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## 1. INDIAN SOCIETY & POLITY

### 1. Tamil Nadu Legislature turns 100

#### Why in News?

- The Assembly chambers at Fort St. George, the 17th-century vestige of the colonial era, and Tamil Nadu's seat of power have completed 100 years of existence.

#### Elections in Tamil Nadu:

- Tamil Nadu witnessed elections in November 1920 as a result of the Montagu-Chelmsford Report and the Government of India Act of 1919.
- The electors included only men, accounting for just 3% of the population.
- The concept of dyarchy came into being with Ministers, who were Indians, gaining limited control over certain subjects, such as local self-government and education.
- It was then that the office of the Chief Minister, also called Premier, got instituted.

#### Key Works Accomplished:

- Reservations in public employment: For the first time, caste became the basis for appointment to public services. It took over 70 years for the Central government to follow the principle in its institutions for education and employment.
- Above 50% cap in reservation: In December 1993, the scheme of 69% reservation for Backward Classes, Most Backward Classes, SCs and STs got legal safeguard. The law was subsequently included in the IX Schedule of the Constitution, through an amendment passed in Parliament, so that its validity could not be challenged.

#### Other Facts:

- Women's suffrage: In early 1927, Muthulakshmi Reddy, the well-known medical practitioner and social activist, became the first woman member of the Council and, in no time, became the Deputy President of the Council.
- Gopuram as an emblem: The symbol features a 'gopuram' (temple tower) – characteristic of south Indian temples has been adopted as the state emblem.
- Change of name: During the two-year rule of the DMK founder C.N. Annadurai, the Assembly, in July 1967, adopted a motion renaming Madras State as Tamil Nadu, which later got the approval of Parliament.
- Social reforms: It has passed several landmark laws for the welfare of women, such as Devadasi abolition, equal rights to women in property and the constitution of the State Commission for Women.

## Montagu-Chelmsford Reforms:

- Central Legislature thereafter called the Indian Legislature was reconstituted on the enlarged and more representative character.
- **Bicameral legislature:** The act set up bicameral legislatures at the centre consisting of two houses- the Council of the States (Upper House) and the Central Legislative Assembly (Lower House).
- **Election and Nominations:** It consisted of the Council of State consisted of 60 members of whom 34 members were elected and the Legislative Assembly consisted of about 145 members, of whom about 104 were elected and the rest nominated.
- **Separation of Power:** The central and provincial subjects were demarcated and separated.
- **Diarchy:** The Provincial subjects were further divided into Transferred Subjects and Reserved Subjects, the legislative council had no say in the latter.
- **Communal representation:** The principle of separate electorate was further extended to Sikhs, Indian Christians, Anglo-Indians and Europeans.
- **Working review:** It provided for the appointment of a statutory commission to report the working of the act after ten years.

## 2. Governors can Pardon Death Row: Supreme Court

### Why in News?

- The Supreme Court has held that the Governor of a State can pardon prisoners, including death row ones, even before they have served a minimum of 14 years of a prison sentence.

### SC Judgement: Section 433-A CrPC:

- The Governor's power to pardon overrides a provision in the Code of Criminal Procedure – Section 433A.
- This article mandates that a prisoner's sentence can be remitted only after 14 years of jail.
- Such power is in the exercise of the power of the sovereign, though the Governor is bound to act on the aid and advice of the State Government, the apex court observed.
- Section 433-A of the Code cannot and does not in any way affect the constitutional power conferred on the President/Governor to grant pardon under Articles 72 or 161 of the Constitution.

## What does one mean by Pardon?

- A pardon is a government/executive decision to allow a person to be absolved of guilt for an alleged crime or other legal offense as if the act never occurred.

## Why need Pardon?

- Pardons can be granted when individuals are deemed to have demonstrated that they have “paid their debt to society”, or are otherwise considered to be deserving of them.
- Pardons are sometimes offered to persons who were either wrongfully convicted or who claim that they were wrongfully convicted.
- Pardons are sometimes seen as a mechanism for combating corruption, allowing a particular authority to circumvent a flawed judicial process to free someone that is seen as wrongly convicted.

## Pardoning powers in India:

- Under the Constitution of India (Article 72), the President of India can grant a pardon or reduce the sentence of a convicted person, particularly in cases involving capital punishment.
- A similar and parallel power vests in the governors of each state under Article 161.

## President:

- Article 72 says that the president shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offense.
- The pardoning powers of the Indian President are elucidated in Art 72 of the Indian Constitution. There are five different types of pardoning that are mandated by law.
- **Pardon:** means completely absolving the person of the crime and letting him go free. The pardoned criminal will be like a normal citizen.
- **Commutation:** means changing the type of punishment given to the guilty into a less harsh one, for example, a death penalty commuted to a life sentence.
- **Reprieve:** means a delay allowed in the execution of a sentence, usually a death sentence, for a guilty person to allow him some time to apply for Presidential Pardon or some other legal remedy to prove his innocence or successful rehabilitation.
- **Respite:** means reducing the quantum or degree of the punishment to a criminal in view of some special circumstances, like pregnancy, mental condition etc.
- **Remission:** means changing the quantum of the punishment without changing its nature, for example reducing twenty-year rigorous imprisonment to ten years.

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### Cases as specified by art. 72:

- in all cases where the punishment or sentence is by a court-martial;
- in all cases where the punishment or sentence is for an offence against any law relating to a matter to which the executive power of the Union extends;
- in all cases where the sentence is a sentence of death.

### Governor:

- Similarly, as per article 161: Governor of a State has the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law.
- It must be relating to a matter to which the executive power of the state extends.
- President can grant pardon to a person awarded a death sentence. But a governor of a state does not enjoy this power.

### Nature of the Pardoning Power:

- Not absolute: The question is whether this power to grant pardon is absolute or this power of pardon shall be exercised by the President on the advice of Council of Ministers.
- Aid and advice: The pardoning power of the president is not absolute. It is governed by the advice of the Council of Ministers.
- Constitution is silent on this: This has not been discussed by the constitution but is the practical truth. Further, it does not provide for any mechanism to question the legality of decisions of President or governors exercising mercy jurisdiction.
- Judicial review applicable: But the SC in Epuru Sudhakar case has given a small window for judicial review of the pardon powers of President and governors for the purpose of ruling out any arbitrariness.

### Some Traditions:

- It is important to note that India has a unitary legal system and there is no separate body of state law.
- All crimes are crimes against the Union of India.
- Therefore, a convention has developed those the governor's powers are exercised for only minor offenses.
- While requests for pardons and reprieves for major offenses and offenses committed in the UTs are deferred to the President.



### 3. Quit India Movement

#### Why in News?

- The Prime Minister has greeted the nation on the eve of the anniversary of Quit India Movement Day.

#### Highlights:

- The Quit India Movement is also known as the Bharat Chhodo Andolan was launched by Mahatma Gandhi on August 8, 1942, at the Bombay session of the All India Congress Committee (AICC).
- The movement demanded an end to British rule in India.
- Since the protest was held in August, it also went on to be known as August Kranti or August Movement.
- The 'Do or Die' speech was etched in the hearts of Indians, and many faced the consequences of the movement.
- Every year, the day is celebrated by paying tribute to freedom fighters who laid their lives for the country.

#### Quit India Movement:

- The movement began on August 8, 1942, with its foundations being laid back in 1939 when the Governor-general of India was Lord Lilingthow.
- In 1942, Stafford Cripps was sent to India by the British Establishment to negotiate with the leaders of the All India Congress Committee for gaining their support in exchange for their freedom.
- July 1942- The Quit India Movement Resolution was passed at the Wardha Conference of All India Congress Committee.

#### Series of Events:

- Mahatma Gandhi delivered his speech at Mumbai's Gowalia Tank Maidan, also called August Kranti Maidan, on 08th August 1942.
- Gandhi Ji was arrested and jailed at Pune's Aga Khan Palace and his wife Kasturba Gandhi, Sarojini Naidu and secretary Mahadev Desai.
- Many other senior members of the Indian National Congress were also arrested, including Jawaharlal Nehru and Abul Kalam Azad, and were kept in the Yerwada Jail.
- The British Government banned the Congress Committee declaring it an unlawful association.

- Aruna Asaf Ali, popularly known as the ‘Grand Old Lady’ of the Independence Movement, hoisted the National Flag at Mumbai’s Gowalia Tank Maidan.
- This event was followed by an uproar among the people and the emergence of several young leaders such as Ram Manohar Lohia, JP Narayan, SM Joshi, and others who continued to fuel the fire of the movement throughout India during the period of World War II.

### Causes of the Movement:

- Involvement of India in World War II without prior consultation with the leaders: The Indian Nationalists were disgruntled with the Governor-General of India, Lord Linlithgow, as he brought India to the verge of World War II without consulting them.
- **Failure of Cripps Mission:** The British sent Stafford Cripps to India to gain the cooperation of India, which failed because the Cripps Mission offered India not complete freedom but the Dominion Status to India, along with the partition. After the failure of Cripps Mission, the Indian Nationalist Leaders knew that the Britishers were in no mood to amend the Constitution before the end of World War II.
- **Shortage of essential commodities:** There was widespread discontent due to the shortage of essential commodities and rising prices of salt, rice, etc., and commandeering of boats in Bengal and Orissa. There were fears that the Britishers would follow a scorched earth policy in Assam, Bengal, and Orissa in reaction to the advancement of the Japanese. The Economy also shattered as a result of World War II.
- **Prevalence of anti-British Sentiment:** The sentiments were widely anti-British, and the masses were demanding complete independence from the British Government.
- **Centralization of many small Movements:** The Ground for the movement was already prepared by various associated and affiliated bodies of the Congress, like Forward Bloc, All India Kisan Sabha, and others. They were leading the mass movements on a much more radical level for more than two decades. They also channelized many militant outbursts, which were happening at several places in the country.

### Phases of Quit India Movement:

- The Quit India Movement can be viewed in three phases from its inception to end. The phases are as follows:
- First phase: The first phase or the inception of the movement had no violence. It began with civil disobedience, boycotts, strikes that the British Government quickly suppressed.

- Almost all members of the Congress Committee, including Gandhiji, were arrested and kept in Jail till 1945 without any trial.
- Second phase: In its second phase, the movement shifted to the countryside. The second phase of the movement took a violent and aggressive turn. Any building or offices which were the symbol of the colonial authority was attacked and destroyed. Communication systems, railway stations & tracks, telegraph poles and wires were also targeted.
- Third and last phase: In the last phase of the movement, there was the formation of many independent national or parallel governments in the isolated pockets of the country, such as Ballia, Satara, Tamluk, etc.

### Successes:

- **Women Empowerment:** Aruna Asif Ali hoisted the national flag on the Gowalia tank maidan; Usha Mehta, on the other hand, helped set up the underground radio station to spread awareness about the movement.
- **Rise of future Leaders:** This movement also gave some future prominent leaders such as Biku Patnaik, Aruna Asif Ali, Ram Manohar Lohia, Sucheta Kriplani, J.P. Narayan, etc. These leaders were helping the movement through underground activities.
- **Rise of Nationalism:** A greater sense of unity and brotherhood emerged due to the Quit India Movement. Many students dropped out of schools and colleges, people gave up their jobs and withdrew money from the banks.

### Failure of the Movement:

- The movement did not have the support of many organizations of the country itself.
- The Britishers were supported by the Princely States, British Indian Army, Indian Civil Services, Viceroy's Council (which had Indians in the majority), All India Muslim League, Indian Imperial Police. The Hindu Mahasabha, Rashtriya Swayamsevak Sangh (RSS) & Muslim League also opposed the Quit India Movement.
- Many Congress members like C Rajagopalachari resigned from the provincial legislature as they did not favor Mahatma Gandhi's idea.

## 4. Definition of Minority

### Why in News?

- The Ministry of Minority Affairs has provided some useful information about various initiatives for minorities.

### Defining a minority community:

- The Central has notified minority communities at the national level in consultation with various stakeholders under Section 2 (c) of the National Commission for Minorities (NCM), Act,
- The six communities notified as minority communities under Section 2(c) of the NCM Act, 1992 are Christians, Sikhs, Muslims, Buddhists, Parsis, and Jains.
- Notification of any community-specific to a State as a minority community within a State comes under the purview of the State
- Article 29 and 30 of the Constitution provide for the protection of interest of minorities which includes linguistic minorities also.

### Who are Linguistic Minorities?

- Linguistic Minorities are group or collectivities of individuals residing in the territory of India or any part thereof having a distinct language or script of their own.
- The language of the minority group need not be one of the twenty-two languages mentioned in the Eighth Schedule of the Constitution.
- In other words, linguistic minorities at the State level mean any group or groups of people whose mother tongues are different from the principal language of the State, and at the district and taluka/tehsil levels, different from the principal language of the district or taluka/tehsil concerned.
- The linguistic minorities are therefore identified by the respective States/UTs.
- The State/UT wise, broad linguistic profile is available in the 52nd Report of the Commissioner for Linguistic Minorities(CLM).

### National Commission for Minorities:

- The Government has already enacted the National Commission for Minorities (NCM) Act, 1992 to constitute a National Commission for Minorities.
- The NCM receives petitions/grievances from the aggrieved persons and the said petitions/grievances being received by Commission.
- They are dealt with by calling for reports from the concerned authorities under the Union and State Governments.
- On receipt of the reports, the Commission makes appropriate recommendations to the respective authorities for Redressal of the Grievances.

## 5. Quality of Life for Elderly Index

### Why in News?

- Quality of Life for Elderly Index was released by the Economic Advisory Council to the Prime Minister (EAC-PM).

### Quality of Life for Elderly Index:

- The Index has been created by the Institute for Competitiveness at the request of EAC-PM and it sheds light on an issue often not mentioned- problems faced by the elderly.
- The report identifies the regional patterns of ageing across the Indian States and assesses the overall ageing situation in India.
- The report presents a deeper insight into how well India is doing to support the well-being of its ageing population.

### The Index framework includes four pillars:

- Financial Well-being
- Social Well-being
- Health System and
- Income Security
- It has eight sub-pillars: Economic Empowerment, Educational Attainment & Employment, Social Status, Physical Security, Basic Health, Psychological Wellbeing, Social Security and Enabling Environment.

### Features of the Index:

- This index broadens the way we understand the needs and opportunities of the elderly population in India. It goes far beyond the adequacy of pensions and other forms of income support, which, though critical, often narrows policy thinking and debate about the needs of this age group. The index highlights that the best way to improve the lives of the current and future generations of older people is by investing in Health, Education and Employment for young people today.

### Why need such an Index?

- India is often portrayed as a young society, with a consequent demographic dividend.
- But, as with every country that goes through a fast process of demographic transition, India also has greying cum aging problem.
- Without a proper diagnostic tool to understand the implications of its ageing population, planning for the elderly can become a challenge for policymakers.

## Key Highlights from the Report:

- The Health System pillar observes the highest national average, 66.97 at an all-India level, followed by 62.34 in Social Well-being.
- Financial Well-being observes a score of 44.7, which is lowered by the low performance of 21 States across the Education Attainment & Employment pillar, which showcases scope for improvement
- States have performed particularly worse in the Income Security pillar because over half of the States have a score below the national average, i.e., 33.03 in Income Security, which is the lowest across all pillars.

## Performance of the States:

- Among all the states, Rajasthan and Himachal Pradesh are top-scoring regions in the aged states and relatively aged states categories.
- Rajasthan has a score of 54.61 in the aged states category while Himachal Pradesh has a score of 61.04 in relatively aged states.
- Mizoram has a score of 59.79 among northeastern states while Chandigarh scored 63.78 among the Union Territories.
- Jammu and Kashmir scored the lowest 46.16 among Union Territories.
- Arunachal Pradesh, among the northeastern states, scored the lowest score with 46.16.
- In the aged states and relatively aged states categories, Telangana and Gujarat scored the lowest with 38.19 and 49.00, respectively.

## 6. Income Limit of OBCs and Creamy Layer

### Why in News?

- A proposal for revision of the income criteria for determining the Creamy Layer amongst the OBCs is under consideration of the Government.

### What is the Creamy Layer?

- Creamy Layer is a concept that sets a threshold within which OBC reservation benefits are applicable.
- While there is a 27% quota for OBCs in government jobs and higher educational institutions, those falling within the “creamy layer” cannot get the benefits of this quota.

### Basis of Creamy Layer:

- It is based on the recommendation of the Second Backward Classes Commission (Mandal Commission).

- The government in 1990 had notified 27% reservation for Socially and Educationally Backward Classes (SEBCs) in vacancies in civil posts and services that are to be filled on direct recruitment.
- After this was challenged, the Supreme Court in the Indira Sawhney case (1992) upheld 27% reservation for OBCs, subject to exclusion of the creamy layer.

### How is it Determined?

- Following the order in Indra Sawhney, an expert committee headed by Justice (retired) R N Prasad was constituted for fixing the criteria for determining the creamy layer.
- In 1993, the Department of Personnel and Training (DoPT) listed out various categories of people of certain rank/status/income whose children cannot avail the benefit of OBC reservation.
- For those not in government, the current threshold is an income of Rs 8 lakh per year.
- For children of government employees, the threshold is based on their parents' rank and not income.
- For instance, an individual is considered to fall within the creamy layer if either of his or her parents is in a constitutional post; if either parent has been directly recruited in Group-A; or if both parents are in Group-B services.
- If the parents enter Group-A through promotion before the age of 40, their children will be in the creamy layer.
- Children of a Colonel or higher-ranked officer in the Army, and children of officers of similar ranks in the Navy and Air Force, too, come under the creamy layer.
- Income from salaries or agricultural land is not clubbed while determining the creamy layer (2004).

### What is Happening Now?

- MPs have raised questions about the pending proposal for revising the criteria.
- They have asked whether the provision of a creamy layer for government services only for OBC candidates is rational and justified.

### Has it ever been revised?

- Other than the income limit, the current definition of the creamy layer remains the same as the DoPT had spelled out in 1993 and 2004.
- The income limit has been revised over the years.
- No other orders for the definition of the creamy layer have been issued.

