CITIZENSHIP AMENDMENT ACT 2019 Critical Analysis

5 Years of Swachh Bharat Abhiyan: Status Check

The Transportation Sector in India: Is it Moving?

Social Security Code Bill, 2019: Need of the Hour

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MESSAGE TO THE READERS

The January 2020 Issue of the Next IAS Current Affairs Magazine (hereafter called 'The Magazine'), covers news events from 26th November 2020 to 25th December 2020 (hereafter called 'Coverage Period'). The Magazine has comprehensive coverage of all the topics from current affairs neatly categorized into major sections like Economy, International Issues, Polity & Governance, and so on.

The January issue of the magazine has an in-depth analysis of three issues from the coverage period viz. **'Citizenship Amendment Act, 2019: Critical Analysis', '5 Years of Swachh Bharat Abhiyan: Status Check' and 'The Transportation Sector in India: Is it Moving?' (This is a two-part series, next part of which will be covered in the February 2020 issue)**. The Magazine also covers the Social Security Code Bill, 2019, Electoral Bonds, Facebook Transparency Report 2019, The United Nations Climate Change Conference, also known as COP25 and many other issues which have become relevant in the coverage period.

This Magazine has a Guest Article contributed by Shri K.P. Shashidharan (IAAS, Former Director General, CAG Office) on the subject of **'India's Emerging Energy Landscape'** The guest columns by such notable authors help readers to have a nuanced understanding of these topics.

The Magazine works on the principle of learning by doing and testing the readers' understanding and retention via model question papers (included in the magazine) based on the lines of Prelims and Mains examinations of the Union Public Service Commission (UPSC) Civil Services Examination.

The Magazine is designed for the needs of the students who are preparing for UPSC Civil Services Examinations. However, it is also helpful for Engineering Services Examinations, Banking Examinations and other government or Public Sector Enterprises examinations.

Any suggestions for further improvement of the Magazine is welcome and may be e-mailed to currentaffairs@nextias.com

Team NEXTIAS

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CITIZENSHIP AMENDMENT ACT, 2019

The Parliament passed the Citizenship (Amendment) Bill (CAB), 2019 which received the President's assent to become an Act.

About:

- The Citizenship (Amendment) Act (CAA), 2019 **amends the Citizenship Act, 1955.**
- The Act is defended by the government but the opposition and some sections of the society are opposing this Act. Protests have broken out across India, a few of them violent, against the CAA.
- At the first hearing on petitions challenging the CAA, the Supreme Court declined to stay the contentious law but asked the Centre to file its reply against the petitions that say it violates the Constitution.

Breif Background

- **The Citizenship Act, 1955** provides for the acquisition and determination of Indian citizenship. A person may become an Indian citizen either by **birth, descent, naturalization or registration.**
    - It basically means that for becoming Indian citizen a person should have been born in India or have Indian parentage or have resided in the country for a period of time, etc.
- However, **illegal migrants are prohibited from acquiring Indian citizenship.** An illegal migrant is a foreigner who
    - Enters the country without valid travel documents, like a passport and visa, or
    - Enters with valid documents, but stays beyond the permitted time period
- Such Illegal migrants may be imprisoned or deported under the **Foreigners Act, 1946 and the Passport (Entry into India) Act, 1920.**
- The above Acts empower the central government to regulate the entry, exit and residence of foreigners within India.
- **In 2015 and 2016, the central government issued two notifications exempting certain groups** of illegal migrants from provisions of the 1946 and the 1920 Acts.
- These groups are **Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, who arrived in India on or before December 31, 2014.**
- This implied that these groups of illegal migrants will not be deported or imprisoned for being in India without valid documents.

- **This is not the first attempt to amend the Citizenship Act 1955.** In 2016 also, the government tried to amend the Citizenship Act 1955. However, the bill for this attempt was **lapsed** with the dissolution of the 16th Lok Sabha.
- Let us analyse the Citizenship Amendment Act, 2019 from a rational and historical perspective.

Relevant Provisions of the CAA, 2019:

- Any person belonging to **Hindu, Sikh, Buddhist, Jain, Parsi or Christian community** from **Afghanistan, Bangladesh or Pakistan**, who entered into India on or before the **31st day of December 2014 shall not be treated as an illegal migrant.**
    - The above benefit will be granted, provided the person has been **exempted** by the Central Government from certain **provisions of Passport (Entry into India) Act, 1920** or from the application of the provisions of the **Foreigners Act, 1946** or any rule or order made thereunder.
    - *Note:* These sections of people were already granted exempemtion from being prosecuted under the Foreigners Act 1946 and Passport Act 1920 by the 2015 and 2016 notifications.
- The central Government can grant a certificate of registration or certificate of naturalization to such a person. A person granted the certificate of registration or certificate of naturalization shall be **deemed to be a citizen of India from the date of his entry into India.**
    - The original Citizenship Act allows a person to apply for citizenship by naturalization, if the person has resided in India, or been in central government service for the last 12 months, and at least for 11 years of the preceding 14 years.
    - However, for these groups of persons, **the 11 years' requirement has been reduced to 5 years.**
- On and from the date of commencement of the Citizenship (Amendment) Act, 2019, any proceeding pending against a person under in respect of illegal migration or citizenship **shall stand abated on conferment of citizenship to him.**
- **Exceptions:** The provisions on citizenship for illegal migrants **will not apply to the tribal areas of Assam, Meghalaya, Mizoram, or Tripura**, as included in the Sixth Schedule to the Constitution.
    - These tribal areas include Karbi Anglong (in Assam), Garo Hills (in Meghalaya), Chakma District (in Mizoram), and Tripura Tribal Areas District.

Inner Line Permit (ILP)

- The Nagaland government has extended the Inner Line Permit (ILP) regime to the **Dimapur district.**
  - Dimapur, the commercial hub of the state, was the only district that was not under the ILP regime unlike the rest of Nagaland, which came into being in 1963.
- **Manipur** has been given protection under the Inner Line Permit regime in Dec 2019 after the President of India signed an order to this effect.

What is ILP?

- The ILP is an official travel document required by an Indian Citizen to visit four Northeastern states, namely, Arunachal Pradesh, Mizoram, Manipur and Nagaland. It is required by a person who is **not a native** to these four states.
  - Both the duration of stay and the areas allowed to be accessed for any non native are determined by the ILP.
  - The ILP **can be issued for travel purposes solely and travellers cannot overstay the permitted time period.**
  - An ILP is **issued by the state government concerned.**
- **Origin of ILP:**
  - ILP's origin dates back to **the Bengal Eastern Frontier Regulations, 1873 which** prohibited "British subjects" or Indians from entering into these protected areas.
  - The concept of inner line was created by the British to safeguard their commercial interests in border areas. After independence, the Indian government continued with the system in the name of protecting the culture of people in these areas.
- NRIs (Indians who are staying abroad for more than 6 months) and OCI holders are not eligible for Inner Line Permit.
- *Note:* Foreigners visting these areas require different permits like the Protected Area Permit (PAP) or Restricted Area Permit (RAP) from the Ministry of Home Affairs, Government of India. The requirement differs from state to state.

  - It will also not apply to the areas under the "Inner Line" under the Bengal Eastern Frontier Regulation, 1873. **So the Act will not be applicable to Arunachal Pradesh, Mizoram, Nagaland, and Manipur.**
- **Provisions related to OCI:** The original Citizenship Act provides that the Central Government may cancel the registration of Overseas Citizens of India (OCI) on certain grounds.
  - The CAA, 2019 **adds one more ground** for canceling the registration, **that is if the OCI has violated the provisions of the Citizenship Act or of any other law as notified by the central government.**

- Also, the orders for cancellation of OCI should not be passed **unless the OCI Cardholder has been given a reasonable opportunity** of being heard.

Why Government brought CAA?

- **Historically,** trans-border migration of population has been happening continuously between the territories of India and the areas presently comprised in Pakistan, Afghanistan and Bangladesh.
- **At the time of partition of India in 1947**, millions of citizens of undivided India belonging to various faiths were staying in the areas of present day Pakistan and Bangladesh.
- **Religious persecution of Minorities in neighbouring countries:** The constitutions of Pakistan, Afghanistan and Bangladesh provide for a specific state religion. As a result, many persons belonging to Hindu, Sikh, Buddhist, Jain, Parsi and Christian communities have faced persecution on grounds of religion in those countries.
  - Many such persons have fled to India to seek shelter and continued to stay in India even if their travel documents have expired or they have incomplete or no documents.
- These persons have been applying for citizenship by **registration** (section 5) under the Citizenship Act, 1955 but they were unable to produce proof of their Indian origin. Hence, they are forced to apply for citizenship by **naturalisation** under section 6 of the said Act, which, *inter alia,* prescribe twelve years residency as a qualification for naturalisation.
  - This denies them many opportunities and advantages that may accrue only to the citizens of India, even though they are likely to stay in India permanently.
- Therefore, the Citizenship Amendment Act, 2019 amends the citizenship Act 2019 to make applicants belonging to the said communities from the aforesaid countries eligible for citizenship by **naturalisation** if they can establish their residency in India for five years instead of the existing eleven years.

