius Target?

- The 1.5 degree Celsius target is the global climate target that aims to limit warming to said level by 2100, to prevent the planet from slipping into further climate crises.
- For decades, 2 degrees was an acceptable level of warming. The idea of 1.5 degrees was perceived as unrealistic and unachievable.
- However, the 2-degree target was unacceptable to small island countries as it implied that their survival was compromised.
- In 2010, at the Cancun COP16, countries agreed to limit global average warming to below 2 degrees Celsius.
- In 2015, the parties to the Paris Agreement pledged to limit the average temperature rise to below 2 degrees, while actively aiming for 1.5 degrees above preindustrial levels.
- This was endorsed as a global target by the Intergovernmental Panel on Climate Change (IPCC) in 2018 and has been pursued in all climate dialogues since then.

#### 3. Why is the 1.5-degree target critical?

- In 2018, the IPCC released a special report on the impact of global warming when the temperature reaches 1.5 degrees Celsius above baseline.

- It also drew a comparison with the effects of 2-degree Celsius warming. It was estimated that anthropogenic activities would have already caused 1 degree of warming, likely to reach 1.5 degrees between 2030 and 2052 at the current rate.
- Frequent and intense heat waves, droughts, heavy precipitation, an additional 10 centimeter rise in sea level, destruction of ecosystems, and mostly irreversible changes can be witnessed at the 2-degree level.
- However, discussions on the average temperature rise do not imply that global warming is uniform. For example, warming greater than the global average is being experienced in the Arctic, with the term ‘polar amplification’ gaining more traction.
- The regional differences and the vulnerability factors spell more urgency for climate action which must limit the average planetary warming to 1.5 degrees.

#### 4. Reasons for missing the targets

- Historically, developed countries are responsible for a major chunk of greenhouse gas (GHG) emissions. Therefore, they are expected to assume more responsibility and implement climate action.
- However, the Climate Performance Index over the years has shown otherwise. Countries like Australia, the U.S., Japan, Russia, and Canada have made little progress in meeting their pledges.
- Additionally, polluters like China, Iran, and Saudi Arabia rank low in climate performance.
- The pandemic pushed the world into a socioeconomic crisis. On the road to recovery, countries pledged measures to buildback.
- However, in most cases, there is little to no consideration for building-back in a sustainable manner. The Ukraine conflict has further added to woes and sparked an energy crisis threatening climate goals.

#### 5. Impacts on India

- India has been increasingly facing the brunt of climate change.
- February 2023 was recorded as the hottest month since recordkeeping began in 1901. In 2022, India witnessed extreme weather events for 80% of the days.
- Indian monsoons were wetter than usual last year after recording extreme heat during the premonsoon period, resulting in wildfires in Uttarakhand and acute food shortages.
- According to the Climate Change Performance Index 2023, India ranked eighth with a high performance after Denmark, Sweden, Chile, and Morocco.



- Being an emerging economy with development needs, it is attempting to balance its development needs with ongoing climate action both at the domestic and international levels.
- With domestic measures like the Green Hydrogen Mission and the introduction of green bonds, India is performing fairly well despite contributing only a miniscule to cumulative GHG emissions.
- At the international level, through the International Solar Alliance and Coalition for Disaster Resilient Infrastructure, India can prove to be a responsible climate player keeping in mind that it has a long way to go in very little time.

## PROJECT CHEETAH

### 1. Context

Recently, three of the four cheetah cubs that were born at the Kuno National Park, Madhya Pradesh, died from natural causes. In response, the government has constituted a new committee of experts that will monitor Project Cheetah.

### 2. Why was Project Cheetah launched?

- India's cheetah relocation program is perhaps among the most ambitious of its kind in the world.
- The attempt is to, over the next decade, bring in five to 10 animals every year until a self-sustaining population of about 35 is established.
- Unlike, cheetahs in South Africa and Namibia, which live in fenced reserves, India's plan is to have them grown in natural, unfenced, wild conditions.
- At Kuno, only six of the 17 adults are in the wild with the rest lodged in large, specially designed enclosures to help the animals acclimatize to Indian conditions.
- The plan is to release all the animals into the open by the yearend. The animals are radio-collared and tracked 24/7.

### 3. How do cheetahs die?

- The South African study also documented the causes of mortality, where it could be established, for 293 cheetah deaths.
- It found that holding camps caused 6.5% of cheetah deaths, immobilization/ transit caused 7.5% of deaths, and another 0.7% were caused by tracking devices. This added up to almost

15% so, one in every seven cheetah deaths was attributed to handling and management.

- Predation turned out to be the biggest killer in the study, accounting for 53.2% of cheetah mortality. Lions, leopards, hyenas, and jackals were primarily responsible. Several other wildlife including warthogs, baboons, snakes, elephants, crocodiles, vultures, zebras, and even ostriches killed cheetahs.
- It is well documented that cheetahs suffer very high cub mortality up to 90% in protected areas mainly due to predation. Consequently, nearly 80% of all cheetahs throughout their range in Africa are found living outside of protected parks and reserves.

#### **4. Were these unfortunate cheetah deaths unexpected?**

- The Cheetah Project did anticipate high mortality. The criteria for the project's short-term success was only "50% survival of the introduced cheetah for the first year". That would be 10 out of 20.
- As a result, the Madhya Pradesh government set a six-month deadline for readying Gandhisagar in the Chambal river valley in Mandsaur and Nimach districts for the cheetahs. There is also talk about moving a few animals from Kuno to the safety of an 80-sq-km fenced area in Rajasthan's Mukundra Hills Tiger Reserve.
- The focus, therefore, is shifting from the project's stated purpose that of establishing the cheetah in an open landscape as a free-roaming and self-sustaining population occupying thousands of square miles to managing the African imports as a few pocket populations in fenced-in or restricted areas.