- While the DoPT had stipulated that it would be revised every three years, the first revision since 1993 (Rs 1 lakh per year) happened only in 2004 (Rs 2.50 lakh), 2008 (Rs 4.50 lakh), 2013 (Rs 6 lakh), and 2017 (Rs 8 lakh).
- It is now more than three years since the last revision.
- What does the government propose to do about the revision?
- A draft Cabinet note has stated that the creamy layer will be determined on all income, including salary calculated for income tax, but not agriculture income.
- The government is considering a consensus on Rs 12 lakh but salary and agriculture income are also being added to the Gross Annual Income.

## 7. Karez System of Irrigation

### Why in News?

- The Taliban are set to seize Kabul, but some expert believes they will spare the age-old Karez system of underground aqueducts in the country given its importance.

### What is a Qanat / Karez?

- This system of underground vertical shafts in a gently sloping tunnel that is built from an upland aquifer to ground level. Some historians and archaeologists have attributed people in the southeast Arabian Peninsula as the first developers. Others, however, ascribe it to the ancient Persians. The Qanat / Karez system, wherever it was developed, soon spread to many Persian, Arab and Turkic lands.
- It even came to the Indian Subcontinent during the 800-year-old Islamic Period.

### Karez in India:

- The system was brought in the Indian Subcontinent during the Bahamani Sultanate, founded by Alaudin Bahman Shah.
- It later broke into five other Sultantates: Bijapur, Golconda, Ahmadnagar, Bidar and Berar.
- The Bahamani Sultanate was Persianate in nature and encouraged many things Persian, among them, the Karez.
- They was built in the city of Bidar during the reign of Bahamani Sultan Ahmad Shah Wali (1422-1436), who shifted the capital from Gulbarga to Bidar.
- By the 15th century, Bijapur city had a network of pipelines. Everyone got 24×7 supply of water.
- It also worked as confidence-building measure between the Sultan and his subjects since the Karez was built the state.



## 8. Gujarat Anti-Conversion Law

### Why in News?

- The Gujarat High Court this week stayed key provisions of The Gujarat Freedom of Religion (Amendment) Act, 2021 pertaining to marriages involving religious conversion of either of the Two Parties.

### What is the Anti-Conversion Law?

- The legislation has amended the 2003 Gujarat Freedom of Religion Act.
- The amendment was brought in line with several similar laws enacted last year by right-wing-ruled states, starting with Uttar Pradesh.
- The laws seek to end conversion through unlawful means, specifically prohibit any conversion for marriage, even if it is with the consent of the individual except when a prior sanction is obtained from the state. Apart from UP and Gujarat, Madhya Pradesh and Himachal Pradesh too, have also enacted similar laws.

### Controversial Provisions:

- **Vagueness:** It gives powers to the state to conduct a police inquiry to verify the intentions of the parties to convert for the purposes of marriage.
- **Burden of proof:** Section 6A reverses the burden of proof on the partner of the converted spouse to prove that he/she did not coerce the other spouse.
- **Intent of Marriage:** Section 4 allows the aggrieved person, their parents, brother, sister, or any other person related by blood or marriage or adoption to file an FIR challenging the conversion and subsequent marriage.
- **Conversion as Allurement:** The law considers lawful conversions as “allurement” in vague.
- **Discrimination:** It defines over-broad terms; prescribes different jail terms based on gender; and legitimizes the intrusion of family and the society at large to oppose inter-faith marriages.

### Issues with such laws:

- Stereotyping of lawful conversion: The new anti-conversion laws shift the burden of proof of a lawful religious conversion from the converted to his/her partner.
- Curb on individual freedom: Legal experts have pointed out that the laws interfere in an individual’s agency to marry a partner from different faith and to choose to convert from one’s religion for that purpose.

- Interference of state: Apart from being vague and sweeping, the laws also test the limits to which the state can interfere in the personal affairs of individuals.
- Violative of FRs: The freedom to propagate one's religion (A25) and the right to choose a partner are fundamental rights (A21) that the new anti-conversion laws impinge upon.

### **What has the Gujarat High Court held?**

- A Division Bench of the Gujarat High Court has granted an interim stay on certain provisions of the amendment that interfere with inter-faith marriages.
- It has held that the bill interferes with the intricacies of marriage including the right to the choice of an individual, thereby infringing Article 21.
- The interim stay on certain provisions will have to be confirmed when the larger challenge is decided.

### **What was the Government's Defence?**

- The state government had argued that the law did not prohibit all inter-faith marriages, but only the ones based on fraud and coercion.
- To buttress its submission, Advocate General had argued that the Act must be read as a whole to interpret the provision, and the provision alone could not be read by itself.
- However, the court said that the wider interpretation would happen at a later stage, and stayed the provisions for the time being. A larger challenge would determine the fate of the law eventually.

### **Significance of the ruling:**

- The HC ruling, although preliminary, comes as a relief to interfaith couples from being harassed.
- The reading could have a bearing on challenges pending in other HCs (namely in MP, UP, Himachal etc).
- However, its real impact on the ground could be limited, as larger constitutional nuances are often difficult to permeate, especially when it is not a final and binding verdict.

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## 2. GOVERNANCE

### 1. Sabki Yojna Sabka Vikas Campaign

#### Why in News?

- The Government has launched 'Sabki Yojna Sabka Vikas' campaign for inclusive and holistic preparation of the Gram Panchayat Development Plan (GPDP).

#### Sabki Yojna Sabka Vikas:

- Under Article 243 G of the Constitution, Panchayats have been mandated for the preparation and implementation of plans for economic development and social justice.
- Thus, Panchayats have a significant role to play in the effective and efficient implementation of flagship schemes/programs on subjects of national importance for transforming rural India.
- The objectives of the campaign broadly include strengthening of elected representatives and Self-Help Groups, evidence-based assessment of progress made.
- The campaign aimed to help Gram Panchayats (GPs) in preparation of convergent and holistic GPDP through the identification of sectoral infrastructural gaps in respective areas.

#### Gram Panchayat Development Plan (GPDP):

- The Gram Panchayats are constitutionally mandated for the preparation of GPDP for economic development and social justice utilizing resources available with them.
- The GPDP should be comprehensive and based on a participatory process involving the community particularly Gram Sabha.
- It will be in convergence with schemes of all related Central Ministries / Line Departments related to 29 subjects listed in the Eleventh Schedule of the Constitution

### 2. Fast Track Special Courts

#### Why in News?

- The Union Cabinet has approved the continuation of 1023 Fast Track Special Court (FTSCs) including 389 exclusive POCSO Courts for two more years.

#### Fast Track Special Courts:

- Fast Track Special Courts are dedicated courts expected to ensure swift dispensation of justice.
- They have a better clearance rate as compared to the regular courts and hold speedy trials.

- Besides providing quick justice to the hapless victims, it strengthens the deterrence framework for sexual offenders.
- Central Share is to be funded from Nirbhaya Fund. The Scheme was launched on 02.10.2019.
- To bring more stringent provisions and expeditious trial and disposal of such cases, the Central Government enacted “The Criminal Law (Amendment) Act, 2018”.
- It made provision of stringent punishment including the death penalty for perpetrators of rape.
- This led to the establishment of the Fast-Track Special Courts (FTSCs).
- Note: Article 247 gives power to Parliament to establish certain additional courts for the better administration of laws made by it or of any existing laws with respect to a matter enumerated in the Union List.

### **Benefits offered by Fast-Track Courts:**

- Further the commitment of the Nation to champion the cause of safety and security of Women and Girl Child.
- Reduce the number of pending cases of Rape & POCSO Act.
- Provide speedy access to justice to the victims of sexual crimes and act as a deterrent for sexual offenders.
- Fastracking of these cases will declog the judicial system of the burden of case pendency.

## **3. State of food insecurity**

### **Why in News?**

- The latest edition of the State of Food Security and Nutrition in the World (SOFI) report, released jointly by five UN organisations in July, reveals that the pandemic and failure on the part of state to combat its effects, has led to a significant increase in the prevalence of hunger and food insecurity in the country.

### **Highlights:**

- Estimates on food insecurity presented in the SOFI report are based on two globally-accepted indicators of food insecurity:
- The Prevalence of Undernourishment (PoU), which estimates the proportion of people suffering from chronic deficiency of calories.
- A more recently developed an experience-based indicator called the Prevalence of Moderate and Severe Food Insecurity (PMSFI).

- The PoU estimates are based on estimates of per-capita supply of food and distributional parameters estimated using the national consumption surveys
- On the other hand, PMSFI estimates are based on data collected through surveys that attempt to capture people's experiences of food insecurity (such as eating less, modifying diet to eat cheaper food etc).
- No assessment of food insecurity during a pandemic: The PMSFI estimates presented in the report are particularly important because, since the outbreak of the pandemic, the Indian government has not undertaken any official assessment of food insecurity in the country.
- Not only has the government not conducted its own consumption or food security surveys, it does not approve the publication of results based on the Gallup World Poll.
- As a result, estimates for India are not published in the SOFI reports.
- However, these can still be obtained indirectly because the data are presented for South Asia and for "South Asia (excluding India)".
- Estimates for India can be obtained by comparing the two sets of data.

### What the report says

- According to the data presented in the report, the prevalence of moderate to severe food insecurity in India rose by about 6.8 percentage points in 2018-20.
- Data show that there were about 43 crore of moderate to severe food-insecure people in India in 2019.
- As a result of the pandemic-related disruptions, this increased to 52 crore in one year.
- In terms of prevalence rates, moderate to severe food insecurity increased from about 31.6 per cent in 2019 to 38.4 per cent in 2021.

### Causes of Food Insecurity in India:

- Economic distress: The problems of hunger and food insecurity are grave in India because of widespread economic distress, high unemployment and high levels of inequality.
- Dependence on informal economy: A large proportion of the poor is dependent on the informal economy in which incomes are too low and uncertain.
- Unemployment: Unemployment rates have risen sharply over the last few years, shrinking public investment and the economic slowdown have compounded the distress among working classes and the peasantry.
- With low and uncertain incomes, Families dependent on the informal economy do not have assured access to adequate and Nutritious Food.

## Way Forward:

- **Monitoring system:** There is an urgent need for the government to establish systems for regular monitoring of the food security situation in the country.
- **Universal access to food:** It is ironic that the country with the largest stock of grain in the world — 120 million tonnes as of July 1, 2021 — accounts for a quarter of the world's food-insecure population.
- **Universalising access to the public distribution system** is the need of the hour at least during the pandemic.

## 4. Resolving the Assam-Mizoram Issue

### Why in News?

- The violent stand-off between the Assam and Mizoram armed policemen at Vairengte in Mizoram, on July 26, took six lives and left over 50 injured is the culmination of a long-standing border dispute.

### History of the Boundary Issue:

- The 'inner line' boundary of the Lushai hills was 'fixed' in 1875 on the southern border of Assam's Cachar district.
- In line with the colonial practice of 'fixing' borders, this boundary was however not 'precise' as it was drawn largely using natural markers such as rivers and hills.
- In post-independent India, the Mizoram government has accepted this boundary in preference over the subsequent revisions made by the colonial government.
- There was a change in boundary when the Inner Line Permit under the Bengal Eastern Frontier Regulation, 1873 was extended to the Lushai hills district in 1930 and 1933.
- The Mizoram government perceives that the boundary instituted by these revisions amounted to unilateral superimposition.
- These revisions are also seen to conspicuously fail to recognise the Mizo's long-standing historical rights to use the un-demarcated southern border of Cachar as their hunting ground, for jhum cultivation, and as sites of their resource extraction including rubber and timber.
- However, considering that borders cannot be driven by perception but by institutionalised rules and laws, Assam's government continues to refuse to accept Mizoram's standpoint.
- The Assam Government considers Mizo plantation and settlements in the Inner Line Reserve Forest areas as an 'Encroachment'.

## People-centric Vs. State-centric approach in dispute:

- At the heart of this dispute is the contending approaches of the Assam and Mizoram governments to 'borders', namely 'state-centric and 'people-centric approaches.
- The Assam government represent a continuum of the colonial 'state-centric' approach to borders which gives premium to legal, juridical and administrative recognition and protection of the border.
- The Mizoram government advocate a 'people-centric approach seeks to give a premium to the historical and traditional rights of the local indigenous people.
- The Mizoram government also advocate the principle of uti possidetis juris ('as you possess under law', including customary law) on the other hand.

## Way Forward:

- Historical context: Fixing the Assam-Mizoram border and resolve the dispute need to be sensitive to the historical context.
- Deep historical knowledge, sensitivity and an accommodative spirit need to inform dialogue and negotiation under the neutral supervision of the Centre.
- Inter-governmental forum: It is about time that the Centre sets up a permanent inter-governmental forum to involve important stakeholders in order to effectively manage border and territorial conflicts.
- Quick-fix solution should be avoided: Any quick-fix solution driven by temporal electoral considerations should be avoided if we were to resuscitate and sustain interdependent Assam-Mizoram borders and beyond.

## 5. Government e-Marketplace (GeM) System

### Why in News?

- The Government e-Marketplace (GeM) system has resulted in a 10% savings in public procurement costs in five years.

### Government e-Marketplace:

- GeM is an online platform for public procurement in India by various Government Departments / Organizations / PSUs.
- The initiative was launched on August 9, 2016 by the Ministry of Commerce and Industry with the objective to create an open and transparent procurement platform for Government Buyers.

- 
- It is owned by GeM SPV (Special Purpose Vehicle) which is a 100 per cent Government-owned, non-profit company under the Ministry of Commerce and Industries
  - GeM aims to enhance transparency, efficiency and speed in public procurement.
  - It provides the tools of e-bidding, reverse e-auction and demand aggregation to facilitate the government users achieve the best value for their money.
  - The purchases through GeM by Government users have been authorized and made mandatory by Ministry of Finance.
  - Note: The government has made it mandatory for sellers on the Government e-Marketplace (GeM) portal to clarify the country of origin of their goods when registering new products.

#### **Advantages for Buyers:**

- Offers rich listing of products for individual categories of Goods/Services
- Makes available search, compare, select and buy facility
- Enables buying Goods and Services online, as and when required.
- Provides transparency and ease of buying
- Ensures continuous vendor rating system
- Up-to-date user-friendly dashboard for buying, monitoring supplies and payments
- Provision of easy return policy

#### **Advantages for Sellers:**

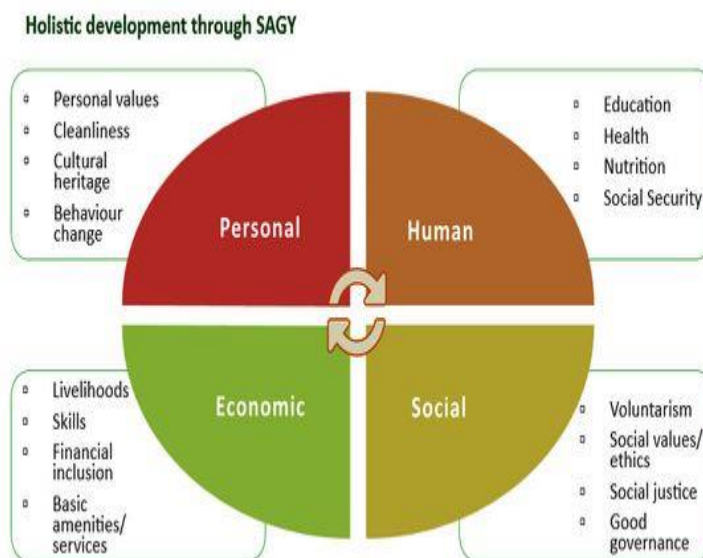
- Direct access to all Government departments.
- One-stop shop for marketing with minimal efforts
- One-stop shop for bids / reverse auction on products / services
- New Product Suggestion facility available to Sellers
- Dynamic pricing: Price can be changed based on market conditions
- Seller friendly dashboard for selling, and monitoring of supplies and payments
- Consistent and uniform Purchase Procedures



## 6. Saansad Adarsh Gram Yojana

### Why in News?

- The Ministry of Rural Development has taken several measures for the successful implementation of the Sansad Adarsh Gram Yojana (SAGY) Gram Panchayats.



### Saansad Adarsh Gram Yojana (SAGY):

- SAGY is a village development project launched in October 2014, under which each Member of Parliament will take the responsibility of developing physical and institutional infrastructure in three villages by 2019.
- SAGY aims at instilling certain values in the villages and their people so that they get transformed into models for others.

### These Values Include:

- Adopting people's participation as an end in itself – ensuring the involvement of all sections of society in all aspects related to the life of village, especially in decision-making related to governance
- Adhering to Antyodaya – enabling the “poorest and the weakest person” in the village to achieve well being
- Affirming gender equality and ensuring respect for women

### Guaranteeing Social Justice:

- Instilling dignity of labour and the spirit of community service and voluntarism
- Promoting a culture of cleanliness
- Living in consonance with nature – ensuring a balance between development and ecology

- Preserving and promoting local Cultural Heritage
- Inculcating mutual cooperation, self-help and self-reliance
- Fostering peace and harmony in the Village Community
- Bringing about transparency, Accountability and probity in public life
- Nurturing local self-governance
- Adhering to the values enshrined in the Fundamental Rights and Fundamental Duties of the Indian Constitution

### Identification of an Adarsh Gram:

- A Gram Panchayat would be the basic unit.
- It will have a population of 3000-5000 in plain areas and 1000-3000 in hilly, tribal and difficult areas.
- In districts where this unit size is not available, Gram Panchayats approximating the desirable population size may be chosen.
- The MP would be free to identify a suitable Gram Panchayat for being developed as Adarsh Gram, other than his/her own village or that of his/her spouse.
- Lok Sabha MP has to choose a Gram Panchayat from within his/her constituency and Rajya Sabha MP a from the rural area of a district of his/her choice in the State from which he/she is elected.
- Nominated MPs may choose a Gram Panchayat from the rural area of any district in the country.
- In the case of urban constituencies, (where there are no Gram Panchayats), the MP will identify a Gram Panchayat from a nearby rural constituency.
- The newly elected MPs will have the option to select the GP of their choice.

## 7. Upholding the human rights of people with disabilities

### Why in News?

- Twenty years ago on August 6 in Erwadi in Tamil Nadu's Ramanathapuram, a fire broke out in a thatched shelter, engulfing 43 chained people who had psychosocial disabilities.