Assam Accord

- It was signed in 1985 between **the Indian government and All Assam Student's Union, and All Assam Gana Sangram Parishad** to end a six-year-long mass movement demanding detection and deportation of illegal immigrants.
- **According to the accord:**
  - All those who entered Assam between **1951 and 1961** were to be **given full citizenship**, including the **right to vote;**
  - Those between **1961 and 1971** were to be denied voting rights for ten years but would enjoy all other rights of citizenship;
  - Those who came **after 1971 were to be deported.**

CONCERNS RELATED TO CAA, 2019

COUNTER TO THE CONCERNS

Violates Article 14

Critics argue that it violates Article 14 of the Constitution, which guarantees the right to equality. This is because it specifically excludes Muslims.

It does not violate Article 14

The equal protection of laws guaranteed by Article 14 does not mean that all laws must be general in character. It does not mean that the same laws should apply to all persons.
▶ In Ram Krishna Dalmia vs Justice, SR Tendolkar case court said that Article 14 forbids class-legislation but it does not forbid reasonable classification.
It is said that CAA stands the test of reasonable classification since it has **'religious persecution'** as the basis and is aiding those who are being religiously persecuted i.e. the minorities in the specified Islamic countries.

Religion as the basis for citizenship

Religion has never been specifically codified in the citizenship law as the ground for distinguishing between citizens and non-citizens.

Shelter to persecuted minorities

After Independence, not once but twice, India conceded that the minorities in its neighborhood are its responsibility. First, immediately after Partition and again during the Indira-Mujib Pact in 1972 when India had agreed to absorb over 1.2 million refugees. It is a historical fact that on both occasions, it was only the Hindus, Sikhs, Buddhists and Christians who had come over to the Indian side.

Why exclude Muslims as even some sections within Islam are persecuted?

Some sections of Muslims are considerably discriminated against and exploited in the neighboring countries of China, Sri Lanka, and Myanmar.
The 36,000 Rohingyas Muslims from Myanmar who fled to India in the wake of the 2015 insurgency is just one such example.
▶ The Second Amendment to the Constitution of Pakistan passed in 1974 effectively declared Ahmaddiyas as non-Muslims.

Historical Precedents and Commitments

The Nehru-Liaqat pact of 1950 required both India and Pakistan to ensure that its minorities enjoy complete equality of citizenship. Thus CAA, 2019 is concerned with only religious minorities in Pakistan, Afghanistan and Bangladesh.

CAA combined with nationwide NRC

Muslims are particularly worried about CAA combined with nationwide NRC. The talk of sending those excluded from the Register to detention centers has given credence to the fear that thousands of people are vulnerable to being rendered stateless and rightless.

Assurance from the Prime Minister of India

Prime Minister categorically said that no detention centres are being built in India for illegal migrant will be sent. He also added that there is no talk on NRC anywhere. It was only implemented in Assam after the Supreme Court's direction.

Concerns of North-Eastern States

In these states, the prospect of citizenship for massive numbers of illegal Bangladeshi migrants has triggered deep anxieties, including fears of demographic change, loss of livelihood opportunities, and erosion of the indigenous culture.
▶ E.g. According to the 2011 census, the percentage of Assamese speakers in the state declined from 58 percent to 48 percent between 1991 and 2011. In the same 20-year-period, Bengali speakers increased from 22 percent to 30 percent.
It is also argued that CAA violates the Assam Accord of 1985 as under the new law, the cutoff is December 31, 2014, for Hindus, Christians, Sikhs, Parsis, Buddhists and Jains.

Clause 6 of Assam Accord

The Asom Gana Parishad itself said that Clause 6 of the Assam Accord will insulate Assam from CAA's adverse impact.
▶ Clause 6 of Assam accord relates to constitutional, legislative and administrative safeguards to protect, preserve and promote the cultural, social, linguistic identity and heritage of the Assamese people.
The provisions of citizenship for illegal migrants will not apply to the tribal areas of Assam, Meghalaya, Mizoram, or Tripura, as included in the Sixth Schedule to the Constitution.
It will also not apply to the areas under the "Inner Line" under the Bengal Eastern Frontier Regulation, 1873. So the Act will not be applicable to Arunachal Pradesh, Mizoram, Nagaland and Manipur (Manipur has been given protection under the Inner Line Permit regime in December 2019).

May deteriorate bilateral relations

The Act will stamp these three countries as institutions of religious oppression and may deteriorate bilateral ties.

Reformist government in Neighbouring countries

It may be noted here that the current governments in Bangladesh and Afghanistan has taken steps to ensure protection of minorities in their countries. But in the past, India has argued that religious minorities were persecuted. Bangladesh government also issued a statement saying if Bangladeshi nationals were found to be living in India illegally, it will take back its citizens.
Afghanistan also announced that it is ready to welcome back Sikhs who fled Afghanistan due to religious persecution.

Nehru-Liaquat Pact 1950

This pact was signed between Liaquat Ali Khan, the then prime minister of Pakistan and Pandit Jawaharlal Nehru in Delhi in April 1950. The immediate concern was the exodus of Hindus from East Pakistan and Muslims from West Bengal. Under the Nehru-Liaquat pact:

- Refugees were allowed to return unmolested to dispose of their property
- Abducted women and looted property were to be returned
- Forced conversions were unrecognized
  - Fundamental rights of minorities were confirmed. E.g. freedom of speech, movement, occupation and worship.
  - Strong punishment to the oppressive elements in the society to safeguard the rights of minorities was agreed.
- As a result, minority commissions were established in the two countries to implement these terms of Nehru-Liaquat pact.

NRC VS NPR VS CENSUS

What is the National Register of Citizens (NRC)?

- At its core, the NRC is an official record of those who are legal Indian citizens. It includes demographic information about all those individuals who qualify as citizens of India as per the Citizenship Act, 1955.
- The NRC was published only once in 1951.
- National Register of Citizens, 1951 is a register prepared after the conduct of the Census of 1951, in respect of each village showing the houses or holdings in serial order and indicating against each house or holding the number and names of persons staying therein. These registers **covered each and every person enumerated during the Census of 1951.**
- Since the first nationwide NRC in 1951, it has not been updated for the whole of India. Only for Assam, the NRC is being updated. The process of NRC update was taken up **in Assam as per a Supreme Court order in 2013**. In order to wean out cases of illegal migration from Bangladesh and other adjoining areas, NRC updation was carried out **under The Citizenship Act, 1955, and according to rules framed in the Assam Accord.**
  - For Assam, National Register of Citizens (NRC) updation basically means the process of enlisting the names of those persons (or their descendants) **whose names appear in any of the Electoral Rolls up to midnight of 24 March 1971, NRC of 1951 or any of the admissible documents stipulated**.
  - The collective list of the NRC data of 1951 and the electoral rolls up to midnight on 24 March 1971 is called Legacy Data.

What is the National Population Register (NPR)?

- The NPR is a register of the **usual residents** of the country.

- A usual resident is defined, for the purposes of the NPR, as a person who has **resided in a local area for the past six months or more, or a person who intends to reside in that area for the next six months.**
- It would record **even a foreign national** staying in a locality for more than six months.
- The first such project dates back to the UPA regime. At that time, it had clashed with Aadhaar (UIDAI) over which project would be best suited for transferring government benefits to citizens. The Home Ministry then pushed NPR as a better vehicle because it connected every NPR-recorded resident to a household through the Census.
  - NPR **was first done in 2010** and was later updated in 2015 when it was linked with the Aadhar.
- NPR contains information collected at the local (village/sub-town), sub-district, district, state and national level **under provisions of the Citizenship Act, 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.**
- It is mandatory for every "usual resident of India" to register in the NPR.
- The process of updating NPR will be carried out under the aegis of the **Registrar General and ex-Officio Census Commissioner, India.**
- During the NPR, a respondent **will not require to produce any document.** As per a statement was given by Home Minister, NPR information will be **self-attested**, that is, whatever information is provided by the respondent will be deemed correct and **no documents or biometric would be required.**

- The process of collecting information for NPR will start in April 2020 and will be completed by September. **NPR will be conducted across India, except Assam** as the state has already gone through the National Register of Citizens.

- The Office of Registrar General of India (RGI) has already begun a pilot project in 1,200 villages and 40 towns and cities through 5,218 enumeration blocks where it is collecting various data from people.

- The NPR will collect **both demographic data and biometric data**, although for the latter it will depend upon Aadhaar. In the last NPR in 2010, data were collected on 15 aspects; in the 2020 NPR, there are 21 data points.

Difference between NPR and Census:

- While NPR only contains demographic information, more details are required for census like information on demography, economic activity, literacy and education, and housing and household amenities besides others.

  - The census provides detailed and authentic information on demography, economic activity, literacy and education, housing and household amenities, urbanization, fertility and mortality, scheduled castes and scheduled tribes, language, religion, migration, disability besides others. Information is also collected on sources of potable water, energy, irrigation, method of farming, whether a house is concrete, thatched or others.

Difference between NPR and NRC:

- National Population Register is a database of people living in India, citizens or not, but the National Register of Citizens is a database of Indian citizens.

- The NRC process demands proof of citizenship from the respondents. Those who found in want of the proof may face deportation or detention in the long run. But in NPR, there is no need to provide any documentation.

NRC and NPR Connection:

- The Home Ministry issued a statement saying, "There is no proposal at present to conduct a nationwide NRC based on the NPR data." He has also said that the two were not connected and that NPR data would not be used for NRC.

Can States halt NPR?