#### **5. How successful has Project Cheetah been so far?**

- In September 2023, it will be one year since a batch of eight cheetahs from Namibia arrived in India.
- They were followed by 12 others from South Africa in February 2023. The official Cheetah Action Plan, the guiding document behind the project, observes that even half the cheetahs surviving the first year would be "an indicator of success".
- Independent critics have, however, argued that there are some basic flaws in the project. For one, it is a mistake to have had all 20 cheetahs at Kuno as there is too little space and prey, given that the animal is a courser and needs larger fields of play.
- Some animals should have gone to the Mukundara reserve in Rajasthan. Forest officials in Madhya Pradesh have also admitted that they are stretched.

- However, the officials in the National Tiger Conservation Authority, the nodal agency of the Environment Ministry tasked with coordinating the project, say that Kuno is capable of hosting the first lot of animals and future batches will be sent to other reserves.
- The experience of raising cheetahs in fenced reserves in Africa can't be replicated in India, say, experts, because India's cultural values promote coexistence with beasts, and that underpinned the success of tiger, lion, and leopard conservation programs.

## EVOLUTION OF GLOBAL PLASTIC TREATY

### 1. Context

The UNEP gathered in Paris, France May 29, 2023 for the second meeting of the Intergovernmental Negotiating Committee (INC) on Plastic Pollution, also known as INC-2.

INC-2, a successor of INC-1, held in Punta del Este, Uruguay, last year, is the international community's chance set the stage for negotiations on a global deal to end plastic pollution.

### 2. Intergovernmental Negotiating Committee (INC)

- United Nations Environment Assembly (UNEA) is the world's highest-level decision-making body on environmental topics. Decisions and resolutions taken by the member states at the assembly also define the work of the United Nations Environment Programme (UNEP)
- INC-2 is the international community's chance to set the stage for negotiations on the substance of a global deal to end plastic pollution to edge closer to protecting ecosystems, species and humanity from the grave impacts of the linear plastics economy
- UNEA was formed in 2012 to create an effective international environmental governance system. The INC is the body of member states of the UN that will be negotiating the treaty, since the treaty negotiation process is led by the member states.
- Every two years, 193 of its member states, businesses and civil societies come together to set priorities for global environmental policies, develop international environmental law, and agree on

policies to address the planet's most pressing environmental challenges.

- In 2017 at UNEA-3, countries agreed to open an ad-hoc open-ended expert group on marine litter and microplastics to study the global landscape of efforts to address plastic pollution

### 3. Major Stakeholders

- Apart from the member states, there are nine major groups and stakeholders: Non-profits, women, workers and trade unions, the scientific community, farmers, indigenous communities, children and youth, local authorities, businesses and industry
- The major groups and stakeholders get to make joint interventions in the negotiations to put forward their concerns and suggestions
- They get two minutes to make their interventions. These organisations are the ones that feature in the list of accredited organisations of the UNEP
- Observer status is a privilege granted to non-members to allow them to participate in the organisation's activities
- Accredited organisations can also be observers in such meetings. Observers are not allowed to make interventions during the process of the negotiations
- However, the observers are seen as agencies that can influence the priorities and decisions taken by certain member states

### 4. India-Plastic ban

- The idea of a global plastic treaty was set in motion after India's call for a global ban on single-use plastic at the UNEA 4 in 2019.
- In UNEA 5.2- a historic resolution was adopted to "End Plastic Pollution", keeping in mind the entire life cycle of plastic, from the extraction of raw materials to the disposal of plastic waste
- The Ministry of Environment, Forest and Climate change, Government of India, notified the Plastic Waste Management Amendment Rules, 2021. The country is taking steps to curb littered and unmanaged plastic waste pollution.
- Since July 1, 2022, India has banned the manufacture, import, stocking, distribution, sale, and use of single-use plastic (SUP) items with low utility and high littering potential.
- India is a party to the United Nations Environment Assembly (UNEA). In all, 124 nations are party to the UNEA, and India has signed a resolution to draw up an agreement in the future that will

make it legally binding for signatories to address the full life cycle of plastics, from production to disposal.

## TEMPERATURE RISE OF 2 DEGREES

### 1. Context

Under current climate change policies, billions will face life-threatening heat. But a global network of heat officers are tackling the problem in their cities. A study, led by scientists at the UK's University of Exeter and Nanjing University in China, found that 60 million people are already exposed to dangerous heat levels, characterized by an average temperature of 29 degrees Celsius (84.2 degrees Fahrenheit) or higher.

### 2. Key Takeaways

- About 2 billion people will live in hazardous heat conditions by the end of the century if climate policies continue on their current trajectory, according to new research published in the Nature Sustainability journal. That represents 23 percent of the projected global population.
- If the climate warms more drastically a potential scenario under current policies about 3.3 billion people could face extreme temperatures by the end of the century.

### 3. How do hot temperatures harm human health?

- Extreme heat can result in a range of illnesses and death, according to the World Health Organisation (WHO). These include heatstroke and hyperthermia.
- Temperature extremes also worsen chronic conditions and have an indirect effect on disease transmission, air quality, and critical infrastructure.
- The elderly, infants and children, pregnant women, outdoor and manual workers, athletes, and the poor are particularly vulnerable to higher temperatures.
- People living in India, Sudan, and Niger will all be heavily affected by even 1.5 degrees of warming, but 2.7 degrees will have enormous effects on countries like the Philippines, Pakistan, and Nigeria.



#### 4. Calculating the human cost of Climate Change

- Researchers said their study breaks the trend of modeling climate impacts in economic rather than human terms.
- Most other models also prioritize current populations over future ones, with inequality in global warming being "both globally distributed, but also intergenerational."
- It fundamentally values my life more than my children's lives and certainly more than my grandchildren's lives.
- Looking at individual country impacts on dangerous heat levels, researchers found that current emissions from 1.2 average US citizens condemn a future human to live in extreme heat.
- Despite having disproportionate emissions, the US population faces a much lower threat from dangerous temperatures.