### Legal provision for the Persons with Disabilities:

- India ratified the Convention on the Rights of Persons with Disabilities (CRPD) in 2007.
- The Rights of Persons with Disabilities Act was enacted in 2016.
- The Mental Healthcare Act (MHCA) was enacted in 2017.

### Failure of the states:

- States have failed to uphold the human rights of people with disabilities in general and those with psychosocial and intellectual disabilities in particular.
- Only eight states/UTs — Karnataka, Andhra Pradesh, Uttar Pradesh, Jammu & Kashmir, Maharashtra, Odisha, Kerala, and West Bengal — have framed rules for implementation of MHCA.
- Unless we implement the law in letter and spirit, the Global Mental Health Movement will remain a mere buzzword and the CRPD-reliant MHCA will remain a law only on paper.

### Violations of rights in Private Asylums:

- Private asylums survive because of their close proximity to faith-based healing centres.
- Because mental health conditions carry a high stigma, caregivers flock to these faith-based facilities in the hopes of finding a cure.
- Private players take advantage of their vulnerabilities, forcing such persons with psychosocial issues to be grouped together and chained in these shelters.
- Chaining in any way or form is outlawed under Section 95 of the MHCA.

### Way Forward:

- Human right approach: We must work to ensure that the human rights approach to disability is integrated into Mental Health Systems, Education, Law, and Bureaucracy.
- We move away from pathologisation, segregation, and a charity-based approach.

## 8. Electricity Amendment Bill, 2021

### Why in News?

- The Electricity Amendment bill, 2021 of the centre is facing opposition even before introduction in the Parliament.
- Many state governments, including West Bengal have asked the centre not to introduce the bill in the Parliament.

### Highlights:

- The bill will deregulate electricity distribution sector and allow private companies to compete with state-owned distribution companies (DISCOMS).
- This would give options to the consumers to choose the distribution company they want without relying on inefficient state owned ones.
- At present many private distribution companies exist in major cities such as Delhi, Mumbai, and Ahmedabad. But these are exceptions.

## Need for Private Distribution Companies:

- Government-owned DISCOMS are suffering from large debts and losses. The government had introduced many schemes to restructure their loans without success.
- Scheme such as UDAY brought temporary respite to the sector but they still are relying on Government Funds to stay afloat.

## Objections to de-licensing:

- There is a fear that private players will cherry pick supply targets in form of industrial and consumer players who pay high tariffs.
- They may not provide supply for domestic and agricultural consumers as the margin for profits are low due to low rates. Poor and unaffordable consumers will be on the mercy of public distribution companies, which may not be efficient as they lose commercial revenue to private players. Higher penalties will be levied on companies who fail to meet Renewable energy Purchase Obligations (RPOs).

## Addressing Concerns:

- There can be a universal service obligation agreement by private players to supply power to agricultural as well as domestic users to prevent cross subsidy.
- There is a plan to define the minimum area to be covered by private sector competitors to include a universal service obligation and also ceiling subsidy.

## 9. Issue of the oath of an elected representative

### Why in News?

- Some Cabinet Ministers in Karnataka who took oath recently stood out from the rest. All these oaths run against the spirit of the Constitution.

### Background of Agnostic Constitution:

- The public officials who took office under the Government of India Act, 1935 had to take oath which had no mention of God.
- During the Constituent Assembly debate, B.R. Ambedkar proposed the Preamble, “We, the people of India...”.
- H.V. Kamath moved an amendment to the Preamble, “In the name of God, we, the people of India...”.
- To this proposal, another member, A. Thanu Pillai said that if this amendment is accepted it would affect the fundamental right of freedom of faith.

- He said that a man has a right to believe in God or not, according to the Constitution.
- H.N. Kunzru opposed Kamath's amendment stating that in a matter that vitally concerns every man individually, the collective view should not be forced on anybody.
- The amendment was defeated, thereby excluding 'God' from the Preamble.
- Thus, our founding Fathers gave us an agnostic Constitution.

### What are Provisions in Consitution:

- The public officials who took office under the Government of India Act, 1935 had to take oath which had no mention of God.
- However, the framers of the Indian Constitution rejected this conception of secularism.
- Constitution gives office-holders an option to swear in God's name if they so wished.
- The Supreme Court of India observed in 2012 that the oath by an elected representative should be taken "in the name of God" if the person is a believer or should be "solemnly affirmed" if the person is a non-believer.
- The Supreme Court said that the oath of an elected representative should be in strict compliance with the wordings of the Constitution.

### Way Forward:

- As the Republic belongs to all the citizenry, irrespective of whether he is a theist, atheist or agnostic, and irrespective of his caste or religion, a person occupying a constitutional post should take oath in the format of "solemnly affirm".
- The Constitution should be amended accordingly.

## 10. Why India needs an NHS-like healthcare model

### Why in News?

- Even after the pandemic, the Indian Government Continues to budget less than 1 per cent of GDP for healthcare, one of the Lowest in the world.

### NHS:

- Every year, Britain's legendary health network National Health Service (NHS) cures 15 million patients with chronic ailments, at a fraction of the cost spent by the US.
- The NHS funded by direct taxes is also the fifth largest employer in the world, after McDonalds and Walmart.
- One of every 20 British workers is employed as doctor, nurse, catering and technical personnel.

## Public Healthcare in India:

- Even after the pandemic, the Indian government continues to budget less than 1 per cent of GDP for healthcare, one of the lowest in the world.
- In contrast, China invests around 3 per cent, Britain 7 per cent and the United States 17 per cent of GDP.
- So, 62 per cent of health expenses in India are paid for by patients themselves
- This is one of the main reasons for families falling into poverty especially during the pandemic.
- In India, hospitals are beleaguered with absentee staff.
- As per a Niti Aayog database, in the worst state of Bihar in 2017-18, positions for 60 per cent of midwives, 50 per cent of staff nurses, 34 per cent of medical officers and 60 per cent of specialist doctors were vacant.
- Those on the job, despite being handsomely paid, are chronically overworked.
- In the 21st century, not much has improved in India's public hospitals. Still, in India doctors are often equated with gods. What India needs in NHS like healthcare model.



## 3. SCIENCE & TECHNOLOGY

### 1. NASA-ISRO Synthetic Aperture Radar

#### Why in News?

- The NASA-ISRO Synthetic Aperture Radar satellite, aimed at making global measurement of land surface changes using advanced radar imaging, is proposed to be launched in early 2023, informed Earth Sciences Minister.

#### NASA-ISRO SAR:

- NISAR is a joint collaboration for a dual-frequency L and S-band SAR for earth observation.
- NASA and Bengaluru-headquartered ISRO signed a partnership on September 30, 2014, to collaborate on and launch NISAR.
- The mission is targeted to launch in early 2022 from ISRO's Sriharikota spaceport in Andhra Pradesh's Nellore district, about 100km north of Chennai.
- It is capable of producing extremely high-resolution images for a joint earth observation satellite mission with NASA.
- It will be the first satellite mission to use two different radar frequencies (L-band and S-band) to measure changes in our planet's surface less than a centimeter across.

#### Objectives of the NISAR:

- NISAR will observe Earth's land and ice-covered surfaces globally with 12-day regularity on ascending and descending passes, sampling Earth on average every six days for a baseline three-year mission.
- It will measure Earth's changing ecosystems, dynamic surfaces, and ice masses, providing information about biomass, natural hazards, sea-level rise, and groundwater, and will support a host of other applications.
- It would also provide data on natural hazards including earthquakes, tsunamis, volcanoes, and landslides.

#### What are L and S Bands?

- L band waves are used for GPS units because they are able to penetrate clouds, fog, rain, storms, and vegetation.
- The S-band is used by airport surveillance radar for air traffic control, weather radar, surface ship radar, and some communications satellites, especially those used by NASA to communicate with the Space Shuttle and the International Space Station.

- NISAR uses a sophisticated information-processing technique known as SAR to produce extremely high-resolution images.
- Radar penetrates clouds and darkness, enabling NISAR to collect data day and night in any weather.

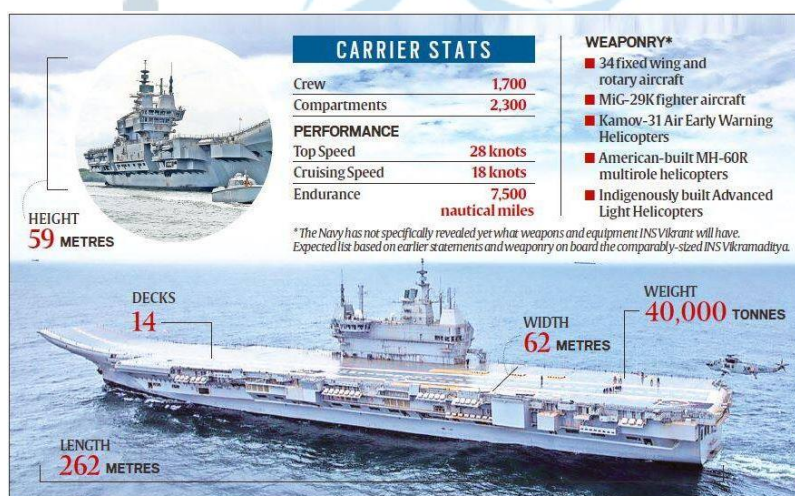
## What is Collaboration?

- NASA is providing the mission's L-band SAR, a high-rate communication subsystem for science data, GPS receivers, a solid-state recorder, and payload data subsystem.
- ISRO is providing the spacecraft bus, the S-band radar, the launch vehicle, and associated launch services for the mission, whose goal is to make global measurements of the causes and consequences of land surface changes using advanced radar imaging.

## 2. Indigenous Aircraft Carrier 1 (INS Vikrant)

### Why in News?

- The much-awaited sea trials of India's maiden indigenous aircraft carrier (IAC-1), built by the public sector Cochin Shipyard Ltd (CSL) have begun.



### Indigenous Aircraft Carrier 1:

- IAC is the first aircraft carrier designed and built in India.
- It has been designed by the Indian Navy's Directorate of Naval Design (DND), and is being built at Cochin Shipyard Limited (CSL), a public sector shipyard under the Ministry of Shipping. The IAC-1, the biggest warship made indigenously, has an overall length of 263 m and a breadth of 63 m.
- It is capable of carrying 30 assorted aircraft including combat jets and helicopters.
- Propelled by four gas turbines, it can attain a top speed of 30 knots (about 55 kmph).



- The vessel will have a complement of 1,500 personnel.

### Significance of IAC 1:

- An aircraft carrier is one of the most potent marine assets for a nation, which enhances a Navy's capability to travel far from its home shores to carry out air domination operations.
- Many experts consider having an aircraft carrier as essential to be considered a 'blue water' navy – one that has the capacity to project a nation's strength and power across the high seas.
- An aircraft carrier generally leads as the capital ship of a carrier strike/battle group.
- As the carrier is a valuable and sometimes vulnerable target, it is usually escorted in the group by destroyers, missile cruisers, frigates, submarines, and supply ships.

### Why does it Matter that this is a Made-in-India Warship?

- Only five or six nations currently have the capability of manufacturing an aircraft carrier – India joins this elite club now.
- According to the Navy, over 76 per cent of the material and equipment on board IAC-1 is indigenous.
- India's earlier aircraft carriers were either built by the British or the Russians.
- The INS Vikramaditya, currently the Navy's only aircraft carrier that was commissioned in 2013, started out as the Soviet-Russian Admiral Gorshkov.
- The country's two earlier carriers, INS Vikrant and INS Viraat, were originally the British-built HMS Hercules and HMS Hermes before being commissioned into the Navy in 1961 and 1987 respectively.

### Why will this Warship be named INS Vikrant?

- INS Vikrant, a Majestic-class 19,500-tonne warship, was the name of India's much-loved first aircraft carrier, a source of immense national pride over several decades of service before it was decommissioned in 1997.
- India acquired the Vikrant from the United Kingdom in 1961, and the carrier played a stellar role in the 1971 war with Pakistan that led to the birth of Bangladesh.
- Now that India has the capability, will it build more carriers?
- Since 2015, the Navy has been seeking approval to build a third aircraft carrier for the country, which, if approved, will become India's second Indigenous Aircraft Carrier (IAC-2).
- This proposed carrier, to be named INS Vishal, is intended to be a giant 65,000-tonne vessel, much bigger than IAC-1 and the INS Vikramaditya.

- The Navy has been trying to convince the government of the “operational necessity” of having a third carrier.

### 3. CERT-In tracks 6.07 lakh cybersecurity incidents

#### Why in News?

- Cybersecurity incidents noted by CERT-In.

#### Highlights:

- The Indian Computer Emergency Response Team (CERT-In) observed more than 6.07 lakh cybersecurity incidents in the first six months of 2021, of which about 12,000 were related to government organisations.
- The IP addresses of the computers from where the attacks appeared to originate belonged to various different countries.

#### CERT-In:

- CERT-IN was established in 2004 under Section (70B) of the Information Technology Act.
- It is the national nodal agency for responding to computer security incidents as and when they occur. It strengthens the security-related defence of the Indian Internet domain.

#### Functions of CERT-In:

- Collection, analysis and Dissemination of information on cyber incidents.
- Providing forecasts and alerts of Cybersecurity Incidents.
- Emergency measures for handling Cybersecurity Incidents.
- Coordination of cyber incident response Activities.
- Issue guidelines, advisories, vulnerability notes and whitepapers relating to information security practices, procedures, prevention, response and reporting of Cyber Incidents.

### 4. Olympian bat

#### Why in News?

- A variety of bat has been successful in travelling a distance of 2000 km from London to the Pskov region of Russia, earning the nickname ‘Olympian bat’.



#### Highlights:

- The female bat belongs to Nathusius’ pipistrelle species and was found near the village of Molgino, located in Pskov region of Russia.

- The observers found tag on the bat's arm that read "London Zoo". This is not the first instance when bats travelled such far.
- In 2019, a bat belonging to the similar species was found in Spain. The bat had travelled about 2,224 km from Latvia.
- These species of bats are smaller than a toothbrush and weigh less than 10 grams. They are known to migrate from cold northern Europe to warmer areas for breeding purpose.
- The distance of 2,224 is likely to be an estimate based on shortest distance between Spain and Latvia. It could be more.

### Significance:

- The study will offer insights into the migration pattern of bats and also effects of climate change on habitat.
- The range expansion of the Nathusius' pipistrelle is said to be effect of climate change. Further climate change will Impact the Species.

### Conservation:

- The National Nathusius' Pipistrelle Project was launched by Bat Conservation Trust of Great Britain in 2014 for conservation and understanding of the species.
- One of the goals include studying the migration pattern of the species to determine the effects of climate change on its habitat.

## 5. Revamped National Gene Bank

### Why in News?

- The Union Agriculture Minister has inaugurated the world's second-largest refurbished gene bank at the National Bureau of Plant Genetic Resources.

### National Gene Bank:

- The National Gene Bank was established in the year 1996 to preserve the seeds of Plant Genetic Resources (PGR) for future generations.
- It has the capacity to preserve about one million germplasm in the form of seeds.
- Presently it is protecting 4.52 lakh accessions, of which 2.7 lakh are Indian germplasm and the rest have been imported from other countries.
- National Bureau of Plant Genetic Resources is meeting the need of in-situ and ex-situ germplasm conservation through Delhi Headquarters and 10 regional stations in the Country.

### Key Facilities Provided:

- The NGB has four kinds of facilities to cater to long-term as well as medium-term conservation namely:
- Seed Gene bank (- 18°C),
- Cryo gene bank (-170°C to -196°C),
- In-vitro Gene bank (25°C), and

### Field Gene bank:

- It stores different crop groups such as cereals, millets, medicinal and aromatic plants, and narcotics, etc.

### What is the Latest Update?

- This is the world's second-largest gene bank located in the national capital.
- It has the capacity to preserve about one million germplasm in the form of seeds.
- Presently, it is protecting 4.52 lakh accessions, of which 2.7 lakh are Indian germplasm and the rest have been imported from other countries.

## 6. Colourful molecules of turmeric

### Why in News?

- Researchers have come forward with some interesting findings on Turmeric.

### Turmeric:

- Turmeric has about 3% of the active component molecule called curcumin, a polyphenol diketone (and not a steroid).
- Researchers point out that there is another molecule in turmeric called piperine, which is an alkaloid, responsible for the pungency of pepper that we use every day in our cooking, along with turmeric.
- Piperine enhances curcumin absorption in the body. It gives turmeric its multivariate healing and protective power.

### Benefits of turmeric consumption:

- Turmeric has been known for over 4,000 years in the Indian subcontinent, West Asia, Burma, Indonesia and China, and is used as an essential part of our daily food – what the colonials called curry powder.
- It has also been known as a medicine for ages, and to have anti-bacterial, anti-oxidant and Anti-Inflammatory Properties.

- Herbal medicine experts have used turmeric to treat painful symptoms of arthritis, joint stiffness, and joint pain.
- They have also claimed that turmeric helps cure acute kidney injuries. Some of these claims need to be checked using controlled trials.

### Against COVID-19:

- Most recently, an exciting study has recently been published by a group in Mumbai which shows that turmeric aids in the treatment of COVID-19 patients.
- The researchers did a trial of about 40 COVID-19 patients and found that turmeric could substantially reduce morbidity and mortality.

## 7. BCG Vaccine: 100 Years and Counting

### Why in News?

- The first use of BCG (Bacillus Calmette-Guerin), the vaccine against tuberculosis (TB) in humans has been completed for 100 years.

### What is TB?

- TB is a very ancient disease and has been documented to have existed in Egypt as early as 3000 BC.
- It is caused by a bacterium called Mycobacterium tuberculosis, belonging to the Mycobacteriaceae family consisting of about 200 members.
- Some of these cause diseases like TB and leprosy in humans and others infect a wide range of animals. Mycobacteria are also widely dispersed in the environment.
- In humans, TB most commonly affects the lungs (pulmonary TB), but it can also affect other organs (extra-pulmonary TB).