- Citizenship, aliens, and naturalization are subject **matters listed in List 1 of the Seventh Schedule** that fall exclusively under the domain of Parliament. Legally, **the states have no say in implementing or ruling out NPR.**

- **The Census Act of 1948** was amended in 1994 inserting Section 4A. This makes it **binding on the state governments to support the Census exercise** launched the Centre.

- Rule 5 of the **Citizenship Rules 2003** makes it **binding on state governments and local authorities to assist** the Registrar General of Citizen Registration or any person authorized by him in this behalf for preparation of NPR database.

- Also, according to the Citizenship Rules, it is obligatory on part of citizens to assist in the preparation of the National Register of Citizens.

DATA COLLECTION, THEN & NOW

Details of individual required for NPR in **2020**

1. Name of person
2. Relationship to head of household
3. Sex
4. Date of Birth
5. Marital status
6. Educational qualification
7. Occupation/Activity
8. Father's Name/Mothers Name/Spouse Name
9. Place of birth
10. Present address of usual residence
11. Duration of stay at present address
12. National (as declared)
13. Permanent residential address
New
14. Aadhaar Number (voluntary)
15. Mobile Number
16. Date & Place of Birth of Parents
17. Place of Last Residence
18. Passport Number*
19. Voter ID Card Number
20. Permanent Account Number
21. Driving License Number
If holder of Indian Passport

Details of individual required for NPR in **2010**

1. Name of person
2. Relationship to head of household
3. Father's Name
4. Mothers Name
5. Spouse Name (if married)
6. Sex
7. Date of Birth
8. Marital status
9. Place of birth
10. Nationality (as declared)
11. Present address of usual residence
12. Duration of stay at present address
13. Permanent residential address
14. Occupation/Activity
15. Educational qualification

5 YEARS OF SWACHH BHARAT ABHIYAN: STATUS CHECK

Aligning with the ideals of Mahatma Gandhi, the Swachh Bharat Mission (SBM) was initiated in 2014 to achieve universal sanitation coverage by 2nd October 2019.

About:

- The Swachh Bharat Mission is perhaps the largest cleanliness drive as well as an attempt to effect behavioural change in the world ever. The program was needed because even after 67 years of India's independence, in 2014, around 100 million rural and about 10 million urban households in India were without a sanitary toilet and over 564 million, i.e. close to half the population, still practiced open defecation.

Achievements of Swachh Bharat Mission:

- Through SBM, **99.2 per cent of rural India has been covered** in the last four years.
- Since October 2014, **over 9.5 crore toilets have been built** all over the country and 564,658 villages have been declared Open Defecation Free (ODF).
- As on 14 June 2019, 30 States/UTs are 100 per cent covered with **Individual Household Latrine (IHHL).**
- **SBM has significantly improved health outcomes.**
  - To highlight the impact of SBM on health, new evidence is provided that SBM has helped **reduce diarrhoea and malaria** among children below five years, still birth and low birth weight (new born with weight less than 2.5 kgs).
  - **Diarrhoea**, a leading cause of death among the under-five children in India, accounted for around 11% of deaths in 2013. Diarrhoea cases among children below 5 years in India have reduced significantly over the past 4 years.
  - **NOTE:** Apart from SBM, Control Programme and provision of safe drinking water, **Oral rehydration solutions (ORS) and zinc**, hand washing and personal hygiene under Integrated Action Plan for Prevention and Control of Pneumonia and Diarrhoea have also played an important role in reduction of malaria and diarrhoea.
- **Financial savings** from a household toilet exceed the financial costs to the household by 1.7 times, on average and 2.4 times for poorest households.
  - A **recent study conducted by UNICEF** on behalf of MoDWS (Ministry of Drinking Water & Sanitation) assessed the economic impacts (benefits) of SBM.
  The study found that on an average, every household in an open defecation free village **saved about ₹ 50,000 per year** on account of financial savings due to lower likelihood of disease from using a toilet and practicing hand washing and the value of time saved due to a closer toilet.

Rural	Urban			
% households with water closets	% households with pit latrines	% households with other types on toilets		% households without toilets
19% 72.6%	10.5% 7.1%	0.8% 1.7%		69.3% 18.6%
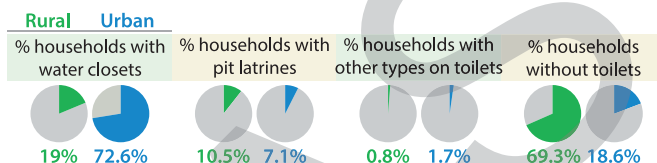
- The gains from a cleaner India are important inputs, directly as well as indirectly, for achieving broader economic development objectives.
- SBM's major focus has been on making villages Open Defecation Free (ODF).
  - ODF would mean the termination of faecal-oral transmission of diseases.
  - **Defined by no visible faeces found** in the environment/village and every household as well as public/community institution(s) using safe technology option for disposal of faeces.
  - The number of ODF villages have significantly increased since 2015.
  - As on 29.05.2019, 93.41% villages, 96.20% gram panchayats have been declared ODF.
- **State wise coverage:** Most of the states have **achieved** the **status of 100% ODF coverage** and only few states are yet to achieve their targets.
  - Goa has the lowest ODF coverage declared followed by Odisha, Telangana and Bihar.
  - West Bengal and Sikkim are very close to achieving 100 per cent ODF coverage.
- The **National Annual Rural Sanitation Survey (NARSS) 2018-19,** conducted by an Independent Verification Agency (IVA) has found that 93.1% of households had access to toilets during the survey period.
  - Further, 96.5% of the households in rural India that had access to a toilet, used them.
  - NARSS also re-confirmed the ODF status of 90.7% of villages, which were previously declared and verified as ODF by various districts/ States.
  - 95.4% of the villages surveyed were found to have minimal litter and minimal stagnant water.
- **Solid and Liquid Waste Management (SLWM)** is another major component of SBM Mission.
  - Many states have undertaken various activities such as construction of waste collection centres, menstrual hygiene management activities, installation of bio-gas

plants, construction of compost pits, installation of dustbins, system for collection, segregation and disposal of garbage, construction of drainage facility and leach pits and construction of soak pits and stabilization ponds.

- ◆ These activities require huge disbursement of funds from Central and State governments.
- This mission acts as a driver for **eliminating the gender disparity** through the construction of **gender-specific latrines in public areas** such as schools, roads and parks.
  - ◆ This public movement has indirect positive impact on society by **increasing the enrolment ratio of girls in schools** and improving health standards.
- **Importantly,** the SBM is also aligned with the 2030 global sustainable development agenda and Sustainable Development Goals (SDGs) especially the **SDG 6.2** – "By 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations".

More Toilets than Ever

Except for Goa, every state has achieved complete Individual Household Latrine (IHHL) coverage in rural areas, says the government. It also says that except for Bihar and Odisha, villages in all other states and Union Territories are now open-defecation free. Only 7% of villages still have open defecation.

Household Toilet Coverage

38.70%
(October 2014)

99.99%
(September 2019)

2014 ▢ 30% ▢ 30-60% ▢ 61-90% ▢ 91-100% **2019**
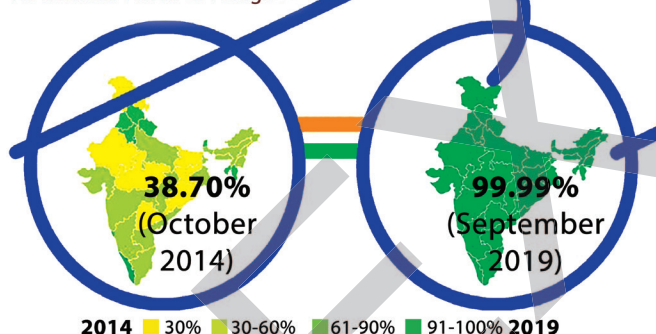
Multi-Faceted approach of SBM:

- The focus under this mission has not just been on construction of toilets but also on effecting a behavioural change in the communities.
- **Financial Incentive:** Under SBM, an incentive of Rs. 12,000 is provided for construction of Individual Household Latrines (IHHL) to eligible beneficiaries in rural areas and covers for provision of water storage.
- **Community participation:** Ensuring appropriate participation of the beneficiary/communities, financially or otherwise, in the setting up of the toilets to promote ownership and sustained use.
- **Flexibility in Choice:** SBM offers flexibility by building in a menu of options so that the poor/disadvantaged families can subsequently upgrade their toilets depending upon their requirements and their financial position.

- **Capacity Building:** SBM augments the institutional capacity of districts to change behaviour at the grassroots level and **strengthen the capacities of implementing agencies** so that the programme could be rolled in a time-bound manner and collective outcomes could be measured.
- **Instil Behaviour change:** Incentivizing the performance of State-level institutions to implement activities for behavioural change among communities.
  - ◆ E.g. Emphasising on awareness generation, triggering mind-set changes, leading to community behaviour change and demand generation for sanitary facilities in houses, schools, anganwadis, places of community congregation and for solid and liquid waste management activities.
- **Broad-based Engagement:** SBM set up the **Swachh Bharat Kosh** to encourage Corporate Social Responsibility and accept contributions from private organizations, individuals and philanthropists.
- **Use of Technology:** Information technology and social media is imperative to this program as it allows citizens to keep a check on the availability of toilets for every rural household in India.
  - ◆ Nearly 90% of all SBM toilets have already been geo-tagged.
  - ◆ Many mobile applications have been launched by not only the government but also by few citizens, which direct the municipal corporations' attention towards unclean areas.
- **Continuous engagement with implementers:** Team SBM-G visited each state multiple times and engaged directly with district collectors through learning workshops, informal gatherings and WhatsApp groups, promoting healthy competition among implementers which spurs local innovation.
- **Media:** The SBM-G made sanitation glamorous by engaging extensively with the media, leveraging popular culture, and associating Bollywood stars, sportspersons and other influencers to promote the message of sanitation.
- **Sustaining the Motivation:** The mission kept the buzz alive throughout its lifecycle through regular, large-scale events with the PM at important milestones, helping sanitation stay on top of public recall.