#### 5. How can people be protected from extreme heat?

- Previous studies have shown cities are particularly vulnerable to such dangerous temperature rises, due to the "heat island effect".
- Buildings, roads, and infrastructure absorb and radiate the sun's heat more than natural environments like forests and water bodies, raising the urban temperature by as much as 15 degrees Celsius in some cases, compared to rural areas.
- Cities around the world are introducing the new role of chief heat officer to deal with inevitable temperature increases.
- One of those is Cristina Huidobro, who took up the post of Chile's capital Santiago in March 2022.
- Many cities in the world face extreme heat, but the solutions and the way you approach it are very, very local, Huidobro told DW.
- Preparedness can include categorizing heat waves in the same way as other natural disasters or setting up an alert threshold to trigger a certain city response.
- Limiting warming to the lower Paris Accord target of 1.5 degrees Celsius above pre-industrial levels would still expose 400 million people to dangerous heat levels by the end of the century, the study found.
- The third prong is adapting the city to the new reality of high temperatures, largely by creating more green spaces in the city.
- Santiago has just launched an urban reforestation project to plant 30,000 trees across the city and develop strategies that treat the trees as part of the urban infrastructure. "Trees, trees, trees, trees everywhere."

- But planting trees isn't as easy as people think. We're putting trees in really dense streets, like in the main avenues of the city, where you have a lot of cement.
- You need to dig a hole and do some civil work. It's also not an instant solution to urban heat as trees need time to grow.

## 6. Emissions are seeking a peak in 2025

- The G7 stressed the need for a global peak in emissions by 2025. The G7—the US, the UK, Germany, Italy, Japan, France, and Canada claimed that their emissions had already “peaked”, and asked all “major economies” to ensure that their individual emissions do not continue to rise beyond 2025.
- Major economies are not defined, but in the context of climate change, it usually includes countries like India, China, Brazil, South Africa, and Russia, each of which is a significant emitter.
- The 2025 peak year is not mandated under the Paris Agreement or any other international decision. India has long made it clear that it sees its emissions growing well into the next decade.
- Even China, the world's largest emitter, has indicated that it would peak only towards the end of this decade.
- Still, a global peak of greenhouse gas emissions by 2025 is not implausible. The biggest emissions year so far has been 2019 about 55 billion tonnes of carbon dioxide equivalent.
- After a dramatic drop in 2020 due to the Covid-19 pandemic, emissions rose again in 2021, the last year for which data are available, but remained lower than in 2019.
- While emissions of developing countries, including India, are still increasing, most of the rich and industrialized nations are now seeing a decline, though not at the required pace.
- Estimates from UN Climate Change suggest that if all countries took only those measures that they have promised so far, emissions in 2030 would be about 11 percent higher than 2010 levels.

## 7. Target of Net Zero by 2050

- The G7 reiterated its commitment to turn net zero by 2050 and asked all ‘major economies’ to attain net-zero status by that year and to come up with detailed road maps to reach the target.
- Science says that the world as a whole must become net zero by mid-century in order to meet the 1.5 degree Celsius target.

- Interestingly, the 1.5 degree Celsius milestone is likely to be achieved a lot sooner not just as part of annual fluctuation but also on a more stable basis.
- The Intergovernmental Panel on Climate Change (IPCC) has said this could happen before 2040 but that it was possible to pull back from there if aggressive action on climate continued. One of the prerequisites of the pullback is global net zero by 2050.
- China has said it would turn net zero only in 2060, while India has set 2070 as the target. Some other countries, including big emitters like Russia and Saudi Arabia, have 2060 as their net-zero targets.
- If these countries do not become net-zero by 2050, it would mean that the other major emitters, mainly the US and the European Union, would have to reach there much earlier. As of now, only Germany has said it would attain net-zero status by 2045.
- However, the post-2050 targets of major developing countries are not set in stone. With fast-changing technologies and the rapid adoption of cleaner sources of energy, the situation could alter significantly over the next decade.
- But countries like India would want to keep some wiggle room for themselves, and not make a commitment that they are not mandated to do.

## 8. End of Fossil Fuels

- The G7 countries put no deadline on ending the use of fossil fuels, only saying that they were committed to accelerating the phase-out of “unabated fossil fuels” in line with 1.5-degree Celsius trajectories.
- “Unabated” is not clearly defined; they also said they would eliminate “inefficient fossil fuel subsidies” by 2025 or earlier, without defining “inefficient subsidies”.
- The G7 also claimed they had stopped financing new fossil fuel-based energy projects “except in limited circumstances”.
- These circumstances include the need to end the dependence on Russian gas, because of which new investments in the gas sector would be considered legitimate.

## CHILIKA LAKE

### 1. Context

As many as 62,947 birds of 88 species were found in the vast lake during the annual summer survey of birds conducted by the Chilika wildlife division of Odisha government's forest, environment and climate change department on May 24, 2023

More birds flocked to the Chilika Lake in Odisha this summer than the previous years, despite the day temperature in and around Asia's largest brackish water lagoon hovering 39 to 41 degrees Celsius

## 2. Key Takeaways

- In the summer of 2022 and 2021, as many as 61,350 birds of 95 species and 48,728 birds of 106 species had spotted in the blue lagoon, while in the summer of 2020, 45,056 birds of 97 species were counted
- Birds found this summer include 54,407 waterfowls of 43 species and 8,540 resident birds of 45 species
- The species like grey-headed swamphen or purple swamphen were spotted the most number (8,386) followed by Asian Openbilled-stork (7,454), whiskered tern (5,033), little cormorant (4,263) and little egret (3,929)
- Habitat improvement, availability of food and eviction of the prawn *gherries* (enclosures) in the lake are some of the reasons for more birds flocking this summer and in the last winter than the previous years
- Chilika is a favourable destination for the winged guests during the winter seasons and is the ideal habitat for the waterfowls and resident birds for the entire year



### 3. Regions from where birds migrate

- The birds, mostly from beyond the Himalayas in northern Eurasia, the Caspian region, Siberia, Kazakhstan, Baikal lake and the remote areas of Russia and neighbouring countries, visit the Chilika every winter and start their homeward journey before the onset of summer
- Some of the migratory birds preferred to remain in the lake instead of going to their native places despite the heat
- The flamingos and pelicans generally come to Chilika in delay. While pelicans start their journey with the onset of monsoon, some flamingos choose to stay in the lake over the years