### Yet not Eliminated:

- Other historically dreaded diseases like smallpox, leprosy, plague and cholera have been either eradicated or controlled to a large extent due to advances in science and technology.
- However, TB continues to be a major public health problem in the world.
- According to the WHO's Global TB Report, 10 million people developed TB in 2019 with 1.4 million deaths. India accounts for 27% of these cases.

### BCG Vaccine for TB:

- BCG was developed by two Frenchmen, Albert Calmette and Camille Guerin, by modifying a strain of Mycobacterium bovis (that causes TB in cattle) till it lost its capacity to cause disease while retaining its property to stimulate the Immune System.

- It was first used in humans in 1921.
- Currently, BCG is the only licensed vaccine available for the prevention of TB.
- It is the world's most widely used vaccine with about 120 million doses every year and has an excellent safety record.

### **BCG in India:**

- In India, BCG was first introduced in a limited scale in 1948 and became a part of the National TB Control Programme in 1962.
- India is committed to eliminate TB as a public health problem by 2025.

### **Effectiveness of BCG:**

- One intriguing fact about BCG is that it works well in some geographic locations and not so well in others.
- Generally, the farther a country is from the equator, the higher is the efficacy.
- In children, BCG provides strong protection against severe forms of TB.
- This protective effect appears to wane with age and is far more variable in adolescents and adults, ranging from 0–80%.
- In addition to its primary use as a vaccine against TB, BCG also protects against respiratory and bacterial infections of the new-borns and other mycobacterial diseases like leprosy and Buruli's ulcer.
- It is also used as an immunotherapy agent in cancer of the urinary bladder and malignant melanoma.

## 4. ECONOMY

### 1. Strategic Petroleum Reserves

#### Why in News?

- Under Phase II of the petroleum reserve program, the Government has approved two additional commercial-cum-strategic facilities at Chandikhola (Odisha) and Padur (TN) on Public-Private Partnership (PPP) model.

#### Strategic Petroleum Reserves Programme:

- To ensure energy security, the govt had decided to set up 5 million metric tons (MMT) of strategic crude oil storage at three locations namely, Visakhapatnam, Mangalore, and Padur (near Udupi).
- These strategic storages would be in addition to the existing storage of crude oil and petroleum products with the oil companies and would serve as a cushion during any supply disruptions.
- The petroleum reserves established are strategic, and the crude oil stored in these reserves will be used during an oil shortage event, as and when declared so by the Government of India.
- The construction of the Strategic Crude Oil Storage facilities is being managed by Indian Strategic Petroleum Reserves Limited (ISPRL), a Special Purpose Vehicle.



#### Why Need SPR?

- The Gulf War in 1990 caused a sharp rise in oil prices and a massive increase to India's imports. During the subsequent 1991 Indian economic crisis, foreign exchange reserves could barely finance three weeks' worth of imports while the government came close to defaulting on its financial obligations.
- India was able to resolve the crisis through policies that liberalized the economy. However, India continued to be impacted by the volatility of oil prices.
- In 1998, the AB Vajpayee administration proposed building petroleum reserves as a long-term solution to managing the oil market.
- Three storage facilities were built in underground locations in Mangalore, Visakhapatnam and Padur.

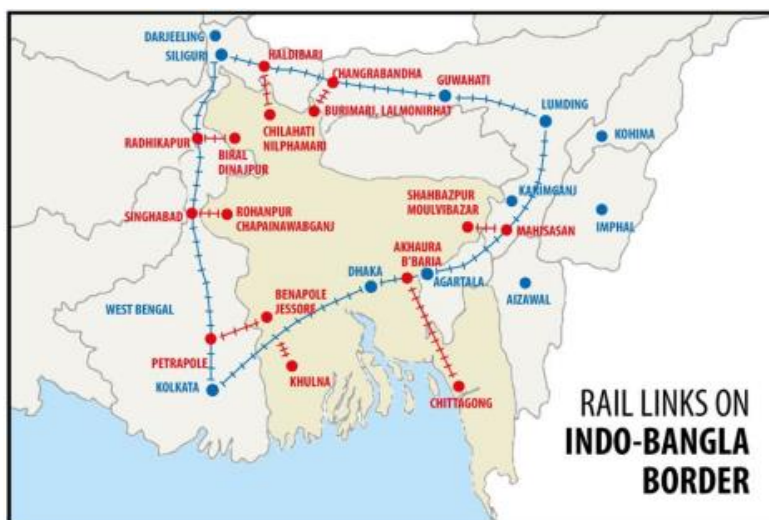
## Construction of ISPR:

- The crude oil storages are constructed in underground rock caverns and are located on the East and West coasts of India.
- Crude oil from these caverns can be supplied to the Indian Refineries either through pipelines or through a combination of pipelines and coastal movement.
- Underground rock caverns are considered the safest means of storing hydrocarbons.

## 2. Haldibari- Chilahati Rail Link

### Why in News?

- The freight trains have started commuting via the restored Haldibari (India) – Chilahati (Bangladesh) rail link.



### Haldibari- Chilahati Rail Link:

- The Haldibari – Chilahati rail link between India and then East Pakistan was operational till 1965.
- The distance between Haldibari Railway Station till the international border is 4.5 km, while that of Chilahati is around 7.5 km till the ‘zero points’.
- This was part of the Broad-Gauge main route from Kolkata to Siliguri during the partition.
- Trains traveling to Assam and North Bengal continued to travel through the then East Pakistan territory even after partition.
- However, the war of 1965 effectively cut off all the railway links between India and then East Pakistan.
- The link was reopened in 2020 for the movement of passenger and goods traffic.



## Other railway links between India and Bangladesh:

- As of now, five links connecting India with Bangladesh have been made operational which include:
- Petrapole (India) – Benapole (Bangladesh)
- Gede (India) – Darshana (Bangladesh)
- Singhabad (India) – Rohanpur (Bangladesh)
- Radhikapur (India) – Birol (Bangladesh)
- Haldibari (India) – Chilahati (Bangladesh)

## 3. Kuthiran Tunnel

### Why in News?

- The Union Minister for Road Transport and Highways has inaugurated the Kuthiran Tunnel in Kerala

### Kuthiran Tunnel:

- Kuthiran Tunnel is a Twin-tube tunnel at Kuthiran in Thrissur District of Kerala.
- It is located on National Highway 544, owned and operated by the National Highways Authority of India.
- It is Kerala's first-ever tunnel for road transport and South India's Longest 6-lane road tunnel. Kuthiran gradient is situated in the Kuthiran Hills, situated in the western part of Anaimalai Hills. The hills are a notified Peechi- Vazhanni wildlife sanctuary.
- It will drastically improve connectivity to Tamil Nadu and Karnataka.
- The road will improve connectivity to important ports and towns in North-South Corridor without endangering wildlife.

## 4. What India needs for a just energy transition

### Why in News?

- With an ever-growing list of countries announcing net-zero emissions targets, the global energy system is set to undergo a transformation in the coming decades. But India needs to ensure that this transition is smooth and people-centric.

### Transition in India:

- According to an IEA analysis, 90 per cent of new electricity generation capacity around the world now comes from renewables.

- In India, that energy transformation is well underway.
- India is among the world's top five countries in terms of renewable power capacity.
- Ambitious target of 450 gigawatts: Its ambitious target to increase India's renewable energy capacity to 450 gigawatts (GW) by 2030 would help move it closer to achieving the country's broader climate goals and commitments made under the Paris Agreement.
- Clean energy leadership by India: India is also showing global clean energy leadership through initiatives such as the International Solar Alliance, which has more than 70 member countries.
- **Transition in rural area:** The energy transition in rural India can be driven by dedicated policies to promote renewables, incentivise investment in decentralised low-carbon power sources like rooftop solar, and train and build the capacity of clean energy entrepreneurs.
- Incorporating energy efficiency in the Affordable Housing Mission: In the short term, stimulus spending in the labour-intensive construction sector could accelerate progress on the Affordable Housing Mission.
- Incorporating energy efficiency and green construction methods into these projects could ensure millions of homes enjoy thermal comfort, and help make energy efficiency a core part of building designs.

### Factors to Consider in Transition to Clean Energy:

- **Ensure Equity:** It must be ensured that the opportunities of India's transition are shared fairly throughout society – and workers and communities are not left to face the challenges alone.
- Make it people-centric: To achieve the trifecta of jobs, growth and sustainability, India must strive to put people at the centre of its energy transformation.
- Provisions for coal-dependent regions: New jobs would need to be found over time for the coal miners affected by the changes, as well as for people who work in the fossil fuel power plants that will close down.
- Policymakers must earmark special “transition funds” to help coal-dependent regions, some of which are among India's poorest.
- Increase investment by rationalising energy subsidies: Energy subsidies must be rationalised and directed towards those who need them most. Fiscal resources freed up through subsidy reform should then be invested in clean energy solutions, especially in underdeveloped regions and marginalised communities.

- **Support Rural Livelihood:** A just transition should focus on how clean energy can support rural livelihoods and increase communities' resilience in the aftermath of the pandemic shock.
- Ensure women's participation in the green workforce: While India's energy transition will create many new jobs, the limited participation of women in the growing green workforce must be addressed.
- A 2019 study by CEEW and the IEA suggests that women account for nearly 32 per cent of the renewable's workforce globally but only around 11 per cent of the rooftop solar workforce in India.
- **Engage Youth:** Engaging the youth is critical to ensure that the energy transition is sustainable, inclusive and enduring.
- Young entrepreneurs in India have already shown their impact by expanding the footprint of renewables and disrupting traditional energy models.
- Some of these key themes are being explored by the 30 members of the Global Commission on People-Centred Clean Energy Transitions, which the IEA launched in January.

## 5. Vaccination and Normalising of Monetary Policy hold key to Economic Rebound

### Why in News?

- Increasing pace of vaccination and normalising of monetary policy hold key to economic rebound.

### K-shaped Recovery and its Impact:

- Growth indicators so far suggest resilience in the short term — a shallow dent in May's economic activity followed by a recovery in June, back to April's levels.
- **K-shaped Recovery:** The external, investment and industrial sectors have been relatively resilient, with consumption and services bearing the brunt.
- Notwithstanding signs of some fatigue in ultra-high frequency indicators in July, damage from the second wave seems largely limited to April-June 2021.
- However, K-shaped recovery means light cracks on the top conceal much larger structural fault lines below.
- **Rising Poverty:** The Pew Research Centre estimates that the pandemic has led to India's poor rising by 75 million while the middle and upper-middle class has shrunk by 39 million.

- MSMEs and informal workforce worst hit: A recent survey by the ILO finds that the worst-hit — MSMEs and their informal workforce — have struggled to access the government’s pandemic support programmes. These more structural scars may become blurred in the GDP data in coming quarters but will almost certainly affect the medium-term growth story.

## Way Forward in the Near Term:

### 1. Policy

- Achieving two objectives: When inflation is under control, then flush liquidity and ultra-accommodative monetary policy will help achieve two objectives—
  1. Ensuring easy financial conditions.
  2. Help control borrowing costs of the government’s expansive borrowing programme.
- Inflation risk: The above strategy is not costless, it effectively uses the central bank’s credibility in controlling inflation as “collateral”.
- So when inflation flares up and remains sticky, this arithmetic becomes increasingly complicated. The RBI’s consistent message recently has been to view the current inflation surge as a “temporary hump”.
- Much as the current monetary policy stance maintains that the economy is ill-equipped to handle policy normalisation, it is a matter of when rather than if.
- As growth strengthens and the RBI’s inflation-targeting credibility comes under greater scrutiny, a policy pivot would become increasingly likely.

### 2. Vaccination

- The “ultimate unlocking” of the economy remains contingent on a critical mass getting vaccinated, which on materialising should trigger a revival in consumer and business sentiment.
- The uptick in the pace of vaccination over the last few days and higher seroprevalence reported in some states are welcome news.

## K-shaped Recovery:

- A K-shaped recovery occurs when, following a recession, different parts of the economy recover at different rates, times, or magnitudes.
- This is in contrast to an even, uniform recovery across sectors, industries, or groups of people. A K-shaped recovery leads to changes in the structure of the economy or the broader society as economic outcomes and relations are fundamentally changed before and after the recession.

- This type of recovery is called K-shaped because the path of different parts of the economy when charted together may diverge, resembling the two arms of the Roman letter “K.”

## 6. The Goal of Making the Rupee a Global Reserve Currency

### Why in News?

- India will celebrate 100 years of Independence in 2047. This article makes the case that prosperity is possible and best accomplished by the goal of making the rupee a global reserve currency by India@100.

### What is the Purpose of Having Forex Reserves?

- Official foreign exchange reserves of about \$12 trillion across 150 countries are currently stored in eight currencies: 55 per cent in US dollars, 30 per cent in euros, and 15 per cent in six other currencies. Protection in case of volatility: This concentration is inevitable given exploding trade, rising capital flows, and the less acknowledged motivation of protecting your reserves from your currency’s volatility.
- A reserve currency has to serve as a medium of exchange, a store of value, and a unit of account.

### Steps India Would Require to Take:

- Full capital account convertibility: To fulfil the ambition of becoming the reserve currency, the first step is full capital account convertibility, as suggested by the Tarapore Committee in 1997.
- Advocate rupee invoicing: Dollar investors in the last decade not experiencing the usual big bite out of rupee returns is useful for advocating trading partners to start rupee invoicing.
- Offshore corporate rupee borrowing: Raising corporate rupee borrowing offshore and onshore will also help.
- Digital currency: We need to accelerate our CBDC (central bank digital bank currency) plans.
- Take payment networks to a global level: We need to take our UPI payment technology to the world, the dollar gets heft from global networks like Visa, MasterCard and Swift.
- Raise tax to GDP ratio: Fiscal policy must raise our tax to GDP ratio, raise the share of direct taxes in total taxes, and keep our public debt to GDP ratio under 100 per cent.
- Monetary policy: Monetary policy must control inflation while moderating central bank balance sheet size.

- Economic policy: Economic policy must raise the productivity to reach goals in formalisation, urbanisation, financialisation (100 per cent credit to GDP ratio), industrialisation (less than 15 per cent farm employment), internationalisation (higher share of global trade) and skilling.
- Institutional reforms: These goals must be complemented by reinforcing institutions that signal rule of law; cooperative federalism, press freedom, civil service effectiveness, and judicial independence.

### How it will Help India?

- Becoming a global reserve currency is helpful because it indirectly aligns fiscal, monetary, and economic policy.
- Low-interest rate: The main advantage is the “exorbitant privilege” of lower real interest rates. Edge over China: The 2 per cent renminbi share in global reserves — despite a 25 per cent increase last year — doesn’t reflect their status as the world’s second-largest economy and biggest trading nation.
- China’s astounding economic success seems to be making China overconfident.
- Chinese overconfidence creates an opportunity for India.
- Prosperity for all Indians by India at 100 — a precondition for a country where the mind is without fear and the head is held high — needs bold reforms in the next 25 years. These reforms are best measured by the wholesome and achievable goal of the rupee becoming a global reserve currency by 2047. The journey is the reward.

## 7. China surging ahead, says NITI Aayog

### Why in News?

- The NITI Aayog officials opine that China has been recovering well in the aspects of trade flows, financial markets, etc.

### Highlights:

- To discuss the long-term impact of the COVID-19 pandemic, a Standing Committee on Finance has been set up.
- The committee has been mandated to view the developments on the global economy, trade flows and financial markets.
- It has been found that the Chinese had been recovering well, inching well ahead of India and also at a rate that is bridging the gap between China and the USA in the post-pandemic era.

- The officials however did not give any specific details about the current economic state of India.

### State of the Global Economy:

- A NITI Aayog official said the global economy was going through a similar phase like the one it witnessed post the first world war.
- The NITI Aayog officials were quizzed if the pandemic had turned out to be a critical point in the global supply chain and if there was any evidence to suggest if China would persist as the factory of the world.
- The officials in response replied that China had been doing well on the economy front, and it was fast narrowing the gap with the USA.
- China has adapted itself better than most other countries to the post-pandemic era.

### The Reforms Suggested:

- India has to initiate reforms that are deep-rooted similar to the one witnessed during the 1991 reforms.
- With reference to the current state of the Indian economy, it was said that India should focus on becoming an Export-Based Economy.

## 8. e-RUPI

### Why in News?

- Recently e-RUPI was launched by the Prime Minister.

### e-RUPI:

- It is a digital prepaid, purpose- and person-specific payment utility.
- Built on the UPI platform, e-RUPI is easy to scale by the issuer.
- At the point of presence, the verification code received by the beneficiary is shared with the service provider to authenticate and authorise the transaction: Contactless, real-time payment and online settlement of funds into the service provider's bank account.
- Fourteen leading banks have already integrated it with their systems.
- e-RUPI is almost custom-designed for school voucher programmes.
- The efficacy of these programmes is well established in many countries.

### Advantages:

- The adoption of e-RUPI in various government programmes will enhance business efficiency, simplicity, transparency, and accountability in these programmes.

- e-RUPI can make cash transfer purpose and person-specific:
- Policymakers have debated whether direct cash transfers deliver benefits more efficiently than in-kind transfers like the Public Distribution System (PDS) and fertilisers.

### **e-RUPI could break the policy logjam with the following advantages:**

1. It will make cash transfers purpose- and person-specific.
2. Freeing them from dependence on bank accounts.
3. Providing visibility from the time of issue until redemption.

### **e-RUPI can make PDS more Efficient:**

- The inefficiency of PDS is rooted in high overhead costs, leakages, exclusion and inefficiencies. A food-specific e-RUPI voucher will allow beneficiaries to buy rations from an outlet of their choice. It will also help promote the One Nation, One Ration Card.
- The move will also help in removing price distortion and the redemption of the voucher at market price by merchants within and outside the PDS network.

### **Streamline Fertiliser Subsidy:**

- e-RUPI will enable farmers to buy fertiliser at nominal prices with direct credit of the subsidy amount into the account of the authorised dealers.
- As far back as 2011, a task force on direct transfer of subsidies on kerosene, LPG and fertilisers headed by Nandan Nilekani had suggested a roadmap for direct cash transfer of fertiliser subsidies in a phased manner.
- The suggestion relating to fertilisers have not happened.
- The e-RUPI will allay apprehensions about creating an IT infrastructure, managing nearly 3,00,000 fertiliser sale points, the collapse of dealer network due to liquidity squeeze in the event of subsidy payments getting delayed and a complex system of timely credit of subsidy into an estimated 129 million Aadhaar-linked bank accounts of farm households.