Pillars of SBM:

- **Team Swachh Bharat Mission Grameen (SBM-G)** has identified four key pillars, which can, more or less, be applied to any large-scale transformation in the world.
- **Political Leadership:**
  - ◆ Arguably the biggest game-changer for the SBM, was the prime minister investing his personal political capital in the mission.
  - ◆ Inspired by his leadership and commitment, various CMs took up the cause, creating a domino-like effect, cascading leadership to the chief secretary and in turn to collectors, all the way down to sarpanchs at the grassroots level.
  - ◆ Leaders at all levels are prime catalysts for large-scale transformations.

- **Public Financing**
  - Typically, no large-scale transformation can be an unfunded mandate.
  - Over Rs 1 lakh crore was committed to ensuring universal access to sanitation, thereby backing the political will with budgetary support.
  - About 90 per cent of the 10 crore households which received toilets were from socially and economically weaker sections of society and they received financial incentives to build and use toilets.
- **Partnerships**
  - The SBM (G) partnered with implementers and influencers alike — national and international development agencies, media houses, civil society, celebrities, as well as all departments/ministries of the government of India, who pledged an additional $6 billion for sanitation in their respective sectors.
  - **This "all hands on deck" approach,** making sanitation everyone's business, helped to mainstream it into the national consciousness.
- **Peoples' Participation**
  - The SBM-G **trained over half a million swachhagrahis,** grassroots motivators, who triggered behaviour change in every village of India.
  - Ordinary people undertook extraordinary roles and inspired others to build and use toilets.
  - Stories of **sanitation champions** emerged from every nook and corner of the country.
  - A large-scale transformation can be truly successful if it captures the imagination of the people, and becomes a people's movement or a jan andolan.

Challenges and Way Forward:

- **Dream of clean India** can only be realized by — maintaining a culture of swachhata at public places beyond individual houses, cleaning water bodies, scientific waste management, dealing with plastic menace, controlling air pollution, etc.
- To sustain the momentum created and behavioural change, a number of actions would have to be taken on a continuous basis such as motivation of "agents of change" at the ground level, impart training to field agents, appointment of sanitation Ambassadors to campaign and create awareness especially on health benefits, obtain systematic feedback from users.
- Attention must also be accorded to the sewer construction and water availability.
- SBM should focus on **achieving 100% disposal of solid and liquid waste.**
  - Currently, many states are not concentrating enough on this aspect which could pull us back to where we were a few years back.
  - Scientific techniques for the safe and effective disposal of waste should be the next on the agenda for this mission.

- As Indian economy grows, people are also on the move for various activities - for better education, for accessing better health, transport, hospitals, and tourism purposes - imparting strongly the culture of swachhata at public places and maintaining it should be an important part of clean India.
- **The cleaning of rivers** should be an integral part of clean India, along with coordinated activities between Centre and States such as treatment of industrial effluence, drain bio-remediation, river surface cleaning, rural sanitation, river front development, afforestation and biodiversity conservation etc.
- To continue the momentum created by SBM, the availability of financial resources intermixed with changing mind-sets have to be ensured.
- **Annual monitoring of the various rural villages** of different states has to be guaranteed for the effective formulation of different policies and their implementation.
- As the resource requirements are large, there is a need to **facilitate and sustain innovative financing mechanisms** by exploring the suitability of various financial instruments in specific contexts and interventions.
- For example, micro-financing, concessional loans, corporate social responsibility and crowd funding align with local government financing.
- **Private Partnership and Corporate Social Responsibility** can ensure, in specific contexts, a smooth flow of funds for the procurement of various scientific technologies for waste disposal and awakening masses.
- Governments must assign significant weight to the allocation of adequate resources as improvement in sanitation is one of the key determinants for the wider economic development of the economy.
- **A clean India should also lead to environment friendly green India.** Keeping the surroundings clean and maintaining hygiene would have tremendous environmental benefits.
- SBM needs to incorporate environmental and water management issues for long term sustainability and improvements.
- The issues relating to water availability are expected to be exacerbated by the effects of climate change and incidence of extreme weather events.
- Investment in the toilet and sanitation infrastructure in future, therefore, demands incorporation of **principles of sustainability, circular economy, and adoption of eco-friendly sanitation technologies.**
- Finally, all these efforts together endeavour into culminating a **Swachh (Clean), Swasth (Healthy) and Sundar (Beautiful) Bharat** that we dreamt for us and future generations to inherit which will be a real tribute to the 'Father of the Nation'.

■■■■

THE TRANSPORTATION
SECTOR IN INDIA: IS IT MOVING?

Recently, the Finance Minister of India unveiled Rs 102 lakh crore of infrastructure projects, under National Infrastructure Pipeline.

About:

- **The National Infrastructure Pipeline**, revealed by the Finance minister recently, is an endeavor by the government to push the infrastructure sector in India. It will be implemented in the next five years. The Finance Minister also said that another Rs 3 lakh crore of projects is likely to be added to this pipeline in the future.

- **Need of the National Infrastructure Pipeline (NIP):** It is estimated that India would need to spend $4.5 trillion on infrastructure by 2030 to sustain its growth rate.

- **Background of the NIP:** In his Independence Day speech, Prime Minister Narendra Modi highlighted that Rs 100 lakh crore would be invested in infrastructure over the next five years.
  - Subsequently, a task force identified Rs 102 lakh crore worth of projects after conducting 70 stakeholder consultations.

- **Projects included in the NIP:** The NIP will include projects from diverse infrastructural regimes like irrigation and rural infrastructure, industrial infrastructure, agriculture, and social infrastructure, roadways, railways, airways, port projects, urban infrastructure and telecom projects and projects related to the energy sector.

- **Status of the projects under NIP:** Around 42% of NIP projects are now under implementation while 31% are at the conceptualization stage.

- **Shareholding in projects under NIP:** As per the Finance Minister, central government and state governments would have an equal share of 39% each in the NIP. The private sector, on the other hand, would have a 22% share which the government expects to increase to 30% by 2025.

Note: *It is a two-part series*

India is aiming to become a $5Trillion economy by 2024-25 and Transportation Sector will play a crucial role in achieving this feat. In light of this, we will analyze the **Transport sector in India in a two-part series**. The first part, presented hereunder, will discuss the state of the **Roads, Railways, Waterways and Airways in India.** The second part will be presented in the next issue of the magazine and will cover the future of Urban Transportation, Logistics sector and other innovative means of transportation that may revolutionize how Indians move and do business.

- **Benefits:** The National Infrastructure Pipeline will enable a forward outlook on infrastructure projects, it will create jobs, improve ease of living, and provide equitable access to infrastructure for all, thereby making growth more inclusive.

What is the Significance of Infrastructure?

- In Economic literature, infrastructure is popular by the name "Overhead Capital" or "Social Overhead Capital". **The famous economist A.O Hirschman stated that Social Overhead capital** is the "basic services without which primary, secondary and tertiary productive activities cannot function".

- The very success of the social and economic transformation of an economy lies in providing inclusive and sustainable infrastructure amenities to the people and the pace of economic growth depends on how competently and judiciously an economy is able to address its infrastructure bottlenecks.

- Transport infrastructure is one of the most important factors for a country's progress. Good physical connectivity in urban and rural areas is essential for economic growth.

- **Even the SDG goal number 9** aims to "Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all".

Importance of Transport Infrastructure:

> *"The king shall promote trade and commerce by setting up trade routes by land and by water and market town ports."*
>
> **—The Arthashastra**

- **Economic importance:** Economic importance can be categorized as follows:
  - **The most fundamental impact** of transportation relates to the physical capacity to move passengers and goods. This involves the setting of routes enabling new or existing interactions between economic entities.
  - **Operational:** Improvement in the time performance, notably in terms of reliability, as well as reduced loss or damage. This implies a better utilization of existing transportation assets benefiting its users as passengers and freight is moved more rapidly and with fewer delays.

◆ **Geographical:** Access to a wider market base where economies of scale in production, distribution, and consumption can be improved. Increase in productivity from the access to a larger and more diverse base of inputs (raw materials, parts, energy or labor) and broader markets for diverse outputs (intermediate and finished goods).

• **Multiplier effect:** When transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multiplier effects such as better accessibility to markets, employment and additional investments. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost such as reduced or missed opportunities and lower quality of life.

• **GDP and transport infrastructure:** According to Economic Survey 2018-19, the correlation of investments in inland, road, rail and airport infrastructure to GDP is **higher than 0.90** indicating that there exists a strong correlation between GDP and investment in infrastructure.