### 4. Convention on Migratory Species of Wild Animals

- As an environmental treaty of the United Nations, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats
- CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range
- As the only global convention specializing in the conservation of migratory species, their habitats and migration routes, CMS complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector
- Migratory species threatened with extinction are listed on Appendix I of the Convention



- CMS Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them.
- Besides establishing obligations for each State joining the Convention, CMS promotes concerted action among the Range States of many of these species
- Migratory species that need or would significantly benefit from international co-operation are listed in Appendix II of the Convention

### 5. About Chilika lake

- Chilika Lake is a brackish water lagoon, spread over the Puri, Khordha and Ganjam districts of Odisha state on the east coast of India, at the mouth of the Daya River, flowing into the Bay of Bengal, covering an area of over 1,100 square kilometres. It is the biggest lake in India after Vembanad Lake
- Chilika supports some of the largest congregation of migratory birds in the country, particularly during the winter
- Chilika is an integral part of the culture of coastal Odisha
- Almost 400 years ago, the saint poet Purshottam Das, a devotee of Lord Jagannath, wrote a poem about Lord Krishna dancing with a milkmaid called Maniki, who had come to sell curds on the banks of the Chilika.



### GS-3 Science & Technology

## WORLD'S LITHIUM

### 1. Context

The news of potentially significant reserves of lithium, an element needed to manufacture batteries used in electric cars and other renewable energy infrastructure in Jammu and Kashmir has been welcomed universally.

This is a boost for national prosperity and security without dismissing concerns about the potential social and environmental impacts.

### 2. The status of India's lithium industry

- India's electric vehicle (EV) market was valued at \$383.5 million in 2021 and is expected to expand to \$152.21 billion in 2030.
- India imported 450 million units of lithium batteries valued at \$929.26 million (₹ 6, 600 crores) in 2019-2020, which makes the development of the country's domestic lithium reserves a matter of high stakes.
- Scholars have argued the ongoing global transition to low-carbon economies, and the rapid expansion of **artificial intelligence (AI) and 5G networks** will greatly reshape global and regional geopolitics.
- Access to and control over rare minerals, such as lithium and cobalt, will play a crucial role in these epochal changes.

### 3. Owner of these minerals

- In July 2013, a three-judge bench of the Supreme Court of India ruled that the owner of the land has rights to everything beneath, "**down to the centre of the earth**".
- Yet, large areas of land, including forests which make up more than 22 per cent of India's landmass hills, mountains and revenue wasteland are publicly owned.
- The Supreme Court also recalled that the Union government could always ban private actors from mining sensitive minerals, as is already the case with Uranium under the **Atomic Energy Act 1962**. In today's context, lithium is as important as, if not more than, uranium.

### 4. Other countries manage lithium reserves

- The stories of two South American countries, **Chile and Bolivia** which have the largest known reserves of lithium are particularly instructive.

- In Chile, the government has designated lithium as a strategic resource and its development has been made the exclusive prerogative of the state.
- The state has licensed only two companies SQM and Albemarle to produce lithium in the country.
- In April 2023, Chile's announced a new "**National Lithium Strategy**", which many in the corporate sector took to be a declaration of his intention to nationalise the industry.
- On the contrary, the government would honour existing contracts.
- As a supplement, the new strategy calls for public-private partnerships for future lithium projects, which will allow the state to regulate the environmental impact of lithium mining, distribute the revenue from lithium production more fairly among local communities and promote domestic research into lithium-based green technologies.
- **Bolivia's** new constitution gave the state "the control and direction over the exploration, exploitation, industrialisation, transport and commercialisation of natural resources".
- It nationalised lithium and adopted a hard line against private and foreign participation.
- This is believed to be one of the factors for the country's failure to produce any lithium at a commercial scale nearly 20 years after the industry was nationalised.
- Bolivia's current president seeks to change that. However, instead of handing over lithium resources to the private sector and wants to join hands with other Latin American countries to design a "**lithium policy**" that would benefit all their economies.
- Mexico's president also nationalised lithium in February this year, declaring, "Oil and lithium belong to the nation, they belong to the people of Mexico".
- In general, the countries in **Latin and South America** are thinking through ways and means to pursue a multipronged strategy.
- While the national governments of these countries exercise a significant degree of control, the nature of private-sector participation varies between these countries.
- The actions of these governments are also a response to the mobilisation of Indigenous Peoples in the region who want to hold corporations as well as governments to account.

## 5. The way forward

- As India explores and develops its lithium reserves, it is notable that the appropriate development of this sector will require a very high level of effectiveness on the part of the Indian state.

- Much of India's mineral wealth is mined from regions with very high levels of poverty, environmental degradation and lax regulation.
- Effective and careful management of the sector should be paramount if India's rare minerals development is to meet its multiple goals of social well-being, environmental safety and national energy security.

## GENETICALLY MODIFIED FOOD

### 1.Context

Genetically modified food remains controversial, especially in Europe, but for some experts it is the best science-based method for a sustainable global food system amidst biodiversity loss and a rising population.

Producing food is terrible for the environment. According to the online scientific publication Our World in Data, agriculture is responsible for a quarter of the carbon emissions in the atmosphere and the vast majority of world's biodiversity losses.

### 2.What is GM Food?

- Genetically modified organisms (GMOs) are organisms that have altered DNA to change their properties
- Genetically modified crops can improve yield, build resistances to pests, frost or drought, or add nutrients
- Crops can also be modified to reduce carbon emissions and boost the sustainability of food production
- While widespread, **GM crop production** uses only about 10% of the land non-GM crop production uses.
- GM is nothing more than a breeding technique, much like crossing that we've been doing for thousands of years. But it's more sophisticated, so we can make very precise changes, very rapidly
- GMOs were first introduced in the US in 1994, with modified tomato plants that ripened more slowly to prolong their shelf life

- Since then, a wide range of crops, such as soybeans, wheat and rice have been approved for agricultural use, along with GM bacteria grown to produce large amounts of protein
- Scientists in India have also developed strains of Sub-1 rice, which are much more resistant to flooding
- Flooding is a major issue in rice-growing regions of northern India and Bangladesh, set to become worse as the climate crisis develops, and now 6 million farmers in the region are using Sub-1 rice to safeguard their crops against inundation
- Golden rice, on the other hand, is a GM strain modified to contain vitamin A, designed to combat the shortage of dietary vitamin A in parts of Asia and Africa