### **Basic Income Support:**

- The Covid-19 pandemic has revived interest in Universal Basic Income (UBI).
- The lockdowns to contain the pandemic exposed the poor to acute distress, due to loss of means of livelihood. e-RUPI can mitigate their stress by rapidly distributing food and cash vouchers at scale.

### **Ayushman Bharat:**

- In the Ayushman Bharat healthcare initiative beneficiaries can be given e-RUPI vouchers of designated value tenable at empanelled healthcare facilities, providing them portability and facility choice.



- The service provider will benefit from the Immediate Payment.

### Way Forward:

- **Ownership Agency:** The Aadhaar experience suggests ownership must vest with a specific agency.
- **Make distribution and Acceptance Compatible:** Making the distribution and acceptance of e-RUPI incentive-compatible is recommended, as demonstrated by the popularisation of prepaid telephony by the telecom industry.
- **Light regulation and Competition Promotion:** Light regulation and the opening of e-RUPI to competition will spur innovation and adoption.
- All banks, small and big, NBFCs, non-bank PPI issuers, and telcos may be allowed to issue it later.

## 9. General Insurance Business (Nationalization) Amendment Bill, 2021

### Why in News?

- The General Insurance Business (Nationalization) Amendment Bill, 2021, was recently passed by both houses of parliament.
- The Bill seeks to amend the General Insurance Business (nationalization) Act, 1972.

### What is the GIB Act?

- The 1972 Act set up the General Insurance Corporation of India (GIC).
- The businesses of the companies nationalized under the Act were restructured in four subsidiary companies of GIC: (i) National Insurance, (ii) New India Assurance, (iii) Oriental Insurance, and (iv) United India Insurance.
- The Act was subsequently amended in 2002 to transfer the control of these four subsidiary companies from GIC to the central government, thereby making them independent companies.
- Since 2000, GIC exclusively undertakes the reinsurance business.

### Key Highlights of the Amendment Bill:

- **Government Shareholding Threshold:** The Act requires that shareholding of the central government in the specified insurers (the above five companies) must be at least 51%. The Bill removes this provision.
- **Change in definition of General Insurance Business:** The Act defines general insurance business as fire, marine or miscellaneous insurance business.

- **Transfer of control from the government:** The Bill provides that the Act will not apply to the specified insurers from the date on which the central government relinquishes control of the insurer.
- **Notifying Terms and Conditions:** The Bill provides that schemes formulated by the central government in this regard will be deemed to have been adopted by the insurer.
- **Liabilities of Directors:** The Bill specifies that a director of a specified insurer, who is not a whole-time director, will be held liable only for certain acts.

### Significance of the Bill:

- **De-regulation:** The move is part of the government's strategy to open up more sectors to private participation and Improve Efficiency.
- **Capital infusion:** Privatization will bring in more private capital in the general insurance business and improve its reach to make more products available to customers.
- **Insurance coverage:** This will enhance insurance penetration and social protection to better secure the interests of policyholders and contribute to faster growth of the economy

### Concerns of the Opposition:

- The Opposition is of the view that privatization will be detrimental to the interests of the public.
- They wanted a proper discussion on the pros and cons of the Bill rather than passing it in a hurry.
- They wanted an expert committee of the Cabinet to study the impact before passing the legislation.
- They are worried about large-scale employee layoffs and short-term investors entering and exiting these entities once the Act comes into force.

## 10. Rice Fortification Plan

### Why in News?

- PM in his I-day speech has announced the fortification of rice distributed under various government schemes, including the Public Distribution System (PDS) and mid-day meals in schools, by 2024.

### What is Fortification?

- FSSAI defines fortification as “deliberately increasing the content of essential micronutrients in a food so as to improve the nutritional quality of food and to provide public health benefit with minimal risk to health”.

## What is Fortified Rice?

- Rice can be fortified by adding a micronutrient powder to the rice that adheres to the grains or spraying of the surface of ordinary rice grains with a vitamin and mineral mix to form a protective coating.
- Rice can also be extruded and shaped into partially precooked grain-like structures resembling rice grains, which can then be blended with natural polished rice.
- Rice kernels can be fortified with several micronutrients, such as iron, folic acid and other B-complex vitamins, vitamin A and zinc.
- These fortified kernels are then mixed with normal rice in a 1:100 ratio, and distributed for consumption.
- Note: Biofortification is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology. It differs from conventional fortification in that Biofortification aims to increase nutrient levels in crops during plant growth rather than through manual means during the processing of the crops.

## What is the plan Announced by the PM?

- Malnutrition and lack of Essential Nutrients in poor women and poor children poses major obstacles in their Development.
- In view of this, it has been decided that the government will fortify the rice given to the poor under its various schemes.
- Be it the rice available at ration shops or the rice provided to children in their mid-day meals, the rice available through every scheme will be fortified by the year 2024.

## Why Such a Move?

- The announcement is significant as the country has high levels of malnutrition among women and children. According to the Food Ministry, every second woman in the country is anemic and every third child is stunted.
- India ranks 94 out of 107 countries and is in the 'serious hunger' category on the Global Hunger Index (GHI).
- Fortification of rice is a cost-effective and complementary strategy to increase vitamin and mineral content in diets.
- According to the Food Ministry, seven countries have mandated rice fortification – the USA, Panama, Costa Rica, Nicaragua, Papua New Guinea, Philippines, and Solomon Islands.

### Advantages Offered:

- **Health:** Fortified staple foods will contain natural or near-natural levels of micro-nutrients, which may not necessarily be the case with supplements.
- **Taste:** It provides nutrition without any change in the characteristics of food or the course of our meals.
- **Nutrition:** If consumed on a regular and frequent basis, fortified foods will maintain body stores of nutrients more efficiently and more effectively than will intermittently supplement.
- **Economy:** The overall costs of fortification are extremely low; the price increase is approximately 1 to 2 percent of the total food value.
- **Society:** It upholds everyone's right to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger

### Issues with Fortified Food:

- **Against nature:** Fortification and enrichment upset nature's packaging. Our body does not absorb individual nutrients added to processed foods as efficiently compared to nutrients naturally occurring.
- **Bioavailability:** Supplements added to foods are less bioavailable. Bioavailability refers to the proportion of a nutrient your body is able to absorb and use.
- **Immunity issues:** They lack immune-boosting substances.
- **Over-nutrition:** Fortified foods and supplements can pose specific risks for people who are taking prescription medications, including decreased absorption of other micro-nutrients, treatment failure, and increased mortality risk.

### Adhering to FSSAI standard:

- The Food Safety and Standards Authority of India (FSSAI) sets standards for food items in the country.
- According to FSSAI norms, 1 kg fortified rice will contain iron (28 mg-42.5 mg), folic acid (75-125 microgram) and Vitamin B-12 (0.75-1.25 microgram).
- In addition, rice may also be fortified with micronutrients, singly or in combination, with zinc (10 mg-15 mg), Vitamin A (500-750 microgram RE), Vitamin B1 (1 mg-1.5 mg), Vitamin B2 (1.25 mg-1.75 mg), Vitamin B3 (12.5 mg-20 mg) and Vitamin B6 (1.5 mg-2.5 mg) per kg.

## 11. IndiGau: India's first Cattle Genomic Chip

### Why in News?

- The National Institute of Animal Biotechnology (NIAB), Hyderabad has launched a chip called IndiGau.

### IndiGau:

- IndiGau is India's first Cattle Genomic Chip for the conservation of pure varieties of indigenous cattle breeds like, Gir, Kankrej, Sahiwal, Ongole etc.
- It is purely indigenous and the largest cattle chip in the world.
- It has 11,496 markers more than that placed on 777K Illumina chip of US & UK breeds.
- The manufacturing of this chip is in synergy with Rashtriya Gokul Mission and is a great example of Atmanirbhar Bharat.

### Utility of IndiGau:

- Indigenous bovines are robust and resilient and are particularly suited to the climate and environment of their respective breeding tracts,
- Their productivity is less likely to be impacted by the adversities of climate change.
- The milk of indigenous animals is high in fat and SNF (solids-not-fat) content.
- National Programme for Bovine Breeding and Dairy Development
- The NPBBDD has been formulated by merging four ongoing schemes of the Department of Animal Husbandry, Dairying and Fisheries in the dairy sector.
- It was launched in Feb 2014.
- This merger has been done to integrate milk production and dairying activities in a scientific and holistic manner to meet the increasing demand for milk in the country.

### Components of the Scheme:

- NPBBDD has the following three components.
- National Programme for Bovine Breeding (NPBB)
- National Programme for Dairy Development (NPDD) and
- Rashtriya Gokul Mission.

## 12. National Hydrogen Mission

### Why in News?

- During his I-Day speech, the PM has announced a National Hydrogen Mission and said India will become the world's largest exporter of green hydrogen in the years to come.

## National Hydrogen Mission:

- The PM's announcement takes forward the proposal, made in the 2021 Budget, for the launch of NHM that would enable the generation of hydrogen "from green power sources".
- The added advantage of hydrogen is that, apart from transportation, it can be a "decarbonizing agent" for industries like chemicals, iron, steel, fertilizer and refining, transport, heat and power.
- While the details of the NHM are yet to emerge, India has taken several exploratory steps.
- India has been working on a pilot project on Blue Hydrogen, Hydrogen CNG (H-CNG), and Green Hydrogen.
- Several programs are focusing to blend hydrogen with compressed natural gas for use as a transportation fuel as well as an industrial input to refineries.

## Hydrogen as a fuel:

- Hydrogen is the fuel of stars and packs awesome energy. It is also the most abundant element in the universe.
- But on Earth it is found in complex molecules such as water or hydrocarbons.
- Hydrogen is not a source of energy, like fossil fuels or renewable sources like sunlight and air, but an energy carrier, which means it has to be produced, or extracted, and stored before it can be used.
- But no matter how it is used, the by-product the burning of hydrogen produces is water.

## How is Hydrogen Produced?

- There are several ways of extracting hydrogen and, depending on the method, the hydrogen produced is classified as 'grey', 'blue', or 'green' hydrogen.
- According to WEC, as of 2019, 96 percent of hydrogen is produced from fossil fuels via carbon-intensive processes.
- Hydrogen thus obtained is called 'grey' hydrogen as the process, though not as expensive as the other methods, releases a lot of carbon dioxide.

## What Is Grey, Blue, Green Of Hydrogen?

- 'Grey' hydrogen becomes 'blue' hydrogen when the CO<sub>2</sub> given out during its production is locked up through carbon capture and storage (CCS) processes.
- But while the CO<sub>2</sub> output is lowered, this process is quite expensive.
- 'Grey' and 'blue' hydrogen, thus, are both produced by the same processes, the only difference for 'blue' hydrogen being that the CO<sub>2</sub> produced is sequestered.

- But it is 'green' hydrogen that governments are aiming at. This is any hydrogen that is produced from clean energy sources like renewables.
- 'Green' hydrogen is released via the electrolysis of energy from renewable sources. This process, though it gives rise to no CO<sub>2</sub> emissions, is expensive and not commercially viable yet.

### Key Challenges:

- **Lack of Infrastructure:** India does not have enough storage capacity for the current state of domestic consumption.
- **Safety concerns:** Hydrogen is highly inflammable.

### Way Ahead:

- Developing technologies to produce 'green' hydrogen are cost intensive.
- However, falling renewable energy and fuel cell prices and stringent climate change requirements have provided an impetus for the investments in this area.
- In India, the IITs, IISc, Benaras Hindu University, Council for Scientific and Industrial Research laboratories etc. are exploring different aspects of Hydrogen Production.

## 13. Startup ecosystem can help India become Powerhouse of Global Economy

### Why in News?

- With 62 per cent of the population in the working-age group and 54 per cent below the age of 25, we have the advantage of leveraging the skill and ability of our youth to drive the nation forward through Productive output and Innovation.

### Significance of Startup Ecosystem in the Country:

- In 2021 alone, Indian startups have so far raised upward of \$20 billion in funding.
- Today, India is home to more than 40,000 startups and is building a robust tech and internet infrastructure.
- The last decade-and-a-half has witnessed a significant change in the landscape — from the founding of new startups, to global investor interest, to the advances made in infrastructure and policies.
- Global investors too are realising the potential upside in India's huge, under-penetrated market as the country steadily makes a place for itself as a leading R&D hub for many Silicon Valley companies.

- Amid the Covid-19 pandemic, Indian startups have rapidly innovated to provide indigenous, tech-enabled solutions to combat challenges from testing kits and ventilators to remote monitoring, and preventive technologies, as well as innovations in supply chain management, logistics, and education.

### Factors Driving startup Economy in India:

- The steady rise of Indian IT companies in the 2000s, a large talent pool of a skilled workforce, increased expendable income, and rising capital inflows have collectively contributed in large part.
- Young generation: Moreover, the ability of the young generation to take risks, move fast, and disrupt things without fear, has become our biggest asset today.
- Increasing internet use: In the next five years and likely to have an estimated 850 million internet users by 2030, the country stands at the cusp of unprecedented economic growth.

### How it helps Economy:

- The proliferation of this startup Economy has brought with it new business opportunities, innovation, tech-centric approaches and job creation across sectors.
- A mature startup Ecosystem, with seasoned Entrepreneurs and technology-led solutions, paves the way for innovation and expanding its global footprint.
- While value creation lies at the centre of entrepreneurship, Indian startups are also taking big strides in building synergies and partnerships with global entities, further demonstrating the evolution of the startup ecosystem and its appetite for innovation, Collaboration and Disruption.
- In fact, one of the paradigm shifts brought about through technology during the pandemic has been systemic shift to online education and remote learning at scale.
- Solutions built by Indian startups saw widespread adoption not just domestically but also on a global scale, firmly establishing the country as a cornerstone of tech and innovation in the world.

### Suggestions:

- **Educations and Reskilling:** In order to transition beyond the current capabilities and achieve the demographic dividend, education, and reskilling, and upskilling of our workforce is crucial.
- **Policy Environment:** Apart from the domestic policy environment, the global environment and technological advances are also changing, and it is imperative that India is prepared for this revolution.



- **Foster Entrepreneurship:** Apart from policy-level decisions that promote entrepreneurship, the onus is also on India's corporate sector to foster entrepreneurialism, and create synergies to build impactful technology solutions, sustainable and resource-efficient growth.
- **Inclusion and Sustainability:** As country stands at the cusp of unprecedented economic growth, speed, inclusion, and sustainability are key elements in this mission.
- **Tap the potential of rural and semi-urban India:** The collective future efforts of the public and private sectors to improve physical and digital connectivity will also help unlock the untapped potential of rural and semi-urban India to truly lead Industry 4.0 and beyond.
- **Focus on goals of national importance:** In view of achieving this transformation at scale, the Indian startup ecosystem must focus on developing solutions that allow businesses in key sectors to meet goals of national Importance.

## 14. Oil Bonds

### Why in News?

- The Centre has argued that it cannot reduce taxes on petrol and diesel as it has to bear the burden of payments in lieu of oil bonds issued by the previous UPA government to subsidize fuel prices.

### What are Oil Bonds?

- Oil bonds are special securities issued by the government to oil marketing companies in lieu of cash subsidy.
- These bonds are typical of a long-term tenure like 15-20 years and oil companies are paid interest.
- Before the complete deregulation of petrol and diesel prices, oil marketing companies were faced with a huge financial burden as the selling price of petrol and diesel in India was lower than the international market price.
- This 'under-recovery' is typically compensated through fuel subsidies allocated in the Union budget.
- However, between 2005 and 2010, the UPA government issued oil bonds to the companies amounting to Rs 1.4 lakh crore to compensate them for these losses.

### Why do Governments Issue such Bonds?

- Compensation to companies through issuance of such bonds is typically used when the government is trying to delay the fiscal burden of such a payout to future years.

- Governments resort to such instruments when they are in danger of breaching the fiscal deficit target due to unforeseen circumstances that lead to a collapse in revenues or a surge in expenditure.
- These types of bonds are considered to be 'below the line' expenditure in the Union budget and do not have a bearing on that year's fiscal deficit, but they do increase the government's overall debt.
- However, interest payments and repayment of these bonds become a part of the fiscal deficit calculations in future years.

### Deregulation of Fuel Prices:

- Fuel price decontrol has been a step-by-step exercise, with the government freeing up prices of aviation turbine fuel in 2002, petrol in 2010, and diesel in 2014.
- Prior to that, the government would intervene in fixing the price at which retailers were to sell diesel or petrol.
- This led to under-recoveries for oil marketing companies, which the government had to compensate for. The prices were deregulated to make them market-linked, unburden the government from subsidizing prices, and allow consumers to benefit from lower rates when global crude oil prices tumble.
- Price decontrol essentially offers fuel retailers such as Indian Oil, HPCL or BPCL the freedom to fix prices based on calculations of their own cost and profits.
- However, the key beneficiary in this policy reform of price decontrol is the government.
- **Impact:** Loss of consumers
- While oil price deregulation was meant to be linked to global crude prices, Indian consumers have not benefited from a fall in global prices.
- The central, as well as state governments, impose fresh taxes and levies to raise extra revenues. This forces the consumer to either pay what she's already paying, or even more.

### Why are the Oil Bonds in news?

- As prices of petrol and diesel climb steeply, the Centre has been under pressure to cut the high taxes on fuel.
- Taxes account for 58 per cent of the retail selling price of petrol and 52 per cent of the retail selling price of diesel.
- However, the government has so far been reluctant to cut taxes as excise duties on petrol and diesel are a major source of revenue, especially at a time the pandemic has adversely impacted other taxes such as corporate tax.

- The government is estimated to have collected more than Rs 3 lakh crore from tax on petrol and diesel in the 2020-21 fiscal year.

### The Blame Game:

- The present government has blamed the UPA regime for its inability to cut taxes.
- It pointed out that the bonds issued by the Manmohan Singh government have weakened the financial position of the oil marketing companies and added to the government's fiscal burden now.
- It is an argument that has been often repeated since 2018.