• **Development of remote areas:** Roads and railways are opening up various remote and inaccessible regions of the country and make way for tapping vast unexplored resources like minerals, forest and agricultural wealth of the country.

• **Widening of the outlook of people:** The transport system of the country plays an important role in widening the outlook of the people of the country. It enriches the social, cultural and political outlook of our people. It also removes conservative attitudes, superstition and ignorance of our people.

• **Security of nation:** Development of transport infrastructure is important for a country like India to secure its borders especially along Line of Actual Control (LAC), Line of Control (LoC) and in the North-eastern States. Better transport infrastructure increases the military capability to thwart external aggression.

STATUS OF ROADWAYS IN INDIA:

• It is the dominant mode of transportation in comparison with rail, air traffic, and inland water-ways and **accounts for about 3.14 percent of GVA and 69 percent and 90 percent of the country's** freight and passenger traffic respectively.

• India has a road network of about 58.98 lakh km as of 31 March 2017 with rural roads constituting 70.65 percent and National highways constituting 1.94 percent.

• Ministry of Road Transport and Highways (MORTH) **declared 2018-19 as the 'Year of Construction'**, and has been making constant efforts to expand and upgrade the network of National Highways in the country as a result of which road construction in km grew **@ 30 km per day in 2018-19 as compared to 12 km per day in 2014-15.**

Issues with Road infrastructure in India:

• **The capacity of existing highways:** National and state highways are already overstrained, carrying more than 65 percent of the road traffic. **National highways carry 40 percent of India's total road traffic.**

Maintenance of existing infrastructure: The annual outlay earmarked for maintenance and repair of national highway stretches is only about 40 percent of the funds required. This is one of the main reasons for the inability to take up timely maintenance interventions.

• **Cost escalation for roads:** Delays in acquiring land can affect project costs as the average cost of land has escalated from Rs. 0.80 crore per hectare during 2012-13 to Rs. 3.20 crore per hectare during 2017-18.

• **Tardy investment:** Private sector investment has been tardy as private investors are interested in short term investments while **NHAI and NHIDCL were looking for long-term borrowing arrangements** keeping in view the long gestation period of road projects. There are also the associated risks from the projected revenue streams not materializing from tolls because of the uncertainty of traffic.

• **Accidents and safety concerns:** Road safety is a major issue in the country with nearly 400 road-related deaths being recorded daily. In 2013, India had an accident death rate of 18.9 for every 100,000 people, higher than other South Asian countries such as Bangladesh (11.6), Mauritius (12.2).

Steps taken by the Government to improve Road Infrastructure in India:

• **Central Road Fund (CRF)** which is a major source of budgetary support for the Highway sector was amended by the Finance Act, 2018, and replaced by **Central Road and Infrastructure Fund (CRIF)** wherein the fund now is to be earmarked for various infrastructure sectors such as Transport, Energy, Water and Sanitation, Communication, Social and Commercial infrastructure.

• **Eastern Peripheral Expressway** constructed with the objective to decongest the national capital by providing an alternate route to the traffic not destined for Delhi.

• **Delhi-Meerut Expressway** is the first national highway in the country with 14 lanes, dedicated cycle tracks and pedestrian paths with several eco-friendly features.

• **Dhola-Sadiya Bridge (a.k.a. Bhupen Hazarika Setu)** connects Assam to Arunachal Pradesh and ensures 24X7 connectivity.
   ◆ **Note:** At 9.15 kilometers (5.69 mi) in length, it is the current longest bridge in India over water.

• The **Government has approved a National Road Safety Policy.** This Policy outlines various policy measures such as promoting awareness, establishing road safety information data base, encouraging safer road infrastructure including the application of intelligent transport, enforcement of safety laws etc.

- **National Highways and Infrastructure Development Corporation (NHIDCL)** was created in 2014 as a fully owned company of the Ministry of Road Transport and Highways by the Government of India to expedite construction of National Highway projects with a specific focus on Northeast India.
- **The Bharatmala Pariyojana** envisages the development of about 26,000 km length of Economic Corridors, which along with Golden Quadrilateral (GQ) and North-South and East-West (NS-EW) Corridors are expected to carry a majority of the Freight Traffic on roads.

Way Forward:

- Improve the implementation capacity of states'/ UTs' public work departments (PWDs) through institutional strengthening and training.
- Maintain NH assets by adopting a **Maintenance Management System (MMS).** Earmark funds from the Central Road Fund (CRF) for maintenance activities.
- Eliminate 789 black spots identified by the Ministry of Road Transport and Highways (MORTH) by March 2020 by constructing permanent structures such as flyovers/vehicular underpasses (VUPs) and pedestrian underpasses (PUPs). Of these spots, 136 are on state roads and need to be dealt with by state governments.
- Sensitize stakeholders to iron out details of land acquisitions like determining market value, deciding a compensation amount, disbursement of compensation, etc., as detailed in the 2017 guidelines issued by MORTH, which covered various aspects of the **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement (RFCTLARR) Act**, 2013, and **The National Highways Act, 1956.**
- Introduce vocational training courses on road construction in Industrial Training Institutes (ITIs).
- Collaborate with original equipment manufacturers and other stakeholders to set up driving training centers (DTCs) to train commercial vehicle drivers.
- **Earmark 0.1 percent of MORTH's annual budget for R&D.** Establish a transport data center at the national level for applied research on roads. Enhance R&D on IT-enabled traffic management systems.
- **Transform State Road Transport Undertakings (SRTUs)** and promote public transport, rural transport, and last-mile connectivity.
  - Phase-I of PMGSY should be completed by March 2019. The total length under the LWE
  - (Left Wing Extremism) program of 5400 km must be completed by March 2020.
  - Beyond 2020, we should focus on building last mile connectivity.

STATUS OF INDIAN RAILWAYS:

- Rail experts believe that rail transport systems are **six times more energy-efficient** than road and **four times more economical**.
- The social costs in terms of environmental damage or degradation are significantly lower in rail. Rail construction **costs are approximately six times lower than the road** for comparable levels of traffic.
- The Indian Railways (IR) is the **fourth-largest** network in the world in terms of route km (67,368 km in FY17).
- It is also the **largest passenger** (1,150 billion-passenger km in FY17) and **fourth-largest freight** (620 billion net-tonne km in FY17) transporting railway system globally.
- During FY07- FY17, railways' revenue increased at a CAGR of 5.7 percent to USD 25.1 billion.
- **The share of railways in the transportation of surface freight has declined** from 86.2 percent in 1950-5114 to 33 percent in 2015, in part due to a shortfall in carrying capacity and lack of price competitiveness.

A: Route km increase Over Time — 1950-51: 53,596; 2013-14: 65,806 (23% increase).
B: Passenger km increase Over Time — 1950-51: 66,517; 2013-14: 11,58,742 (1642% increase). Passenger km (million).
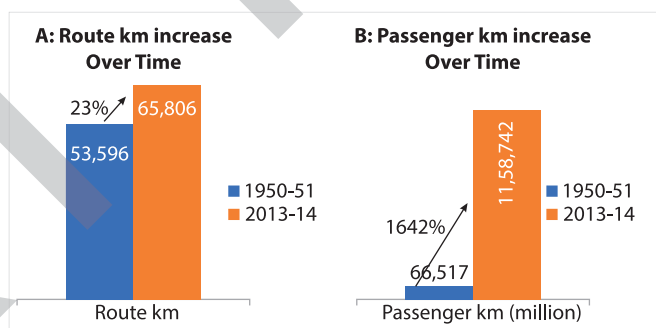
- The expenditure on the railways as a percentage of **transport expenditure declined** from 56 percent in 1985-90 (7th plan) to 30 percent in 2007- 12 (11th plan).
- **Rail Safety:** The incident of train collisions **has come down to zero in the year 2018-19**. The incidents of derailment have decreased from 78 in 2016-17 to 46 in the year 2018-19. However, the occurrence of fire in trains has increased to six in the year 2018-19 as compared to one in 2016-17

Issues with the Indian Railways:

- **Congested networks:** Over-stretched infrastructure with 60 percent-plus routes being more than 100 percent utilized, leading to a reduction in the average speed of passenger and freight trains.
  - From 1950-51 to 2013-14, the route km increased by only 23 percent against the growth in freight and passenger-km of 1,344 percent and 1,642 percent respectively.
- **Organizational structure:** Delays in decision making, inadequate market orientation, and long project approval durations lead to slow turnover times and delays in the implementation of railways projects.

- **Internal generation of resources:** Negligible non-fare revenues and high freight tariffs have led to a sub-optimal freight share. The lower relative cost of transporting freight by road has led to a decline in the share of the railways.
  - According to CAG, The Indian Railways recorded its worst **operating ratio** in 10 years in 2017-18 at 98.44%.
  - Many analysts feel that a major reason why the Indian Railways faces a financial crunch is that it **cross-subsidizes passengers** from the money it earns from moving freight across the country. Passenger fares are kept artificially low, and to compensate, freight rates are increased. The Indian Railways earns 1.44 rupees for every ton of freight it moves by a kilometer. In contrast, it earns just about 35 paise from moving passengers by the same distance.
- **Low and static prices** for the passenger segment have also contributed to the low internal generation of resources.
- **Safety and poor quality of service delivery:** There have been a number of accidents and safety issues in the IR in recent years. Poor cleanliness of trains and stations, delays in train departures/arrivals, quality of food and difficulties in booking tickets are key issues.
- **The efficiency of terminals:** Poor terminal facilities lengthen loading and unloading times. Eighty percent of railway loads come from terminals. The functioning of terminals needs to be strengthened to improve rail freight.
- **Economies of scale:** The lack of scale economies especially impact management quality and system accountability.