### 2.1. Disease resistance

**Gene editing technology** has also helped save crop production from blights

In the late 20th century, the papaya ringspot virus almost wiped-out papaya crops in Hawaii, but a local scientist developed a modified papaya that was resistant to the virus. Seeds were distributed to farmers, saving papaya production a decade later

Currently there's no real solution except for massive fungicide applications

No one wants that, so we worked on adding genes or DNA changes from distantly related plants to achieve better resistances to the fungus

### 3. GM Controversy

- Many people find the idea of GM foods hard to swallow — a 2020 opinion poll found 50% of people in 20 surveyed countries perceived GM foods as unsafe
- When GM crops were first developed 30 years ago, uncertainty and concerns about safety were shared by scientists, but things are different now
- Scientists say that "GM food is completely safe to eat, and 30 years of information showing it's not dangerous for the environment"
- There are concerns big corporate interests from companies like Monsanto, which promote more pesticides and monocultures and wrong forms of agriculture and seeds sold to farmers and expensive prices

### 4. GM Food Industry



- GM agriculture is moving on from the Monsanto big-dog corporate model
- GM products are increasingly focused on social and public enterprise and the industry is looking at more local solutions that help smallholder farmers in developing countries
- Regulation and licensing are a huge part of this. Many, including Replanet, strongly advocate for open-source seeds and GM technologies
- You can develop GMOs without patents developed by humanitarian public organizations
- It's about creating a licensing landscape that empowers local farmers to adapt to the demands of sustainable agriculture, but quickly enough to meet rising populations and climate change
- 

## SECOND-GENERATION NAVIC SATELLITE

### 1. Context

Recently, The Indian Space Research Organisation (ISRO) launched the first of the second-generation satellites for its navigation constellation successfully.

The 2, 232 kg satellite, the heaviest in the constellation was launched by a Geosynchronous Satellite Launch Vehicle (GSLV) rocket that lifted off from Sriharikota.

### 2. Key points

- Each of the seven satellites currently in the **Indian Regional Navigation Satellite System (IRNSS)** Constellation, operationally named NavIC, weighed much less around 1, 425 kg at liftoff.
- They all rode the lighter Polar Satellite Launch Vehicle (PSLV), ISRO's workhorse launch rocket.
- The last IRNSS Satellite, IRNSS-1I, was launched in April 2018 to replace an older, partially defunct satellite in the constellation.
- IRNSS-1I was ISRO's ninth satellite for the NavIC constellation but is considered to be the eighth because the IRNSS-1H launched eight months earlier in August 2017 and originally intended to replace the older satellite was lost after the heat shield of the payload failed to open on time.

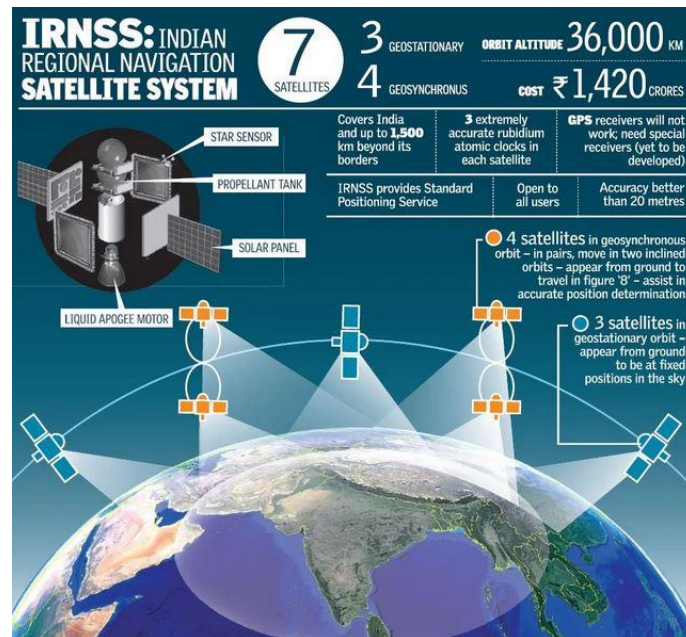


Image source: ISRO

### 3. About the second generation NavIC satellite

- The second-generation satellite christened NVS-01, the first of ISRO's NVS series of payloads is heavier. Other than that:
  - Atomic Clock:** The satellite will have a Rubidium atomic clock onboard, a significant technology developed by India.
- The Space-qualified Rubidium Atomic clock indigenously developed by Space Application Centre-Ahmedabad is an important technology which only a handful of countries possess.
- **L1 signals for better use in wearable devices:** The Second-generation satellites will send signals in a third frequency, L1, besides the L5 and S frequency signals that the existing satellites provide, increasing interoperability with other satellite-based navigation systems.
- The L1 frequency is among the most commonly used in the Global Positioning System (GPS) and will increase the use of the regional navigation system in wearable devices and personal trackers that use low-power, single-frequency chips.
- **Longer mission life:** The second-generation satellites will also have a longer mission life of more than 12 years. The existing satellites have a mission life of 10 years.

### 4. Significance of the atomic clock on board the NVS-01 payload

- Several of the existing satellites stopped providing location data after their onboard atomic clocks failed this was the main reason for the launch of the replacement satellite in 2018.

- Since a satellite-based positioning system determines the location of objects by accurately measuring the time it takes for a signal to travel to and back from it using the atomic clocks on board, the failure of clocks means the satellites are no longer able to provide accurate locations.
- Currently, only four IRNSS satellites can provide location services, according to ISRO officials.
- The other satellites can only be used for messaging services such as providing disaster warnings or potential fishing zone messages for fishermen.