### What Budget Documents show?

- Budget documents show that such bonds will be up for redemption over the next few years – beginning with two to be redeemed in the current fiscal year – till 2026.
- The government has to repay a principal amount of Rs 10,000 crore this year, according to these documents.
- The government has paid around Rs 10,000 crore annually as interest over the last decade.
- The government is likely to pay a similar amount of interest for the current fiscal as well.
- Is the issuance of such special securities restricted to the UPA era?
- Besides oil bonds, the UPA era also saw the issuance of fertilizer bonds from 2007 to compensate fertilizer companies for their losses due to the difference in the cost price and selling price.
- However, the issuance of such special securities is not limited to the UPA regime.
- Over the years, the Modi government has issued bank recapitalization bonds to specific public sector banks (PSBs) as it looked to meet the large capital requirements of these PSBs without allocating money from the budget.

## 15. International Bullion Exchange

### Why in News?

- The International Financial Services Centres Authority (IFSCA) has inaugurated the pilot run/soft launch of the International Bullion Exchange scheduled to go live on October 1, 2021.

### What is Bullion?

- Bullion is gold and silver that is officially recognized as being at least 99.5% and 99.9% pure and is in the form of bars or ingots.

- Bullion is often kept as a reserve asset by governments and central banks.
- To create bullion, gold first must be discovered by mining companies and removed from the earth in the form of gold ore, a combination of gold and mineralized rock.
- The gold is then extracted from the ore with the use of chemicals or extreme heat.
- The resulting pure bullion is also called “parted bullion.” Bullion that contains more than one type of metal, is called “unparted bullion.”

### **The Bullion Market:**

- Bullion can sometimes be considered legal tender, most often held in reserves by central banks or used by institutional investors to hedge against inflationary effects on their portfolios. Approximately 20% of mined gold is held by central banks worldwide.
- This gold is held as bullions in reserves, which the bank uses to settle the international debt or stimulate the economy through gold lending.
- The central bank lends gold from their bullion reserves to bullion banks at a rate of approximately 1% to help raise money.
- Bullion banks are involved in one activity or another in the precious metals markets.
- Some of these activities include clearing, risk management, hedging, trading, vaulting, and acting as intermediaries between lenders and borrowers.

### **What is International Bullion Exchange?**

- This shall be the “Gateway for Bullion Imports into India”, wherein all the bullion imports for domestic consumption shall be channelized through the exchange.
- The exchange ecosystem is expected to bring all the market participants to a common transparent platform for bullion trading.
- It would provide efficient price discovery, assurance in the quality of gold, enable greater integration with other segments of financial markets and help establish India’s position as a dominant trading hub in the World.

## **16. Changes in AERA Act to help smaller airports**

### **Why in News?**

- In the recent monsoon session, Parliament passed the Airports Economic Regulatory Authority of India (Amendment) Bill, 2021.

### **Key Features of the AERA Bill, 2021:**

- It seeks to amend the Airports Economic Regulatory Authority of India Act, 2008.

- The 2008 Act established the Airport Economic Regulatory Authority (AERA).
- AERA regulates tariffs and other charges (such as airport development fees) for aeronautical services rendered at major airports in India.
- The 2008 Act designates an airport as a major airport if it has an annual passenger traffic of at least 35 lakh.
- The central government may also designate any airport as a major airport by a notification.
- The Bill adds that the central government may group airports and notify the group as a major airport.
- Why has the definition of a major airport been amended?
- The Amendment has changed the definition of a major airport to include “a group of airports” after the words “any other airport”.
- The government hopes the move will encourage the development of smaller airports and make bidding for airports with less passenger traffic attractive.
- It plans to club profitable airports with non-profitable ones and offer them as a package for development in public-private partnership mode to expand connectivity.

### Was there a need to Amend the AERA Act?

- The Airports Authority of India (AAI) awarded six airports — Lucknow, Ahmedabad, Jaipur, Mangaluru, Thiruvananthapuram and Guwahati — for operations, management and development in public-private partnership mode in February 2019.
- In 2020 too, the AAI has approved leasing of another six airports — Bhubaneswar, Varanasi, Amritsar, Raipur, Indore and Tiruchi.
- The Ministry of Civil Aviation plans to club each of these airports with nearby smaller airports for joint development.
- The move follows FM’s Budget Speech this year, in which she said the government planned to monetize airports in tier-2 and tier-3 cities.

## 17. Diluting Credit Discipline

### Why in News?

- Some bank borrowers have gone to court demanding that it quash the Reserve Bank of India (RBI) circular dated August 6, 2020 on opening current accounts.

### Background:

- Current accounts with non-lending banks are an important channel for diversion.

- Diversion of funds is a major reason for large non-performing assets (NPAs).
- Internal diversion is for non-priority purposes and funds can also be diverted to other firms, owned or controlled by the same group, friends or relatives.
- To prevent this, the RBI mandates a No-Objection Certificate (NOC) from lending banks before opening such accounts.
- Banks should verify with CRILC, the RBI credit database, and inform lenders. Banks should also obtain a NOC from the drawee bank when an account is opened through cheques.
- Widespread non-compliance with mandated safeguards forced the RBI to bar non-lending banks from opening current accounts for large borrowers.
- Thus, if borrowing is through a cash credit or overdraft account, no bank can open a current account.

### What are the Current Regulations?

- If a borrower has no cash credit or overdraft account, a current account can be opened subject to restrictions.
- If the bank's exposure is less than 10% of total borrowings, debits to the account can only be for transfers to accounts with a designated bank.
- If total borrowing is ₹50 crore or more, there should be an escrow mechanism managed by one bank which alone can open a current account.
- Other lending banks can open 'collection accounts' from which funds will be periodically transferred to the escrow account.
- If the borrowing is between ₹5 crore and ₹50 crore, lending banks can open current accounts.
- Non-lending banks can open collection accounts.
- If borrowing is below ₹5 crore, even non-lending banks can open current accounts.
- The working capital credit should be bifurcated into loan and cash credit components at individual bank levels.

### Issues with Regulations:

- If a borrower has an overdraft, how can there not be a current account?
- An overdraft is the right to overdraw in a current account up to a limit.
- The second issue is that the circular forecloses such operational flexibility.
- Third, why should a bank with low exposure transfer funds to another bank when it can use it to adjust other dues with it?

- Fourth, share in borrowing is not static. Crossing the threshold both ways could happen often.
- Fifth, there is a mismatch between what a borrower needs and the regulations allow.
- Support of non-lending banks through current accounts in other banks is required for large accounts.
- Sixth, transactions in an active current account enables a bank to monitor a borrower's account, however small.
- The lack of such control was why large development financial institutions of yesteryear built up huge NPAs.
- Seventh, the regulation mandates splitting working capital into loan and cash credit components across all banks.
- Such a one-size-fits-all regulation does not factor in the purpose of the different facilities.
- A large company might avail itself of loans in Mumbai, but require current accounts with another bank in Assam where it might have a factory.
- Lack of flexibility: Rules are not flexible, do not provide for unforeseen circumstances, and can be easily circumvented. Use more generic terms: Regulation needs to use more generic terms. Terms such as Working Capital Term Loan might mean different things in different banks. Diversion of fund is risk better dealt by banks: Is it not better to leave management of exceptional risks such as diversion of funds to the banks?
- The cost of regulation: the costs of regulation be justified by the benefits.

## 18. Asset Monetization

### Why in News?

- Finance Minister has recently announced the framework for the National Monetization Pipeline (NMP) and its process is Under Discussion.

### What is Asset Monetization?

- Asset Monetization involves the creation of new sources of revenue by unlocking of the value of hitherto unutilized or underutilized public assets.
- Internationally, it is recognized that public assets are a significant resource for all Economies.
- Many public sector assets are sub-optimally utilized and could be appropriately monetized to create greater financial leverage and value for the companies and of the equity that the Government has invested in them.

- This helps in the accurate estimation of public assets which would help in the better financial management of government/public resources over time.

### What is the National Monetization Pipeline?

- The NMP names a list of public assets that will be leased to private investors.
- Only brown-field assets, which are assets that are already operational, are planned to be leased out under the NMP.
- So, to give an example, an airport that is already operational may be leased out to an investor. Assets that are yet to be developed, such as an undeveloped piece of land, for example, may not be leased out. Importantly, there won't be any transfer of ownership from the government to the private sector when assets are leased out.
- The government only plans to cede control over its assets for a certain period of time, after which the assets must be returned to the government unless the lease is extended.

### Will NMP Help the Economy?

- **Better control and Utilization:** Economists generally believe that scarce assets are better managed and allocated by the private sector than by the government. So to the extent that the NMP frees assets from government control, it can help the economy.
- **Freeing Capital:** The government believes that leasing out public assets to private investors will help free capital that is stuck in these assets.
- **Infra Generation:** The government can use this money, in turn, to build fresh infrastructure under the National Infrastructure Pipeline (NIP).
- **Economic boost:** In fact, the proceeds from the NMP are expected to account for about 14% of the total outlay for infrastructure under the NIP. The government believes all this spending will boost economic activity.
- **A Perfect Model:** Analysts also believe that the government has now through the NMP found the right model for infrastructure development.
- **Source of Finance:** The government, they say, is best suited to tackle the ground-level challenges in building infrastructure, while the private sector can operate and offer indirect finance to these projects through the NMP.

### What are the Risks?

- **Political lobbying:** The allocation of assets owned by governments to private investors is often subject to political influence, which can lead to corruption. In fact, many in the Opposition allege that the NMP will favour a few business corporations that are close to the Government.



- **Burden of Opportunity Cost:** The expected boost to economic activity due to higher government spending may also need to be weighed against the opportunity costs. For one, the money that the government collects by leasing out assets comes from the pockets of the private sector. So higher government spending will come at the cost of lower private spending.
- **Legal Uncertainties:** The NMP also does not address the various structural problems such as legal uncertainty and the absence of a deep bond market that hold back private investment in infrastructure.
- **Sheer Privatization:** There are also concerns that the leasing of airports, railways, roads and other public utilities to private investors could lead to higher prices for consumers. If the government merely cedes control of public utilities to private companies without taking steps to foster greater competition, it can indeed lead to poor outcomes for consumers.
- **Policy Compulsion:** The government's past disinvestment projects such as the sale of Air India did not catch the fancy of investors owing to the stringent conditions set by the government. In the case of Air India's sale, the buyers were supposed to possess a certain minimum net worth and stay invested in the airline for at least three years.

### What lies ahead?

- The success of the NMP will depend on the demand for brown-field government assets among private investors.
- Many analysts also believed that the government was expecting buyers to pay too much for a debt-ridden Air India.
- The pricing of assets and the terms of sale will thus determine the level of interest that private investors show for assets leased under the NMP.
- In the past, doubts have been raised about the allocation of airports and other assets to certain private business groups (say Adani Group).
- So the process that the government adopts this time to allocate assets may come under scrutiny. There is likely to be a demand for an open, competitive auction of assets.

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## 19. CSR Expenditure

### Why in News?

- The Ministry of Corporate Affairs has clarified that companies have to ensure that funds transferred to implementing agencies are actually utilized for them to be counted towards mandatory CSR Expenditure.

### What is Corporate Social Responsibility (CSR)?

- CSR is a type of business self-regulation that aims to contribute to the societal goals of a philanthropic, activist, or charitable nature by engaging in or supporting volunteering or ethically-oriented practices.
- It rests on the ideology of “give and take” i.e. to take scarce resources from the Environment for running a business, and in turn to contribute towards economic, social, and environmental development.

### CSR in India:

- India is the first country in the world to make corporate social responsibility (CSR) mandatory, following an Amendment to the Companies Act, 2013 in April 2014.
- Businesses can invest their profits in areas such as education, poverty, gender equality, and hunger as part of any CSR Compliance.

### What is the Recent Clarification?

- The MCA has clarified that excess Corporate Social Responsibility (CSR) expenditure prior to FY21 cannot be set off against future CSR expenditure requirements.
- Corporate donations to government schemes cannot be counted as CSR.
- The ministry has also clarified that companies have to ensure that funds transferred to implementing agencies are actually utilized for them to be counted towards mandatory CSR expenditure.

### Impact of the move:

- This clarification may impact donations to state government schemes which are often done for the sake of managing relationships with the Government.

## 20. Bharat Series (BH-series) for Vehicles

### Why in News?

- The Ministry of Road Transport & Highways has rolled out a new series for vehicles registration ‘BH’ to avoid re-registration of vehicles while moving to another state.

### **Bharat series (BH-series):**

- There was a procedure of re-registration of a vehicle while moving to another state.
- A vehicle bearing BH registration mark shall not require assignment of a new registration mark when the owner of the vehicle shifts from one State to another.
- Format of Bharat series (BH-series) Registration Mark –

### **Registration Mark Format:**

- YY BH #### XX
- YY – Year of first registration
- BH- Code for Bharat Series
- ####- 0000 to 9999 (randomized)
- XX- Alphabets (AA to ZZ)

### **Why Such Move?**

- Station relocation occurs with both Government and private sector employees.
- Such movements create a sense of unease in the minds of such employees with regard to transfer of registration from the parent state to another state.
- Under section 47 of the Motor Vehicles Act, 1988, a person is allowed to keep the vehicle for not more than 12 months in any state other than the state where the vehicle is registered.

### **Who can get this BH series?**

- BH-series will be available on voluntary basis to Defense personnel, employees of Central Government/ State Government/ Central/ State PSUs and private sector companies/organizations.
- The motor vehicle tax will be levied for two years or in multiple of two.
- This scheme will facilitate free movement of personal vehicles across States/UTs of India upon relocation to a new State/UT.
- After completion of the fourteenth year, the motor vehicle tax shall be levied annually which shall be half of the amount which was charged earlier for that vehicle.

## 5. GEOGRAPHY & ENVIRONMENT

### 1. Net-Zero Concept in Climate Change

#### Why in News?

- Independent charitable organization Oxfam has said that ‘net zero’ carbon targets that many countries have announced maybe a “dangerous distraction” from the priority of cutting carbon emissions.

#### What does Net-Zero mean?

- Net-zero, which is also referred to as carbon-neutrality, does not mean that a country would bring down its emissions to zero.
- That would be gross-zero, which means reaching a state where there are no emissions at all, a scenario hard to comprehend.
- Therefore, net-zero is a state in which a country’s emissions are compensated by absorption and removal of Greenhouse Gases from the Atmosphere.

#### Achieving Net-Zero Targets:

- One way by which carbon can be absorbed is by creating carbon sinks.
- Until recently, the Amazon rainforests in South America, which are the largest tropical forests in the world, were carbon sinks.
- But eastern parts of these forests have started emitting CO<sub>2</sub> instead of absorbing carbon emissions as a result of significant deforestation.

#### What’s the Difference between Gross Zero and Net Zero?

- Given the impact that carbon emissions have on our planet, you might wonder why we aren’t aiming for zero, or gross zero, rather than net-zero.
- Gross zero would mean stopping all emissions, which isn’t realistically attainable across all sectors of our lives and industry. Even with best efforts to reduce them, there will still be some emissions.
- Net-zero looks at Emissions overall, allowing for the removal of any unavoidable emissions, such as those from aviation or manufacturing.
- Removing greenhouse gases could be via nature, as trees take carbon dioxide from the atmosphere, or through new technology or changing industrial processes.

#### What is carbon negativity?

- It is even possible for a country to have negative emissions if the absorption and removal exceed the Actual Emissions.

- Bhutan has negative emissions because it absorbs more than it emits.
- Which countries have recently announced net-zero targets?
- In 2019, the New Zealand government passed the Zero Carbon Act, which committed the country to zero carbon emissions by 2050 or sooner.
- In the same year, the UK's parliament passed legislation requiring the government to reduce the UK's net emissions of greenhouse gases by 100 per cent relative to 1990 levels by the year 2050.
- More recently, US announced that the country will cut its greenhouse gas emissions by at least 50 per cent below 2005 levels by 2030.
- The European Union too, has a similar plan, called "Fit for 55", the European Commission has asked all of its 27 member countries to cut emissions by 55 per cent below 1990 levels by 2030.
- Last year, China also announced that it would become net-zero by the year 2060 and that it would not allow its emissions to peak beyond what they are in 2030.

### What does the Oxfam report say?

- "Land-hungry 'net zero' schemes could force an 80 per cent rise in global food prices and more hunger while allowing rich nations and corporates to continue "dirty business-as-usual".
- The report says that if the challenge of change is tackled only by way of planting more trees, then about 1.6 billion hectares of new forests would be required to remove the world's excess carbon by 2050.
- Currently, countries' plans to cut emissions will only lead to a one percent reduction by the year 2030. Oxfam estimates that it could rise by 80 percent by the year 2050.

## 2. Tipping Point

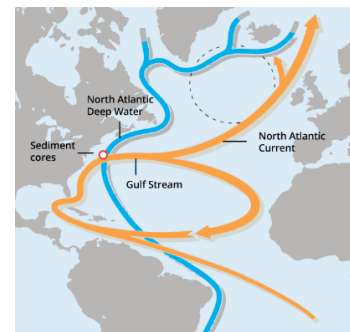
### Why in News?

- A new study published in Nature Climate Change shows that the Atlantic Meridional Overturning Circulation (AMOC) may have become unstable over the last century and reached a tipping point.

### Highlights:

- For the past 15 years, Atlantic Meridional Overturning Circulation (AMOC) has been weakening, signs show that AMOC may be slowing, which could have drastic consequences on the global climate.

- A new study suggests a link between Atlantic Meridional Overturning Circulation (AMOC) and the Indian Ocean and the rising temperatures in the Indian Ocean can help to boost the AMOC and delay slow down.
- Atlantic Meridional Overturning Circulation (AMOC):
- The Atlantic Meridional Overturning Circulation (AMOC) is a major current in the Atlantic Ocean and can be considered as a large system of ocean currents.
- AMOC is characterized by a northward flow of warm, salty water in the upper layers of the Atlantic, and a southward flow of colder, deep waters that are part of the thermohaline circulation
- Since it aids in distributing heat and energy, AMOC maintains the temperature equilibrium of Europe and influences world weather.
- Thermohaline Circulation:
- Thermohaline Circulation (THC) is a part of the large-scale ocean circulation that is driven by global density gradients created by surface heat and freshwater fluxes.
- It is also called the Global Ocean Conveyor or Great Ocean Conveyor Belt, the component of a general oceanic circulation controlled by horizontal differences in temperature and salinity. It continually replaces seawater at depth with water from the surface and slowly replaces surface water elsewhere with water rising from deeper depths.