Industrial Corridor and Dedicated Freight Corridors

- Ministry of Railways is constructing a new Dedicated Freight Corridor (DFC) in two long routes namely, the Eastern and Western freight corridors.
- **Dedicated Freight Corridor Corporation of India (DFCCIL)** — a special purpose vehicle of the railways which has been entrusted with the job to develop DFCs in the country.
- It is developing two corridors at present. While the **Eastern DFC will run from Ludhiana to Dankuni** having a length of 1,856 km, the 1,504-km **Western DFC will run between Dadri and Jawaharlal Nehru Port.**
- While parts of the Western DFC have already been commissioned, the entire stretch may be operational by end of FY 2022. The Eastern DFC may take longer.
- Once commissioned, the DFCs will offer freight rates that would be up to 45% cheaper compared with roads, and the time taken for delivery will almost be the same.
  - It can also decrease the demand for heavy commercial vehicles, whose demand is subdued on account of a rise in prices and the revised axle load norms.

Steps taken by the Government for Indian Railways:

- **'Swachh Rail, Swachh Bharat', mission** focuses on cleanliness.
- Indian Railways has also made sincere efforts in the area of energy and water conservation and there is an increasing competition among stations to obtain **"Green Rating".**
- Similarly, Indian Railways has also encouraged **Green Certification of Workshop** and Production Units **through Green Industries Certification** in collaboration with Confederation of Indian Industry
- The government has created **the Rashtriya Rail Sanraksha Kosh (RRSK) i**n 2017-18 to address critical safety-related issues.
- **Security Help Line number 182** is operational over Indian Railways for security-related assistance to passengers in distress.
- **Mission Electrification:** Indian Railways has initiated a major electrification program for electrifying 100 percent of its Broad Gauge network. This would reduce the nation's dependence on imported diesel oil.
- **The Tejas Express,** 'Railways' 1st private train'**,** is the Railways' first experience of running a train by non-railway operator and its own subsidiary IRCTC.
- The center is also contemplating the development of 50 railway stations, drawing from the example of privatization of six airports in the country.
- The Indian Railways has achieved its target of eliminating all unmanned level crossings on its network, except for one in Allahabad division

Way Forward:

- Prioritize ongoing projects to improve capacity utilization. Timely completion of these projects will generate more revenue. At the same time, we need to maintain and upgrade the existing network to ensure that supply keeps up with demand.
- Consider **opening up the ownership and operations of freight terminals** and ownership of locomotives and rolling stock to the private sector under a transparent, neutral (non-railway) and fair regulatory mechanism. This will improve performance and attract private players and investments.
- **Revisit Indian Railways' pricing model** to make the passenger and freight segments sustainable. Freight tariffs should be competitive with the cost of road transportation. Expedite the process of establishing the **Rail Development Authority (RDA),** already approved by the government.
- **Monetize land resources with the railways**, particularly through developing non-railway revenues such as through retail or other activities.
- **Eliminate level crossings and cattle crossings and fence railway** tracks in areas with high levels of activity to prevent

accidents. Upgrade and ensure the smooth functioning of by-pass crossings and grade separations. Implement the 22 recommendations of the **High-Level Safety Review Committee chaired by Dr. Kakodkar.**

- Improve terminal efficiency by promoting the concept of 'engine-on-load' system, developing proper terminal layouts, adopting efficient operational practices, operating trains end to- end, and using proper handling methods/ systems for loading and unloading operations.

Recommendations of the Bibek Debroy Committee

- **Encouraging private entry:** Private entry into running both freight and passenger trains in competition with Indian railways should be allowed and private participation.
- **Independent regulator:** Shift regulatory responsibility from the government to an independent regulator as the private sector will only come in if there is fair and open access to railway infrastructure.
- **Transition to commercial accounting:** The process of accounting in Indian Railways is very complicated.
- The financial statements of Indian Railways need to be re-drawn, consistent with principles and norms nationally and internationally accepted.
- **The non-core function of railways must be privatized:** These activities include running hospitals and schools, catering, real estate development, including housing, construction and maintenance of infrastructure, manufacturing locomotives, coaches, wagons and their parts.
- **Expansion of Indian Railways Manufacturing Company:** According to Debroy, wagons are already produced by the private sector. Coaches and locomotives could follow. Unless they are freed from 59 their constraints, the existing production units will be unable to face this competition.

STATUS OF PORTS, SHIPPING AND INLAND WATERWAYS:

- **Ports and shipping:** India has a coastline spanning about 7,500 km, forming one of the biggest peninsulas in the world. Around 90 percent of India's external trade by volume and 70 percent by value are handled by ports. Twelve major ports and 205 non-major ports operate on India's coast.
  - Despite being the most cost-effective and efficient mode, water transport accounted for 6 percent of freight transport in India in 2016-17.
  - During 2016-17, the total cargo throughput through major and non-major ports was MT.
- **Inland waterways:** Inland Water Transport (IWT) carries less than 2 percent of India's organized freight traffic and negligible passenger traffic.

- The annual freight volumes carried on inland waterways using National Waterways (NW-1, NW-2, and NW-3) and Goa Waterways was 21.91 MMT in 2016-17. Additionally, Maharashtra Waterways alone transported more than 33.29 MMT.
- Until 2015, there were only five NWs in the country. In April 2016, 106 more waterways spread over 24 states were declared as NWs.

Benefits of Inland Water Transport

- IWT provides a supplementary mode of transport that is cost-effective, fuel-efficient and environment friendly.
- **Low emissions** - CO_2 equivalent greenhouse gas emission per tonne-km of cargo transportation is 15g by IWT, 28g by Rail and 64g by Road transport.
- **Low energy consumption** - 1 HP can carry 4000 kg load in Water, 500 kg by Rail and 150 kg on Road.
- **Low fuel cost** - 1-liter fuel can move 105 tonne-km by IWT, 85 tonne-km by Rail and 24 tonne-km of freight by Road.
- IWT can provide optimal modal mix by integrating river transport with other modes thereby reducing total logistics cost.
- It eases congestion on Road and Rail networks.
- IWT requires very little land acquisition as compared to Road and Rail modes.
- Caters to the needs of the relatively underdeveloped hinterland.

Pillars of the Sagarmala Programme
Port-led Development

Port Modernization	Port Connectivity	Port-led Industrialization	Coastal Community Development
▶ Capacity Augmentation ▶ New ports ▶ Efficiency Improvement	▶ New Road/Rail Connectivity ▶ Up-gradation of Road/Railway ▶ Coastal Shipping ▶ Inland Water Transport ▶ Logistics Parks	▶ Industrial Clusters ▶ Coastal Economic Zones ▶ Maritime Clusters	▶ Skill Development ▶ Coastal Tourism Projects ▶ Development of Fishing Harbours, Fish Processing centres

Issues in Ports, Shipping and Inland Waterways in India:

- **Modal mix:** Roads (54 percent) continue to be the dominant mode of transporting cargo, followed by rail (33 percent). Transportation of cargo through waterways – shipping and inland water – accounts for a minuscule modal share (6%) despite it being the most cost-effective and efficient mode.
- **Draught levels:** Most Indian container handling ports lack the capability to handle large container vessels due to inadequate depth; a minimum draft depth of 18 meters is needed to enable mother vessels to dock at ports. With international trade leaning   towards the more economically viable mother vessels, shallow draft adversely affects a port's potential to become a hub port.

- **Connectivity to ports:** Weak hinterland connectivity between production centers and gateway ports often leads to higher costs and delays because of sub-optimal mode choices.

- **Transshipment port:** A large percentage of containers in India are currently transhipped through other ports, such as Colombo (just south of India), Singapore (East), Dubai and Salalah (West) due to the absence of a transshipment port in the country. This has led to additional costs and delays due to the feeder voyage from India to the hub port.

- **Charges by the shipping lines:** The business practices of shipping lines have played a key role in the present negative perception of sea transport. A long-pending concern has been the high rate and multiplicity of charges imposed by shipping lines.

- **Capital for inland vessels:** At present, the cost of capital is very high and makes IWT freight uncompetitive. It is difficult to attract capital for building inland vessels as it is a significant investment.

- **Technical issues in inland waterways:** The varying and limited depths due to the meandering and braiding of alluvial rivers and the erosion of their banks causing excessive siltation, lack of cargo earmarked for IWT, non-mechanized navigation lock systems and insufficient unloading facility at terminals hinder the use of IWT by shippers.

- **Regulatory issues for inland waterways:** States' Ferries Acts from various years govern cross ferry movement and this may present a barrier to inland navigation, as the regulations may not take into account safety considerations.

Steps taken by the Indian Government for Waterways:

- The **Ministry of Shipping's Sagarmala** program focuses on modernizing and developing ports, enhancing port connectivity, supporting coastal communities and stimulating port-linked industrialization.

- The ministry is augmenting the capacity of NW-I under the **Jal Marg Vikas project.** The project will enable the movement of larger vessels of 1,500-2,000 tonnes on inland waterways.