## 5. The age of the satellites

- This is the second major concern, besides the failing atomic clocks.
- IRNSS-1A was launched into orbit on July 1, 2013, and the 1B and 1C satellites were launched the following year.
- 1A is almost defunct- the failed 1H mission of 2018 was intended to replace this satellite and all the three oldest satellites in the constellation are close to the end of their 10-year mission lives.
- At least three new satellites must be put into orbit to keep the seven-satellite constellation fully functional.

## 6. NavIC constellation

- ISRO has been criticised by experts for not focussing on the development of the user segment until very late in the life of some of the satellites in the constellation.
- No receivers were developed for the NavIC system, even though the satellites were sending signals.  
A 2018 report by the Comptroller and Auditor General (CAG) of India said that even though the Cabinet cleared funding of Rs 200 crores to develop user receivers in 2006, work on the project started only in March 2017, by which time seven launches had already taken place.
- The receivers have now been developed and NavIC is in use for projects like public vehicle safety, power grid synchronisation, real-time train information systems and fishermen's safety.
- Other upcoming initiatives such as common alert protocol-based emergency warning, time dissemination, geodetic network, and unmanned aerial vehicles are in the process of adopting the NavIC system.
- Some cell phone chipsets such as the ones built by Qualcomm and Media Tek integrated NavIC receivers in 2019.

- The Ministry of Electronics and IT is in talks with smartphone companies to urge them to make their handsets NavIC compatible.

## 7. Advantage of having a regional navigation system

- India is the only country that has a regional satellite-based navigation system.
- There are four global satellite-based navigation systems the American **GPS**, the Russian **GLONASS** (GLObalnaya NAVigatsionnaya Sputnikovaya Sistema), the European **Galileo** and the Chinese **Beidou**.
- Japan has a four-satellite system that can augment GPS signals over the country, similar to India's **GAGAN** (GPS Aided GEO Augmented Navigation).
- Once fully operational with ground stations outside India for better triangulation of signals NavIC open signals will be accurate up to 5 meters and restricted signals will be even more accurate.
- GPS signals by contrast are accurate up to around 20 meters. Work is underway to set up ground stations in Japan, France and Russia.
- NavIC provides coverage over the Indian landmass and up to a radius of 1, 500 km around it.
- In this region, NavIC signals will likely be available in even hard-to-reach areas.
- Unlike GPS, NavIC uses satellites in high geo-stationery orbit the satellites move at a constant speed relative to Earth, so they are always looking over the same region on Earth.
- NavIC signals come to India at a 90-degree angle, making it easier for them to reach devices located even in congested areas, dense forests or mountains.
- GPS Signals are received over India at an angle.
- With the use of NavIC picking up, the government has been looking at the possibility of increasing the coverage area of the system.

## DEVAS-ANTRIX DEAL

## 1. Context

Recently the Supreme Court upheld a May 25, 2021 order of the National Company Law Tribunal (NCLT) to liquidate Devas on the ground that the firm was created under fraudulent circumstances. The order came even as three Mauritius-based investors and a German telecom major have approached federal courts in the United States to seize assets linked to the Indian government such as those of Air India.

## 2. What is Devas-Antrix Deal?

- Devas entered into a lease contract with ISRO's private sector arm Antrix Corporation in 2005. According to the deal, ISRO would lease two satellites GSAT-6 and 6A to Devas for 12 years.
- Devas was supposed to provide multimedia services to cell phones in India using the S-band spectrum, with ISRO leasing 70 MHz of the S-band spectrum.
- Devas would provide multimedia services to mobile platforms in India using S-band transponders on the satellites, with ISRO leasing 70 MHz of S-band spectrum.
- The deal was terminated on February 25, 2011, by the government citing "security reasons".
- The government decision was taken amid the 2G scam and allegations that the Devas deal involved the handing over of communication spectrum valued at nearly Rs 2 lakh crore for a pittance.

## 3. The signing of the deal

- In 2005, the deal was signed to provide multimedia services to mobile users using the leased S-band satellite spectrum.
- Under the deal, ISRO would lease to Devas two communication satellites (GSAT-6 and 6A) for 12 years.
- In return, Devas would provide multimedia services to mobile platforms in India using S-band transponders on the satellites.
- As a result of the deal, Devas introduced and utilized technologies like never before and was a huge revenue generator for Antrix.

## 4. Scrapping of the Deal

- The deal was canceled in 2011 on the ground that the auction of the broadband spectrum was mired in fraud.



- The decision was taken amid the 2G scam and allegations that the Devas deal involved the handing over of a communication spectrum valued at nearly Rs 2 lakh crore for a pittance.
- The government also held that it needed the S-band satellite spectrum for national security and other social purposes.

### **5. What happened after the termination of the deal?**

- After the termination, Devas and its foreign investors approached various international tribunals and courts seeking compensation.
- This has led to arbitration between Antrix and Devas at the International Chambers of Commerce (ICC) and two bilateral investment treaty (BIT) arbitrations.
- India lost all three disputes. Devas was awarded compensation of \$1.2 billion by an International Chamber of Commerce tribunal in 2015. Apart from that, Deutsche Telekom was awarded \$101 million plus interest by the Permanent Court of Arbitration in Geneva in 2020.
- Mauritius investors were awarded \$ 111 million by the UN Commission on International Trade Law tribunal in 2020.
- The German investors claimed compensation for violation of an India-Germany bilateral investment treaty and the Mauritius investors for an India-Mauritius BIT.

### **6. What steps were taken by India?**

- In 2014, the Indian government allocated the case to CBI to look into the 2005 deal.
- It highlighted the misuse of official positions for their benefit. The Enforcement Directorate also filed a charge sheet in 2018 under the Prevention of Money Laundering Act against a former managing director of Antrix and five Devas officials for corruption.

### **7. What has led to the Liquidation?**

- Antrix filed a plea in the National Company Law Tribunal in January 2021 for the liquidation of Devas in India, which it said was incorporated fraudulently.
- On May 25, 2023, the NCLT ordered the liquidation, which was upheld by the National Company Law Appellate Tribunal on September 8, 2021, and by the Supreme Court recently.
- The NCLT order held that the start-up was incorporated in a fraudulent manner and for unlawful purposes.