### 3. A circular Economy for Plastic

#### Why in News?

- The India Plastics Pact, the first in Asia, will be launched in September at the CII Annual Sustainability Summit.

#### Issue of Plastic Waste:

- A 2019 report by the Center for International Environmental Law suggests that by 2050, greenhouse gas emissions from plastic could reach over 56 gigatonnes, 10-13% of the remaining carbon budget.
- Connection with livelihood: Viewed from the angle of livelihoods, post-consumer segregation, collection and disposal of plastics make up about half of the income of 1.5- 4 million waste-pickers in India.

- For India, the solution must be multi-pronged, systemic, and large scale, to create a visible impact. The Plastics Pacts model offers such a solution.

### Plastics Pacts model:

- Business-led initiative: The Plastics Pacts are business-led initiatives and transform the plastics packaging value chain for all formats and products.
- The Pacts bring together everyone from across the plastics value chain to implement practical solutions.
- Integral to the Pact's framework is the involvement of the informal waste sector crucial to post-consumer segregation, collection and processing of plastic waste.
- All Pacts unite behind four targets:
  - To eliminate unnecessary and problematic plastic packaging through redesign and innovation.
  - To ensure all plastic packaging is reusable or recyclable.
  - To increase the reuse, collection, and recycling of plastic packaging.
  - To increase recycled content in plastic packaging.
- It is active in a number of countries including the U.K., South Africa, and Australia.
- The first Plastics Pact was launched in the U.K. in 2018, by WRAP, a global NGO based in the U.K.
- It is now being brought to India by CII and WWF India.

### Advantages:

- Economic advantage: It can be expected to boost demand for recycled content, investments in recycling infrastructure, jobs in the waste sector, and beyond.
- Support EPR framework: The Pact will support the Extended Producer Responsibility framework of the government and improve solid waste management as envisioned in the Swachh Bharat Abhiyan.
- The India Plastics Pact focuses on solutions and innovation.
- Plastic production and management development: The Pact will encourage the development and maturing of the entire plastics production and management ecosystem.
- Drive circularity of plastic: Apart from benefits to society and economy, delivering the targets will drive the circularity of plastics and help tackle pollution.

## 4. Greater Adjutant Storks

### Why in News?

- In a first, Bihar has decided to tag endangered greater adjutant storks (*Leptoptilos dubius*), locally known as ‘Garuda’, with GPS trackers to monitor their movement as a part of their conservation.

### Greater Adjutant Storks:

- Bhagalpur’s Kadwa Diara floodplains area is the third-most-popular breeding centre for the greater adjutant stork in the world after Assam and Cambodia.
- Historically the range of the Greater Adjutant covered India and Southeast Asia, but today the endangered storks are mostly found in the Indian state of Assam and in Cambodia.
- In India, the Greater Adjutant is now confined to the north-eastern state of Assam, their last stronghold.

### Conservation:

- The greater adjutant is one of the most threatened stork species of the world and is widely considered to be a rare bird.
- However, the global population of the Greater Adjutant Stork is estimated to be roughly not more than 1,500 now.
- Hence it is classified as ‘endangered’ on the IUCN’s Red List 2004 of threatened species and listed under Schedule IV of the Indian Wild Life (Protection) Act, 1972.
- The Bombay Natural History Society will help and work along with the state forest, environment, and climate change department to start the process of tagging greater adjutant storks with GPS tracker.

## 5. Slender Loris

### Why in News?

- The Kadavur hills in central Tamil Nadu’s Karur district are home to the Kadavur Reserve Forest. These forests are home to the shy and reclusive slender loris, a species of primate.

### Slender Loris:

- Slender loris (*Loris tardigradus*) is secretive and has nocturnal habits. It usually travels from the canopy of one tree to another. But, at times, it also comes down to bushes at the ground level to feed.





- It is also found in the adjoining forest areas on the eastern, southern and western slopes of the Kadavur hills.
- It sleeps by day in the foliage or in a hole or crevice. It comes out at dusk in search of prey.
- They are fond of lantana berries and also eat insects, lizards, small birds, tree frogs, tender leaves and buds.
- They are usually solitary but sometimes found in pairs.

### Conservation:

- The slender loris has been listed as 'Endangered' by the International Union for the Conservation of Nature.
- It has been brought under Schedule I of the Wild Life (Protection) Act, 1972 in order to provide the highest level of legal protection.

### Threats:

- As it is believed that these animals have some medicinal properties, they are captured and sold.
- Since there is great demand for keeping these animals as pets, they are illegally smuggled.
- Habitat loss, electrocution of live wires, and road accidents are other threats that have caused its populations to dwindle.

## 6. Indi Ratifies Kigali Amendment to the Montreal Protocol

### Why in News?

- The Union Cabinet has given its approval for ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer for phase down of Hydrofluorocarbons (HFCs) by India.

### What is Montreal Protocol?

- The Montreal Protocol on Substances that Deplete the Ozone Layer is an international agreement made in 1987.
- It was designed to stop the production and import of ozone-depleting substances and reduce their concentration in the atmosphere to help protect the earth's ozone layer.
- It sits under the Vienna Convention for the Protection of the Ozone Layer.

### Objectives:

- The convention was adopted in 1985 and has highlighted the adverse effect of human activity on ozone levels in the stratosphere and the discovery of the 'ozone hole'.

- Its objectives are to promote cooperation on the adverse effects of human activities on the ozone layer.
- It has since undergone nine revisions, in 1990 (London), 1991 (Nairobi), 1992 (Copenhagen), 1993 (Bangkok), 1995 (Vienna), 1997 (Montreal), 1998 (Australia), 1999 (Beijing) and 2016 (Kigali).

### India and the Protocol:

- India became a Party to the Protocol on 19 June 1992 and since then has ratified the amendments.

### What is the Kigali Amendment?

- It is an international agreement to gradually reduce the consumption and production of hydrofluorocarbons (HFCs).
- It is a legally binding agreement designed to create rights and obligations in international law.
- While HFCs do not deplete the stratospheric ozone layer, they have high global warming potential ranging from 12 to 14,000, which have adverse impact on climate.
- What are the Ozone Depleting Substances?
- Ozone-depleting substances are chemicals that destroy the earth's protective ozone layer.

#### **They Include:**

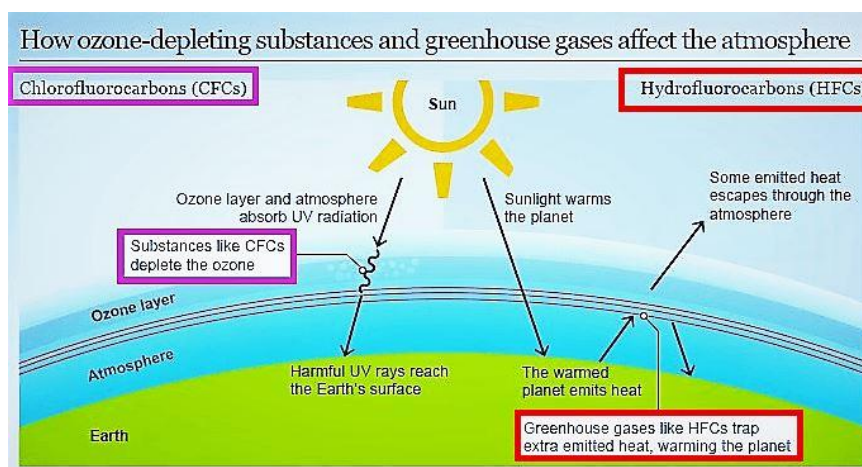
- chlorofluorocarbons (CFCs)
- halons
- carbon tetrachloride (CCl<sub>4</sub>)
- methyl chloroform (CH<sub>3</sub>CCl<sub>3</sub>)
- hydrobromofluorocarbons (HBFCs)
- hydrochlorofluorocarbons (HCFCs)
- methyl bromide (CH<sub>3</sub>Br)
- bromochloromethane (CH<sub>2</sub>BrCl)

### Where are they used?

- The main uses of ozone depleting substances include:
- CFCs and HCFCs in refrigerators and air conditioners,
- HCFCs and halons in fire extinguishers,
- CFCs and HCFCs in foam,
- CFCs and HCFCs as aerosol propellants, and

- Methyl bromide for fumigation of soil, structures and goods to be imported or exported.

## Why phase them out?



## Implementation strategy and targets:

- India will complete its phase down of HFCs in 4 steps from 2032 onwards with cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 80% in 2047.

## Major Impact:

- HFCs phasedown is expected to prevent the emission of up to 105 million tonne of carbon dioxide equivalent of GHGs, helping to avoid up to 0.5 degree Celsius of global temperature rise by 2100, while continuing to protect the ozone layer.
- It will achieve energy efficiency gains<sup>^</sup> and carbon dioxide emissions reduction – a “climate co-benefit,”
- HFCs phrase down implementation will involve synergies to maximize the economic and social co-benefits, besides Environmental Gains.
- There would be scope for domestic manufacturing of equipment as well as alternative non-HFC and low-global warming potential chemicals to enable the industry to transition to the low global warming potential alternatives as per the agreed HFC phase-down schedule.
- In addition, there would be opportunities to promote domestic innovation for new generation alternative refrigerants and related technologies.

## 7. SUJALAM Campaign

### Why in News?

- The Ministry of Jal Shakti began ‘SUJALAM’, a ‘100 days campaign’ to create more and more ODF Plus villages by undertaking wastewater management at the village level.

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## **SUJALAM Campaign:**

- The key activities that will be organized in the villages under this campaign include:
- Organizing Community consultations, Khuli Baithaks and Gram Sabha meetings to analyze the current situation
- Pass resolution to maintain ODF sustainability and achieve a needed number of soak pits to manage the greywater
- Develop a 100 days' plan to undertake sustainability and soak pit construction-related activities
- Construct a requisite number of soak pits
- Retrofit toilets where needed through IEC and community mobilization and
- Ensure all newly emerging Households in the village have access to toilets

## **Objectives of the Campaign:**

- The effort of the campaign would be directed towards achieving the ODF plus status for villages across the country in an accelerated manner in a short time.
- The campaign will not only build desired infrastructure soak pit for management of greywater in villages but will also aid in sustainable management of water bodies.
- The disposal of wastewater and clogging of water bodies in the villages or on the outskirts of the villages remain one of the major problems.
- The Campaign would help in the management of the wastewater and in turn, would help to revive the water bodies.

## 5. INTERNATIONAL RELATIONS

### 1. Pakistan grants statehood to Gilgit-Baltistan

#### Why in News?

- Pakistan has finalized draft legislation to incorporate Gilgit-Baltistan, the region known before 2009 as Northern Areas, as a province of the country.

#### Gilgit-Baltistan: History of the Region:

- Gilgit was part of the princely state of Jammu & Kashmir but was ruled directly by the British, who had taken it on lease from Hari Singh, the Hindu ruler of the Muslim-majority state.
- When Hari Singh acceded to India on October 26, 1947, the Gilgit Scouts rose in rebellion, led by their British commander Major William Alexander Brown.
- The Gilgit Scouts also moved to take over Baltistan, which was then part of Ladakh, and captured Skardu, Kargil and Dras.
- In battles thereafter, Indian forces retook Kargil and Dras in August 1948.

#### Accession with Pakistan:

- In November, 1947, a political outfit called the Revolutionary Council of Gilgit-Baltistan had proclaimed the independent state of Gilgit-Baltistan.
- It declared GB was acceding to Pakistan only to the extent of full administrative control, choosing to govern it directly under the Frontier Crimes Regulation.
- It was a law devised by the British to keep control of the restive tribal areas of the northwest.
- Following the India-Pakistan ceasefire of January 1, 1949, Pakistan entered into an agreement with the “provisional government” of “Azad Jammu & Kashmir”.
- Much of its parts had been occupied by Pakistani troops and irregulars and were later taken over by Pak defence and foreign affairs.
- Under this agreement, the AJK government also ceded administration of Gilgit-Baltistan to Pakistan.

#### Not being Incorporated as a Province:

- In 1974, Pakistan adopted its first full-fledged civilian Constitution, which lists four provinces — Punjab, Sindh, Balochistan and Khyber Pakhtunkhwa.
- Pakistan-Occupied Kashmir (PoK) and Gilgit-Baltistan were not incorporated as provinces.

- One reason ascribed to this is that Pakistan did not want to undermine its international case that the resolution of the Kashmir issue had to be in accordance with UN resolutions that called for a plebiscite.
- In 1975, PoK got its own Constitution, making it an ostensibly self-governed autonomous territory.
- This Constitution had no jurisdiction over the Northern Areas, which continued to be administered directly by Islamabad (the Frontier Crimes Regulation was discontinued in 1997)
- In reality, PoK too remained under the control of Pakistani federal administration and the security establishment, through the Kashmir Council.

### Reasons Behind:

- The main difference was that while the people of PoK had rights and freedoms guaranteed by their own Constitution, which mirrors the Pakistan Constitution.
- However the people of the minority Shia-dominated Northern Areas did not have any political representation.
- Although they were considered Pakistani, including for citizenship and passports, they were outside the ambit of constitutional protections available to those in the four provinces and PoK.

### Why GB is in Focus Now?

- Pakistan began considering changes to its administrative arrangements with increasing Chinese involvement in strategic development ventures.
- GB was vital to those projects, given that it provides only land access between the two countries.
- Since 2009, it has had a namesake legislative assembly.

### Suppression of a Movement:

- There is anger against Pakistan for unleashing sectarian militant groups that target Shias, but the predominant sentiment is that all this will improve once they are part of the Pakistani federation.
- There is a small movement for independence, but it has very little traction. Some factions argue for its accession with India.
- While some reports have suggested that Pakistan's decision is under pressure from China, wary that Gilgit-Baltistan's ambiguous status might undermine the legality of its projects there.

## Significance for India:

- Gilgit-Baltistan is an integral part of India by virtue of the legal, complete and irrevocable accession of Jammu & Kashmir to the Union of India in 1947.
- The area's strategic importance for India has increased in light of the China-Pakistan Economic Corridor agreement.
- India is also concerned of a two-front war (with China as well as Pakistan) after the standoff in Eastern Ladakh last year.

## 2. Indo-Abrahamic Accord

### Why in News?

- An Egyptian scholar, Mohammed Soliman, has recently written about the significance of what he calls the emerging "Indo-Abrahamic Accord" and its trans-regional implications to the west of India.

### Abraham Accord:

- Abraham Accord, signed in August last year in Washington, signifies the normalisation of Israel's relations with the UAE and Bahrain.
- The UAE and Bahrain were followed by Sudan and Morocco in signing the Abraham Accords.
- Although Egypt (1979) and Jordan (1994) had established diplomatic relations with Israel earlier, the Abraham Accords are widely seen as making a definitive breakthrough in the relations between Israel and the Arabs.

### Factors in Favour of Accord:

- Depth of trilateral relationship: Although India had relations with UAE and Israel for many years, they certainly have acquired political depth and strategic character recently.
- Converging interests: Turkish president Recep Tayyip Erdogan's assertive claims for the leadership of the Islamic world and hostile stand against India on several issues, indicates converging interests between India, the UAE, and Israel.
- One of the unintended consequences of Erdogan's overweening regional ambition, his alienation of Israel as well as moderate Arabs, his conflict with Greece, and his embrace of Pakistan is the extraordinary opportunity for India to widen India's reach to the west of the Subcontinent
- Cooperation: There are many areas like defence, aerospace and digital innovation where the three countries can pool their resources and coordinate Development Policies.

- India's extended neighbourhood: The notion of a "Greater Middle East" can provide a huge fillip to India's engagement with the extended neighbourhood to the west.

### **India-Turkey Relations:**

- Hostile approach on Kashmir: Turkey has been championing Pakistan's case on Kashmir after India changed the territorial status quo of the state in August 2019.
- Blocking NSG entry: At Pakistan's behest, Turkey is also blocking India's entry into the Nuclear Suppliers Group.
- The new geopolitical churn is also driven by Pakistan's growing alignment with Turkey and its alienation from its traditionally strong supporters in the Arab Gulf – the UAE and Saudi Arabia.

### **Opportunities for India in Extended Neighbourhood to the west:**

- Relations with Greece: The renewed territorial disputes between Turkey and Greece, and Turkey's quest for regional dominance has drawn Greece and the UAE closer.
- Greece has also looked towards India to enhance bilateral security cooperation.
- Greece's European partners like France, which have a big stake in the Mediterranean as well as the Arab Gulf, have taken an active interest in countering Turkey's regional ambitions.
- Erdogan's support for the Muslim Brotherhood, which seeks to overthrow the current political order in the region, has deeply angered the governments of Egypt, Saudi Arabia and the UAE.
- India's relations with Egypt: If there is one country that can give substantive depth to the Indo-Abrahamic Accord it is Egypt.
- Located at the cusp of Mediterranean Europe, Africa, and Asia, Egypt is the very heart of the Greater Middle East.
- Independent India's engagement with the region in the 1950s was centred on a close partnership with Egypt.
- If Delhi and Cairo lost each other in recent decades, India can rebuild the strategic partnership jointly with the Egypt government which is calling for the construction of a "New Republic" in Egypt.
- The notion of a "Greater Middle East" can provide a huge fillip to India's engagement with the extended neighbourhood to the west.
- The familiar regional institutions like the Arab League and the Organisation of Islamic Cooperation might endure but are incapable of addressing the region's contradictions.



### 3. Boosting India with Maritime Domain Awareness

#### Why in News?

- India's confrontation with China over territorial disputes on the border is pressing India to look at other possible avenues to respond. The naval arena is one such theatre where India can proactively look to counter China's threat.