- The Ministry of Finance has amended the **Central Road Fund Act, 2000,** as part of the Finance Bill 2018 to include a list of projects and infrastructure sub-sectors, including inland waterways, for which the CRF could be used.

- The CRF has since been renamed the **Central Road and Infrastructure Fund.**

Way Forward:

- At present, the Dredging Corporation of India (DCI) and a limited set of private vendors serve the Indian dredging market, limiting competition. The government needs to open up the dredging market to attract more players, particularly international players, in dredging activities to increase and maintain draft depth at ports to attract large vessels and enable them to become hub ports.

- Expedite the completion of various projects under Sagarmala, especially those aimed at improving port connectivity, setting up coastal economic zones (CEZs) and establishing new ports.

- The setting up of a single-window facility for cargo clearance and putting in place fully mechanized cargo handling infrastructure will be critical to increase throughput.

- The Government of India needs to take a fresh look at its policy of imports on a ''Free on Board" basis (FoB policy) as it needs to balance risk between the importer and the exporter.

- The new Merchant Shipping Bill to replace the Merchant Shipping Act, 1958, needs to be enacted at the earliest to promote the ease of doing business, transparency and effective delivery of services. The opening up of the sector will improve the availability of ships and help reduce costs.

- IWT should be integrated into multimodal/ intermodal connectivity. Inland terminals with proper road and/or rail connectivity and the seamless transfer of goods from one mode to the other is important for an efficient logistics supply chain.

- Financing for inland vessels could be made part of priority sector lending by banks. Categorizing inland vessels as infrastructure equipment will further ease access to capital issues for a sector where capital investments and operational costs are high.

- A clear directive needs to be issued for security of inland vessels, crew and cargo. Strengthen existing Inland Water Transport Directorates or Maritime Boards or set them up in states where they do not exist to ease the IWT business and to ensure efficient regulation and facilitation of IWT for cargo movement.

STATUS OF CIVIL AVIATION SECTOR IN INDIA:

- The civil aviation sector contributed USD 8.9 billion to India's GDP in 2014 and supported 1.31 million direct, indirect and induced aviation jobs.

- India's scheduled domestic air transportation for passengers and goods has grown by 14 percent and 12 percent respectively in 2018-19.

- India's domestic air traffic made up 69 per cent of total airline traffic in South Asia.

- The World Economic Forum's Global Competitiveness Report, 2018 ranks India as 53rd out of 140 countries worldwide in air transport infrastructure.

Issues with Civil Aviation Sector in India:

- **Capacity and infrastructure:** Due to the rapid expansion of India's civil aviation sector, airspace, parking bays, and runway slots will become increasingly scarce over the next few years, especially at metro airports. Inadequate hangar space and unavailability of land to expand airports at their current sites, particularly in major cities, are two of the major constraints that face the sector.

- **Skilled workers:** According to a study conducted by the Ministry of Civil Aviation, Indian aviation could directly support 1.0 to 1.2 million jobs by 2035. This implies that about 0.25 million persons will need to be skilled over the next 10 years.
    - Shortage and gaps in the availability of industry-recognized skills – from airline pilots and crew to maintenance and ground handling personnel – could constrain the growth of different segments of the sector.
- **Tariff determination:** The Ministry of Civil Aviation has mandated that all airports move from a **single to a hybrid till structure**. Although this is beneficial as it incentivizes infrastructure investment, it raises costs for airlines and passengers.
- **Taxes on aviation turbine fuel (ATF):** The price of aviation fuel in India may be up to 60 percent higher than prices in ASEAN and the Middle East countries because of high central and state taxes. Since it remains outside the GST network, there are also regional disparities in its price.
    - Fuel cost as a percentage of operating charges amounts to 45 percent in India as compared to the global average of 30 percent.
- **Aviation safety:** Although the number of aviation safety violations in 2017 (337) has declined in comparison to 2016 (442), the absolute number still remains high.

Steps taken by the government for Civil Aviation:

- National Civil Aviation Policy, 2016: NCAP 2016 aims to enhance the passenger traffic through the UDAN scheme, promote open sky agreement, opening a level playing field etc. The provisions include:

National Civil Aviation Policy, 2016:

- **Regional Connectivity Scheme:** Airfare of about Rs. 2500 per passenger for a one-hour flight.
- **Bilateral Traffic Rights:** Indian Government will enter into 'Open Sky' on a reciprocal basis with SAARC countries and countries located beyond 5000 km from Delhi
- **Ground Handling Policy:** It will be replaced by a new framework where the airport operator will ensure that there will be three Ground Handling Agencies (GHA) including Air India's subsidiary/JV at all major airports as defined in AERA Act.
- Encourage the development of Airport by AAI, State Governments, the private sector or in PPP mode.
- **Aviation Security, Immigration and Customs:** Ministry of Civil Aviation will develop **'service delivery modules'** for aviation security, Immigration, Customs, etc.
- **Helicopters and Charters:** Separate regulations for helicopters will be notified by DGCA.
- **Incentivization of Maintenance, Repair, and Overhaul (MRO):** The MRO business of Indian carriers is around Rs 5000 crore, 90% of which is currently spent outside India.

- **Aviation Education and Skill Building:** All training in a non-licensed category will conform to National Skill Qualification Framework standards. MoCA will provide full support to the Aviation Sector Skill Council.
- **Route Dispersal Guidelines** have been provided for better categorization of traffic routes.
- **5/20 Requirement was replaced** with a level playing field. The 5/20 rule was a norm of the Indian Aviation Ministry under which national carriers are required to have five years of operational experience and a fleet of minimum 20 aircraft to fly overseas. This is applicable to all commercial aviation organizations flying passengers.
- The Ministry of Civil Aviation's regional connectivity scheme, UDAN, is a 10-year scheme, which will promote balanced regional growth and make flying affordable for the population. It will help enhance connectivity to the country's unserved and underserved airports.
- **The e-Sahaj** portal is launched to facilitate individuals and private companies in seeking security clearance for setting up a business in certain sensitive sectors like civil aviation.
- **NABH Nirman Initiative:** Through this initiative, the government seeks to ensure the building of airport capacity.

Way Forward:

- Complete the planned airports under the UDAN initiative in a time-bound manner. The revival of 50 un-served and under-served airports/airstrips should be completed.
- Create additional parking hubs at suitable locations, accessible through short-haul flights, to accommodate additional aircraft.
- Monetize vacant real estate near AAI airports in all major centers of traffic to increase non-aeronautical revenues.
- Promote collaboration between original equipment manufacturers (OEMs), industry and educational institutes to teach the latest concepts in the aviation industry including management principles, IT in aviation, etc. Facilitate greater involvement of the private sector in sponsoring aviation institutions, industrial training, and R&D projects.
- Promote "Fly-from-India" through the creation of transshipment hubs. Develop an integrated digital supply chain or e-cargo gateway based on the National Air Cargo Community System (NACCS) platform.
- Deregulate further and open up the aviation market to help increase passenger and freight traffic in India. Align taxation and pricing structure to global benchmarks by considering bringing aviation turbine fuel (ATF) under the rubric of GST.
- Shift focus to pre-empting and preventing accidents/incidents. DGCA should be given autonomy for an effective aviation safety oversight system.

INDIA'S EMERGING ENERGY LANDSCAPE

K.P. Shashidharan, IAAS
Former Director General, CAG Office

The 25th United Nations Conference on Climate Change, also known as Committee of Parities (COP25) to the UN Framework Convention on Climate Change (UNFCCC) was held in Madrid, Spain, from 2 to 13 December 2019. UNFCCC was adopted in 1992. COP 24 was held in Katowice, Poland. COP decides how to go ahead with the Paris Agreement Work Programme with implementation guidelines for climate action. The conference addresses three main issues: first issue is to finalize the rules and procedures for countries to meet their commitments; second is how to finance climate action, and third what action is to be taken to exceed the Paris emissions-cutting commitments on the basis of what was done so far and what is to be done to meet the objectives. COP will operationalize the Paris Agreement to reduce emissions of Green House Gases. The special report by the Intergovernmental Panel on Climate Change (IPCC) found that the world is facing 1°C of global warming with more extreme weather, rising sea levels and diminishing polar glaciers and ice caps. Unless global warming is limited to 1.5°C compared to 2°C for bringing down 420 million people from exposure to heat waves, preserving tropical coral reefs, reducing loss of flora and fauna, and preservation of forests and wetland habitats. In September 2019, UN Secretary-General António Guterres addressed climate summit to strengthen climate action worldwide. If Paris Agreement commitments are fulfilled fully, still the world will be warmer by more than 3°C by this century. Therefore, nations have to raise their commitments to build climate resilience. Action is needed for energy transition, finding climate finance, carbon pricing, industry transition,

nature-based solutions, cities and local action and for climate resilience. COP at Katowice was a major step forward for operationalizing the Paris Agreement, adopted in December 2015 and joined by 184 countries to limit global warming to well under 2°C, or even 1°5C this century. The Katowice COP formulated guidelines to operationalize the transparency framework, how countries need to provide information about their Nationally Determined Contributions and their domestic climate actions for mitigation and adaptation measures. The COP guidelines cover the process for establishing new targets on finance from 2025 onwards from the current target of mobilizing US $100 billion per year from 2020 to support developing countries; how to measure the effectiveness of climate action and assess the progress on transfer of technology.