## 8. S-band Spectrum

- The S-band spectrum, which is part of the Devas-ISRO deal, is extremely valuable for mobile broadband services, in terms of usage as well as money.
- The frequency, also known as the 2.5 GHz band, is globally used for providing mobile broadband services using fourth-generation technologies such as WiMax and Long Term Evolution (LTE).
- This frequency band is unique because it has a substantial amount of spectrum (190 MHz) that can be put to use for mobile services.

## 9. Bilateral Investment Treaty

- An agreement made between two countries containing reciprocal undertakings for the promotion and protection of Private investments made by nationals of the signatories in each other's territories.
- BITs protect illegal nationalization and expropriation of foreign assets and other actions by a signatory of the BIT that may undermine the ownership or economic interest of a national of the other signatory.
- One of the main protections under a BIT is that it allows foreign investors to sue states directly by submitting claims for breach of the BIT to arbitration rather than to local courts.

## 10. Antrix Corporation Limited.

- Antrix Corporation Limited (ACL), Bengaluru is a wholly owned Government of India Company under the administrative control of the Department of Space.
- It was incorporated as a private limited company owned by the Government of India in September 1992.
- It is a marketing arm of ISRO for the promotion and commercial exploitation of space products, technical consultancy services, and transfer of technologies developed by ISRO.
- Another major objective is to facilitate the development of space-related industrial capabilities in India.

## 11. International Chamber of Commerce (ICC)

- ICC is the world's largest business organization working to promote international trade and responsible business conduct.
- It has been helping to resolve difficulties in international commercial and business disputes to support trade and investment since 1923.
- ICC headquarters is in Paris, France.

## GS-3 AGRICULTURE

### IRON FORTIFICATION

#### 1. Introduction

- Iron is an essential mineral required for many bodily functions, including the formation of **haemoglobin**, but can be harmful when taken in excess.
- One of the methods suggested for the treatment of iron deficiency anaemia is the fortification of food with iron.
- Typically, a chosen food staple such as wheat, rice, or even salt, is fortified to provide up to two-thirds (10mg/day) of the iron requirement of adult women and almost the entire daily requirement of men.
- Thus, excess consumption of iron can occur if one habitually consumes a balanced quality diet, to begin with, or exceeds limits for consumption of fortified food.

#### 2. Tolerable upper limit

- There is a defined level of iron intake beyond which the risk of adverse events begins to increase.
- This is called the tolerable upper limit of intake and is set at 40 mg/day.
- It will especially be deleterious for populations who have iron overload states like patients with thalassemia.
- Once iron is absorbed, it is thought that its excretion is steady and very small, except when bleeding takes place, as with menstrual bleeding.
- Thus, women can excrete iron from the body but men cannot. This makes men vulnerable to excess iron intake.
- Recent studies showed that with fortification, there is increased excretion of iron in children.
- It is not known exactly how or through what route this extra excretion takes place.
- The extra iron is likely lost through the intestine, where cells of the intestinal lining exfoliate or drop off, and thereby deposit their iron into the intestine lumen for excretion or through the urine.
- Nevertheless, beyond the excess stores, the net effect of iron provision through fortification on haemoglobin formation is likely to be lower than thought.
- To the extent that the body can, it will try to regulate iron absorption. But excess iron in the fortified diet can remain unabsorbed.

- Typically, it is expected that just 510 per cent of the ingested iron is absorbed. The rest is excreted.

### 3. Harmful effects

- Studies have shown that unabsorbed iron can lead to inflammation in the gastrointestinal lining and disrupt the colonic microbiota with long-term consequences.
- The irritation of the lining may present itself clinically as abdominal cramps, constipation or diarrhoea.
- In addition, the irritation of mucosa can also lead to gastrointestinal blood loss.
- An excess of iron in the gastrointestinal tract can impair the absorption of other minerals.
- A more pressing worry is that excess iron has been closely linked to diabetes.
- Iron can cause oxidative stress in the body which can damage cells, proteins and DNA with long-term consequences.
- This chronic oxidative stress leads to the impairment of mitochondrial beta-oxidation of long-chain fatty acids.
- This abnormal fat oxidation leads to excessive serum triglyceridemia and excessive accumulation of triglycerides in muscle and liver tissues.
- An analysis of data on blood biomarkers of chronic disease risk from the Comprehensive **National Nutritional Survey** in Indian adolescent Children showed that for every 10mcg/L increase in serum ferritin (the storage state of iron), the risk of having high fasting serum glucose, total cholesterol, triglycerides and hypertension increased proportionately.
- A scenario analysis of these data showed that if an additional 10 mg of iron/day were provided (by fortification), the prevalence of high fasting serum glucose could increase by 214 per cent across different socioeconomic groups.
- In very high amounts, iron also has a role to play in hepatic stellate cell activation and excessive deposition of extracellular matrix in the liver.
- This can lead to liver fibrosis, with subsequent progression to cirrhosis.

### 4. Individual approach

- Even though iron fortification has been successful in addressing iron deficiency, it is important to consider the dangers of consuming too much iron.
- Rather than adopting mandatory iron fortification programmes where unsupervised high iron intakes are instituted across a diverse

population, it is imperative to develop individualised strategies and ensure thorough monitoring to detect any adverse events at the earliest.

- There is no doubt that some segments of the population need extra dietary iron but not all.
- Eventually, precision in public health is essential if we are to avoid the risk of iron overload and the potential for long-term chronic illnesses.
- As a public health strategy, the pendulum should not swing to the other side.

### For Mains

**1. What is NavIC? Explain the advantage of having a regional navigation system. (250 Words)**

**2. Discuss the significance of the service sector to India's economy and explain the challenges faced by the service sector in India (250 Words)**

**3. What is Anaemia? Discuss the causes of Anaemia and Explain how it is an important indicator of public health in India. (250 Words)**

**4. What are Primary Agricultural Credit Societies (PACS)? Discuss the various programmes implemented by the Government to strengthen the Primary Agricultural Credit Societies in the country. (250 Words)**

**5. Buddhism is a Global soft power which both India and China are eager to acquire and own but both countries have to deal with Nepal while owning it. Comment (250 Words)**

### For Prelims

1. With reference to the Foreign Trade Policy (FTP) 2023, consider the following statements:



1. It is notified by the Central Government in the exercise of powers conferred under the Foreign Contribution Regulation Act.
2. The Directorate General of Foreign Trade is responsible for imposing import prohibitions or restrictions.