#### Sun Tzu's piece of Advice on Warfare:

- Sun Tzu, a well known military strategist, observed that the most important element in warfare would be foreknowledge, and that could be attained only through specialized tools and by having personnel who had studied the enemy well.
- A detailed homework about the enemy, nature of the battle ahead could be key in deciding which way the battle will swing. Prior reading of the adversary and the theatre of battle, the master tactician asserted, could decisively shift the balance of fortune in war.

#### Nature of the Enemy at Sea:

- The modern era has seen warfare evolve and become more complex.
- The maritime domain has become a theatre for seeking dominance, this can be seen in the case of the Indian Ocean, where the world's largest navies are deployed. Vital shipping routes pass through the Indian Ocean and is central to connecting markets in Europe.
- The maritime domain is not a theatre for only state actors, it is increasingly witnessing the presence of non-state actors like a terrorist, a pirate, a criminal or a sea-robber — an invisible presence that lurks behind regular actors such as fishermen and port workers.
- Law enforcement agencies find it difficult to protect the mainland from threats emanating from maritime areas, therefore there is a case for the law enforcement authorities to be more vigilant, depending on high-grade sensors and communication networks that will help in real-time tracking of doubtful and mistrustful movements.
- Maritime domain awareness is defined by several security experts as having alertness and awareness to identify the threat and nullify before it can threaten national security.

#### Recent Endeavours:

- Recent times have seen the Indian Navy embarking on the strengthening of its domain awareness in the Indian Ocean.
- The Indian Navy hitherto has installed radar stations in the littoral states of the Indian Ocean such as Mauritius, Seychelles and Sri Lanka and this integration into the wider coastal radar chain network is now being extended to other countries like Maldives, Myanmar and Bangladesh.

- The strengthening of maritime domain awareness has been largely directed towards keeping an eye on Chinese activity in the Eastern Indian Ocean, in the seas around the Andaman and Nicobar Islands.
- The clashes with China's People's Liberation Army during the month of June last year has alerted India's security experts about the possibility of a greater Chinese presence in the eastern littorals.
- India has been proactive post the Galwan valley skirmishes to carry out deep surveillance of the ocean's waters for any presence of Chinese submarines. India's P-8I aircraft has been deployed along with the Indian naval ships to patrol the Andaman Seas and eastern chokepoints to nip any Beijing threat in its bud.

### Neighbourhood synergies:

- The maritime domain awareness is not just an exclusive domain of one country, thus attempts at improving maritime domain awareness have been contributing towards cooperative synergies in the neighbourhood.
- Some of the reports have hinted that the seven Indian Ocean countries — Bangladesh, Myanmar, Indonesia, Sri Lanka, the Maldives, Mauritius and Seychelles — have expressed their willingness to deploy Liaison Officers at the Indian Navy's Information Fusion Centre-Indian Ocean Region in Gurugram.
- There has been active interest taken by the western powers, such as, France, who have already posted an officer at the IFC, and the four other Indo-Pacific navies namely Australia, Japan, the U.K and the U.S. have also agreed to position officers at the centre. This active interest expressed by these countries shows the significance of the information hub.
- India has taken active steps towards raising its engagement in the Western Indian Ocean by positioning a Liaison Officer at the Regional Maritime Information Fusion Centre (RMIFC) at Madagascar.
- The Regional Maritime Information Fusion Centre (RMIFC) was established under the auspices of the Indian Ocean Commission that India joined recently as an 'observer'. The RMIFC is a key centre of maritime information in the Western Indian Ocean.
- India has also posted an officer at the European Maritime Awareness in the Strait of Hormuz (EMASOH) in Abu Dhabi to assist in the monitoring of maritime activity in the Persian Gulf and the Strait of Hormuz.

### The French connection:

- France, a permanent member at the United Nations Security Council has aided and supported Delhi's moves in the Western and South-Western littorals, indicative of France's interests in the Indian Ocean, and that it is a critical partner for India in the region.
- India and France are both committed to the logistics agreement signed in 2019; Paris is keen for a stronger partnership in the maritime commons.
- France had been instrumental in pushing for India's candidature for the observer status at the Indian Ocean Commission and is nudging India for enhanced participation in security initiatives in the Western Indian Ocean.

### China Watch:

- A cause for concern for the Indian security establishment has been the future technological sophistication of China's submarines that will make it difficult to detect them in the Indian backyard.
- The Chinese achieved a breakthrough in submarine propulsion by successfully testing shaftless rim-driven pump-jets; analysts fear that the next generation of PLAN nuclear submarines could be stealthier than ever, capable of beating adversary surveillance.
- The recent discovery of a Chinese unmanned underwater vehicle close to a southern Indonesian island is indicative of Chinese attempts to map the undersea terrain of the Indian Ocean region.

### India's Navy Arsenal:

- India has not taken China's threat lying down, instead, it has chosen to be on its toes and has moved to expand its underwater detection capabilities in the Eastern chokepoints. India went ahead to acquire two Sea Guardian drones on lease from the United States for better surveillance.
- Indian navy capabilities are bolstered by an additional nine operational P-8I aircraft to be inducted. Currently, the Navy's coverage of the Bay of Bengal littoral is adequate.
- Speculation abounds that New Delhi might also partner Japan in installing an array of undersea sensors near the Andaman Islands to help detect Chinese submarines.

### Way Forward:

- The maritime domain response of India is largely driven by Chinese threat but it also takes into consideration the emerging transnational threats in the littorals and the need to combat it.

- India has White shipping agreements with 21 countries in the Indian Ocean enabling a comprehensive picture of maritime traffic, even as efforts are underway to help smaller island states build capacity to combat regional threats.
- The launching of India's military satellite (GSAT-7A) will soon pave way for a real-time sharing of data on maritime areas with partners.
- India's maritime initiative vis-à-vis the littoral states of the Indian Ocean Region is guided by Security and Growth for All in the Region (SAGAR), it seeks to put forth the idea of India as a 'security provider' and 'preferred partner' in the Indo-Pacific region.
- Cooperation, collaboration in information sharing will allow for collective action in dealing with threats in the region.
- To bring real change, India must ensure seamless information flow, generating operational synergy with partners, and aim to expand collaborative endeavours.

#### **4. Forum of the Election Management Bodies of South Asia (FEMBoSA)**

##### **Why in News?**

- The Election Commission of India has handed over the Chair of FEMBoSA to the Election Commission of Bhutan for 2021-22.

##### **FEMBoSA:**

- Forum of the Election Management Bodies of South Asia (FEMBoSA) was established at the 3rd Conference of Heads of Election Management Bodies (EMBs) of SAARC Countries in 2012.
- The forum aims to increase mutual cooperation in respect to the common interests of the SAARC's EMBs.
- The Forum has eight Member Election Management Bodies from Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.
- The Election Commission of India was the latest Chair of the Forum (now Bhutan).

##### **Its Establishment:**

- The first meeting of the representatives of Election Management Bodies of Bangladesh, Bhutan, India, Maldives, Nepal and Pakistan held in Dhaka, Bangladesh in the year 2010.
- It was then decided at the conclusion that an organization representing those countries should be established.
- Consequently, annual meets were held in the member countries and the charter for the organization also was adopted with the aim of fulfilling the objectives of the organization.

- Since the creation of FEMBoSA, Annual Meetings were held in Pakistan (2011), in India (2012), in Bhutan (2013), in Nepal (2014), in Sri Lanka (2015), in Maldives (2016), in Afghanistan (2017) and in Bangladesh(2018).

### Objectives of FEMBOSA:

- Promote contact among the Election Management Bodies of SAARC countries
- Facilitate appropriate exchange of experience and expertise among members
- Share experiences with a view to learning from each other
- Foster efficiency and effectiveness in conducting free, fair, transparent and Participative Election

### Significant activities under FEMBoSA:

- Member organizations celebrate National Voter's Day in a calendar year in their respective countries.
- Initiative of establishing South Asia Institute for Democracy and Electoral Studies (SAIDES) in Nepal.
- In order to increase knowledge related to elections, take initiatives to include voter education in the school-level textbooks of their Respective Countries
- Implementation of recommendations of South Asian Disabilities Organizations for the inclusion of disabled people in the electoral system and the creation of suitable Election Environment

## 5. India's fate is tied to the rest of the world

### Why in News?

- Ever since Independence, India's fate has been closely tied to the rest of the world.

### How Global Interactions and how it shaped India:

- A large, newly independent, impoverished, and diverse country required active engagement with a variety of partners for its survival, security, and development.
- But a constantly evolving international environment presented India not just with opportunities but numerous challenges.
- **Poorly Demarcated Borders:** Its frontiers were initially poorly demarcated and poorly integrated.
- **Nuclear-armed neighbours:** India came to have two nuclear-armed neighbours with which it competed for Territory.

- Relations with the US and Russia: India's first leaders opted for flexible and friendly relations with both the U.S. and the Soviet Union and their respective allies.
- The Indo-Soviet Treaty of Friendship and Cooperation and the Bangladesh war altered India's relations with both superpowers and shifted the dynamics of the rivalry with Pakistan.
- Role in global politics: India also played an activist role in the decolonising world, extending diplomatic and (in some cases) security assistance to independence movements in Asia and Africa and sending military missions to Korea and the Congo.
- Economic progress: There were also important economic strides made, including the Green Revolution, undertaken with considerable foreign technical and financial assistance.
- Independent policy: India often found itself at odds with the great powers when it felt its greater interests were threatened, as on intervention in Bangladesh, nuclear non-proliferation, or trade.

### India after the Cold War:

- The 1991 Gulf war resulted in a balance of payments crisis and the liberalisation of the economy.
- India then adopted a range of reforms to liberalise the economy, but it faced more than just economic turmoil.
- Yet, the period that followed witnessed some important developments under the prime ministership of P.V. Narasimha Rao:
- The period saw the advent of the Look East Policy and relations with the Association of Southeast Asian Nations
- It also saw the establishment of diplomatic ties with Israel.
- The signing of a border peace and tranquility agreement with China took place in the same period
- The period also witnessed initial military contacts with the U.S., and preparations for nuclear tests.
- The Atal Bihari Vajpayee government built further upon these developments, conducting a series of tests in 1998, negotiating a return to normal relations with most major powers within two years.
- Economic development: These years also witnessed a rapid growth of the Indian economy, fuelled by a boom in information and communication technology companies, the services sector, and a rising consumer market.

- After 2004, the Manmohan Singh government worked extensively to resolve the outstanding question of India's nuclear status.
- By eliminating barriers to 'dual use' technologies and equipment, as well as a host of associated export controls, India had the opportunity to establish robust defence relations with the U.S. and its allies. Coupled with an economic deceleration after 2011, India's relations with the U.S. and Europe grew more contentious over the next three years.

### Relationship with China:

- The global financial crisis in 2008-09 presaged a slight change in approach, whereby India sought to partner with China and other rising powers on institutional reform, financial lending, climate change, and sovereignty.
- Beginning in 2013, China began to test India on the border and undermine Indian interests in South Asia and the Indian Ocean Region.
- With further stand-offs at Doklam and Ladakh between 2017 and 2021, India opted to boycott China's Belt and Road Initiative, raise barriers to Chinese investment.
- In response, India began consulting more closely with other balancing powers in the Indo-Pacific. Security relations and understandings with the U.S. and its allies (Japan, France, Australia) accelerated after 2014. A greater emphasis on neighbourhood connectivity was adopted.

### Way Forward:

- As India enters its 75th year of independence, there are plenty of reasons for cautious optimism about its place in the world.
- COVID-19 and growing international competition also underscore the difficulties that India will likely face as it attempts to transform into a prosperous middle-income country.
- What is certain is that India will not have the luxury to turn inwards.

## 6. Arctic Cooperation through Climate Change

### Why in News?

- It is tempting to view the current geopolitics of the Arctic through the lenses of the 'great power competition' and inevitable conflict of interests.

### Current geopolitical scenario in the Arctic: US-Russia Spat:

- It is mainly viewed as the growing tensions between North Atlantic Treaty Organization (NATO) allies and Russia.

- By the end of the Cold War, the geopolitical tensions and security concerns in the Arctic were almost forgotten.
- The perceived ‘harmony’ was broken in 2007, when the Russian explorers planted their flag on the seabed 4,200m (13,779ft) below the North Pole to articulate Moscow’s claims in the Arctic.
- This move was certainly viewed as provocative by other Arctic State.
- The regional tension increased after the Russia-Ukraine conflict in 2014.
- Consequently, relations between the U.S. and Russia reached their lowest point again.

### **China’s vested interests in Arctic:**

- China, for example, with its self-proclaimed status of a ‘near Arctic state’, has been actively engaged in various projects across the region.
- The importance of the Arctic region for China mostly stems from its energy security issues and the need to diversify shipping lanes.

### **Why China Focuses on Arctic?**

- Transport routes from China to Europe through the Arctic are not only much shorter but also free from the challenges associated with the Malacca Strait and South China Sea.
- In the latter case, China will continue facing a backlash from many Association of Southeast Asian Nations (ASEAN) members, supported by US forces and Quad.
- Impact of Climate change on Arctic:
- The Arctic is warming nearly twice as fast as the rest of the planet with consecutive record-breaking warm years since 2014.
- The Arctic is likely to begin experiencing ice-free summers within the next decade, with summers likely to be completely free of sea ice by mid-century.

## **7. The Legal Challenges in recognising the Taliban**

### **Why in News?**

- The Taliban’s takeover of Afghanistan has triggered a new debate in international law on the issue of Recognising an entity that claims to be the new government of a state.

### **Legal challenge of Recognising a Government:**

Questions of recognition do not arise when change of government within a state occurs when political power is transferred through Legal Means.



- However, things are different when the change of government happens through extra-legal methods like ousting the sitting government using unconstitutional means.
- China and Russia, two of the five permanent United Nations Security Council members, have seemingly shown readiness to recognise a Taliban-led government.
- Whereas countries like Canada have opposed it.
- Recognition of governments under international law is vital for several reasons.
- Recognition of government Vs. Recognition of State: Malcolm Shaw, the international lawyer, writes, “a change in government, however accomplished, does not affect the identity of the State itself.”
- Thus, in the current debate, the issue is not about the recognition of Afghanistan, whose legal personality remains intact it’s about the recognition of government.
- Two doctrines in International laws for recognising a government

#### **1) Effectiveness**

- According to this principle, to recognise a government means to determine whether it effectively controls the state it claims to govern.
- Under this doctrine, it is immaterial how the new government occupied office.
- Since there is hardly any doubt that the Taliban now effectively controls Afghanistan, as per this test, it would be recognised as Afghanistan’s government for international law and thus, international relations.

#### **2) Democratic legitimacy**

- According to this doctrine, recognition of a government also depends on whether it is the legitimate representative of the people it claims to govern.
- The end of the Cold War, the subsequent spread of democracy in the world, and the growing demand for universal respect for human rights gave an impetus to this doctrine in the last three decades.
- This doctrine has led many countries to bestow de jure recognition (legal recognition) on governments in exile in place of governments exercising effective control.
- Two recent examples include recognition by some states of Yemen’s government in exile since 2015.
- Second, the Nicolás Maduro government in Venezuela is not recognised by several countries due to the alleged lack of democratic legitimacy.
- The Taliban regime, despite exercising effective control over Afghanistan, lacks democratic legitimacy.

- Thus, it would fail to be recognised as the legitimate representative of Afghanistan if the doctrine of democratic legitimacy is applied.
- Nevertheless, there is no binding legal obligation on countries to withhold recognition citing democratic legitimacy.
- Thus, if Russia and China were to formally recognise the Taliban regime due to its effective control of Afghanistan, it would be consistent with international law.

### Way Forward for India:

- India will have to find a way to engage with the Taliban given India's huge investments in Afghanistan and stakes in the South Asian region.
- India should adopt a clear policy that it will deal with the Taliban simply because it is the de facto government, not because it is a legitimate one.
- This principle should be followed for bilateral relations and also for multilateral dealings such as within the South Asian Association for Regional Cooperation.

## 8. Soft Power, India's strength in Afghanistan

### Why in News?

- Over the past few weeks, there has been much talk about India's diplomatic stakes being threatened by the changing political scenario in Afghanistan.

### India's role in Afghanistan's Development:

- India is currently the fifth-largest donor in Afghanistan.
- India's total development assistance over the years has been worth over \$3 billion.
- Soft and hard measures: India's development cooperation with Afghanistan has encompassed both soft and hard measures.
- Soft measures have helped build goodwill and greater people-to-people contact and has involved measures focusing on health, education, capacity development and food security, among others.
- Many projects have been community-driven, thus helping engage a large section of people in development efforts.
- Hard infrastructure examples include the parliament building which was inaugurated in 2015, financing the Delaram-Zaranj Highway as well as the 42 MW Salma Dam in Herat province.
- India had also engaged in triangular cooperation under the US umbrella, cooperating with USAID on various programmes.

- This includes Afghan Women's Empowerment Programme, a collaboration between USAID and the Self-Employed Women's Association (SEWA) for providing vocational education for Afghan women.

### How India's Approach Differed from other Donors?

- Demand-driven approach: India follows a demand-driven approach, which implies that the sectors for investment are chosen by the recipient government.
- Not condition based: although its aid is extended as a soft means to gain strategic leverage, it comes without political conditions.
- In PPP terms, the value of the Indian rupee is often underestimated, meaning that the Indian rupee would be able to buy substantially more goods and services at adjusted exchange rates.
- For example, a study by the Stimson Centre found out that even though Indian aid in 2015-16 totalled \$1.36 billion, in PPP terms it could be pegged at over \$5 billion.

### Way Forward:

- Adapt programs to new reality: At the Afghanistan Conference in Geneva in 2020, India announced several development projects.
- New political developments in Afghanistan are unlikely to lead to a complete disconnect with India and its established socio-economic role.
- However, India may need to adapt its programmes to new realities.
- **Diversify portfolio:** There is still an infrastructure deficit in Afghanistan and a need for rebuilding and reconstruction.
- As far as development cooperation is concerned, however, India needs to further diversify its portfolios.
- Resilient Afghanistan to climate change: India can do much to build a more resilient Afghanistan with respect to climate change and disaster risk reduction with it spearheading global campaigns like CDRI.