Which of the statement(s) given above is/are correct?

- (A) 1 only
- (B) 2 only
- (C) Both 1 and 2
- (D) Neither 1 nor 2

Answer (B)

The policy is notified by the Central Government, in the exercise of powers conferred under Section 5 of the Foreign Trade (Development & Regulation) Act, 1992”. Hence, statement 1 is not correct.

This Act empowered the Centre to “make provision for the development and regulation of foreign trade by facilitating imports and increasing exports” and to “make provision for prohibiting, restricting or otherwise regulating... import or export of goods or services or technology”.

FTP 2023 is an ideal platform for the government to prepare India’s exporters to cope with the challenges in the global market.

The Directorate General of Foreign Trade (DGFT) will coordinate with all the standard-setting agencies of the government, the export promotion councils, and the relevant institutions in the private sector to prepare a roadmap for upgrading institutions and production facilities.

The DGFT will be responsible for imposing import prohibitions or restrictions. Hence, statement 2 is correct.

2. Which of the following pairs is not correctly matched?

- (A) Global Financial Stability Report : World Bank
- (B) Global Information Technology Report : World Economic Forum
- (C) Global Money Laundering Report : Financial Action Task Force
- (D) World Energy Outlook : International Energy Agency

Answer (A)

## Global Financial Stability Report : International Monetary Fund

3. Consider the following statements about Green Deposits:

1. These deposits are accepted only by the scheduled commercial banks.
2. The proceeds raised by the green deposits could be used in climate change adoption and renewable energy.
3. Production and distribution of fossil fuels are not included in the list of projects.

How many of the above statements are correct?

- (A) Only one
- (B) Only two
- (C) All three
- (D) None

Answer (B)

The Reserve Bank of India issued detailed guidelines for acceptance of 'green deposits' by banks and NBFCs wherein the funds could be used for financing activities like renewable energy, green transport and green buildings. Hence, statement 1 is not correct.

The financial sector can play a pivotal role in mobilising resources and their allocation thereof in green activities/projects. Climate change has been recognised as one of the most critical challenges and globally, various efforts have been taken to reduce emissions as well as promote sustainability.

The purpose and rationale for the framework are to encourage Regulated Entities (REs) to “offer green deposits to customers, protect the interest of the depositors, aid customers to achieve their sustainability agenda, address greenwashing concerns and help augment the flow of credit to green activities/projects”.

The projects must encourage energy efficiency in resource utilisation, reduce carbon emissions and greenhouse gases, promote climate resilience and/or adaptation and value and improve natural ecosystems and biodiversity. Hence, statement 2 is correct.

The projects or activities which are on the list where REs could allocate the proceeds raised through green deposits are renewable energy, energy efficiency, clean transportation, climate change adaptation, sustainable water and waste management, and green buildings.

Some of the projects are excluded from the list such as new or existing extraction, production and distribution of fossil fuels; nuclear power generation; and direct waste incineration. Hence, statement 3 is correct.

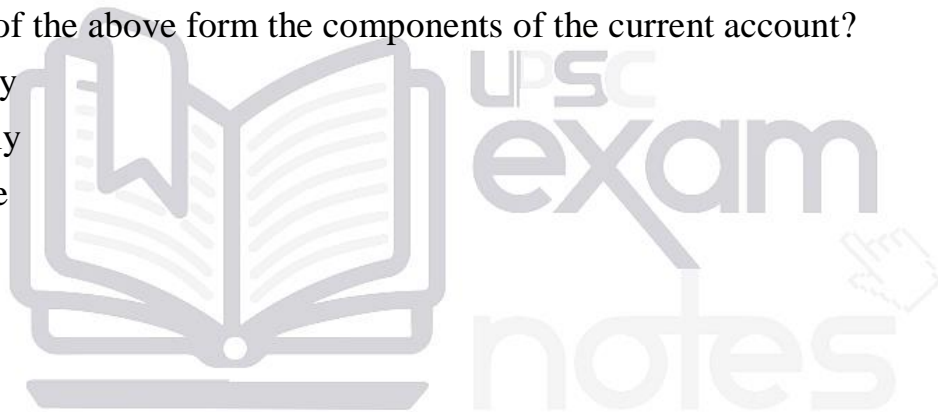
4. Consider the following:

1. Trade in goods
2. Trade in services
3. Transfer payments

How many of the above form the components of the current account?

- (A) One only
- (B) Two only
- (C) All three
- (D) None

Answer (C)



Current Account is the trade record in goods and services and transfer payments.

Trade in goods: It includes exports and imports of goods.

Trade in services: It includes factor income and non-factor income transactions.

Transfer payments: These are the receipts that the residents of a country get for 'free', without having to provide any goods or services in return. They consist of gifts, remittances and grants. They could be given by the government or by private citizens living abroad.

5. With reference to the guidelines for TDS (Tax Deduction at Source) for online gaming, consider the following statements:

1. The platforms will not deduct tax at the source for a player if the net winning does not exceed Rs 1000.
2. The referral bonus and the incentives given by the online gaming company to the intermediate user are not considered taxable deposits.

Which of the statement(s) given above is/are correct?

- (A) 1 only
- (B) 2 only
- (C) Both 1 and 2
- (D) Neither 1 nor 2

Answer (D)

The Central Board of Direct Taxes (CBDT) has come out with guidelines for Tax Deducted at Source (TDS) for online gaming platforms.

The online gaming platforms will not be required to deduct tax at the source for a player if the net winning does not exceed Rs 100. Hence, statement 1 is not correct.

The CBDT circular also said that bonuses, referral bonuses, incentives etc., are given by the online gaming company to the intermediate user and they are to be considered as taxable deposits under Rule 133 of the Income-tax Act. Hence, statement 2 is not correct.