The latest Emissions Gap 2019 Report of the United Nations Environment Programme (UNEP) provides scientific evaluation of gap in GHG emissions and the prospects for the world to achieve the goals of the Paris Agreement. The findings prove the world failed to stop the growth of GHG emissions. Adoption of innovative technologies for cost-effective emission reductions is must for rapid. transformational impact. The Global Climate Action Summit, held in September 2019 convinced governments, private sector, civil society, local authorities and international organizations to collaborate to help the countries to achieve their nationally determined contributions (NDCs) by 2020 and aim for net zero emissions by 2050. At the Summit, around 70 countries expressed their intention to submit enhanced NDCs in 2020, while 65 countries and major subnational

economies committed towards achieving net zero emissions by 2050. Concrete steps are needed to reduce emissions.

The Intergovernmental Panel on Climate Change (IPCC) issued two special reports in 2019: the first one was on climate change and land report bringing out impact on desertification, land degradation and sustainable land management, food security and greenhouse gas fluxes, and the second report dealt with impact on ocean and cryosphere due to changing climate. The reports substantiate the need for achieving the temperature goals set in the Paris Agreement, 2015. GHG emissions increased at 1.5% per year in the last decade recording 55.3 GtCO2e in 2018. Fossil CO2 emissions grew at 2% in 2018 making 37.5 GtCO2 per year. IPCC report showed that GHG emissions must be 25% and 55% of 2018 level to achieve 2°C and 1.5°C respectively.

Economic growth rate is higher in non-OECD members compared to OECD members, indicating more energy demand form these countries. China's per capita emissions is equivalent to EU. G20 countries accounted for 78% global GHG emissions. Seven countries did not meet NDC commitments. G20 countries Canada, Indonesia, Mexico, the Republic of Korea, South Africa, the United States of America were away from their Cancun Pledges. Argentina, Saudi Arabia and Turkey did not agree to any commitment. China, EU28, India, Mexico, Russia and Turkey were likely to achieve NDC targets. India, Russia and Turkey were 15% less than NDC target, providing scope for further enhancing the target. EU's climate legislation helped member states in achieving NDC targets. Australia, Brazil, Canada, Japan, the Republic of Korea,

South Africa and the United States need to put efforts to meet their NDC. Many nations set net zero emission targets by 2050.

Nations need to take concrete action to refrain from extracting new fossil-fuel resources, providing subsidies to support renewable electricity-generation, employing extensive public transport in cities, providing subsidies for alternative fossil fuels, decarbonization of the energy supply by 2050, introduction of electric vehicle, banning coal-fired power plants, promote near-zero emission building development, regulation to refrain from investment in fossil-fuel infrastructure, promoting 100% carbon-free electricity supply by between 2040 and 2050.

Humanity is running out of time. It will be a race against time if concrete action is not taken timely. Before the two-week international climate conference held in December 2-13, 2019 in Madrid, the U.N. Secretary General Antonio Guterres observed that the world's efforts to stop climate change have been "utterly inadequate" with global warming reaching a "point of no return." Humanity has scientific knowledge and technical competence to limit global warming, but what is lacking is political will. Almost 200 countries of the would deliberate how to adhere to the commitments of 2015 Paris climate accord, creating international emissions trading systems and how to compensate poor countries for losses they suffer due to climate change. UN Secretary General cautioned, "Our war against nature must stop." Paris accord aims to limit global warming to well below 2 degrees Celsius, ideally 1.5C by the end of the century compared with pre-industrial times. As average temperatures have increased by about 1C, targets need to be reset to meet the objective. Measures include putting a price on carbon, stopping subsidies on fossil fuels, stopping building coal power plants from 2020 onwards, shifting taxation from income to carbon and taxing pollution

instead of people. About 70 countries who are vulnerable to climate change pledged to stop emitting more greenhouse gases by 2050. Unless the world's largest emitters are taking adequate measures, the goal is unreachable. Creating a worldwide market for emissions, a critical element of the sixth article of the Paris accord remained contentious.

The global concern to environment began with the United Nations Conference on the Human Environment in 1972 in Stockholm, creation of the World Commission on Environment and Development known as the Brundtland Commission in 1983, which defined sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Earth summits or the first United Nations Conference on Environment and Development (UNCED) commenced from 1992 onwards in Rio de Janeiro with the first blue print of action Agenda 21 was developed and adopted. Rio+10 in Johannesburg and Rio+20 in 2012, the United Nations Conference on Sustainable Development (UNCSD) and adoption of Sustainable Development Goals (SDG) with 17 goals and associated targets the world is clear about "The Future We Want" taking action towards poverty eradication, energy, water and sanitation, health, and human settlement. Ban Ki-moon, the then UN Secretary-General said in 2016: "We don't have plan B because there is no planet B."

The SDGs were developed after the Millennium Development Goals (MDGs) could not be achieved by 2015. "The Future We Want" was a non-binding document released in Rio+20 Conference held in 2012. In 2015, 193 countries of the UN General Assembly adopted the 2030 Development Agenda titled "Transforming our world: the 2030 Agenda for Sustainable Development" with 17 Sustainable Development Goals (SDG) and associated 169 targets and 232 indicators. 17 SDGs are 'no

Poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic Growth, industry, innovation, and infrastructure, reducing inequality, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice, and strong institutions.' These goals are broad based, overlapping and interdependent each having a list of targets, can be measured by indicators. Reliable data on the 17 goals is yet to be achieved from all countries. There are cross-cutting issues such as women and gender equality, education and sustainable development, education, gender and technology and need for SDG-driven investment.

India's energy policy is driven towards increasing use of renewable energy to achieve energy security. It aims at transition from coal-fired power plants to renewable energy sources; green industrialization with zero-emission technologies; mass public transit systems; domestic electric vehicles with zero-emission. Currently, India's total primary energy supply (TPES) needs are met from coal, natural gas, hydro, geothermal, solar, nuclear, biofuels and waste and primary and secondary oil. India still remains one of the world's largest coal consumers.

India submitted its Intended Nationally Determined Contribution (INDC) to UNFCC. Salient features of India's INDC include promoting healthy and sustainable way of living, adopting climate-friendly path for economic development, reduce the emissions intensity, enhancing about 40% electric power from non-fossil fuel-based energy resources by 2030, creating additional carbon sink of 2.5 to 3 billion tons of CO_2 equivalent by enhanced forest cover by 2030, enhancing investments in development programmes in agriculture, water resources, Himalayan region,

coastal regions, health and disaster management. India needs to mobilize funds to implement the above mitigation and adaptation actions. For making cutting edge climate technology, India will join collaborative R&D.

India's INDCs focus on climate change adaptation. Out of 8 missions of India's National Action Plan on Climate Change, 4 are based on adaptation viz. 'sustainable agriculture, increasing water use efficiency, sustaining the Himalayan ecosystem and creating sustainable habitats.' India also elaborated financial implications of the climate change goals and need for technology transfers to facilitate INDC achievement. Emissions intensity is to be reduced by 33 - 35% between 2005 and 2030. In order to keep pace with development, use of renewable energy needs to be enhanced by 40% by 2030. By 2030, India plans to create additional carbon sinks by afforestation and increasing the use of renewable energy by establishment of solar power projects, anchoring a global solar alliance, creation of Green Energy Corridors, implementation of National Smart Grid Mission, producing more energy from wind and waste conversion.

Appropriate technology is a priority area to effectively combat climate change. Energy efficient technologies and driven by renewable and hybrid energy are focus areas to increase energy and resource efficiency. The nation will adopt IPR regimes to enable global R&D collaborations for development and transfer of clean technologies. Mitigation efforts should not impact economic growth and development. The emissions targets have to be achieved without compromising the energy requirements. India's tradition and heritage go along with nature and environmental consciousness.

People love to live in harmony with nature. The states and UTs had submitted their Action Plans on Climate Change in line with the National Action Plan on Climate Change (NAPCC). India's initiatives in agriculture, water, health, coastal region & islands, disaster management, biodiversity and ecosystem protection, and securing rural livelihoods are based on sustainable development. National schemes promote organic farming, efficient irrigation systems, watershed management, improving soil health and climate resilient agriculture. India set up the National Adaptation Fund with a corpus of INR 350 Crores for the purpose.

The country has significant percentage of population below the poverty line. India accounts for only 2.4% world surface area supporting around 17.5% world population. India has the largest proportion of global poor, about 363 million people, constituting around 24% of the global population without access to electricity, about 30% of the global population depend on solid biomass for cooking and 92 million without access to safe drinking water. The socio - economic factors make the country highly vulnerable to climate change. India achieved a Human Development Index of 0.586 with very low average annual energy consumption. The infrastructure deficit, urbanization and industrialization drive, India faces a formidable challenge to achieve inclusive economic growth to its citizens. The action against climate change should not put the burden on the vulnerable sections of society. Therefore, India's energy landscape, while focusing on reducing the share of fossil fuel based conventional polluting energy sources like coal, lignite, petroleum and natural gas, will promote renewable energy sources like marine, tidal waves, hydroelectric, wind, geothermal, solar, nuclear. Biofuel and ethanol are gasoline substitutes for powering vehicles. Hydrogen can be used by for cracking of hydrocarbons or water electrolysis.

Share of fossil fuels like coal, crude oil, and natural gas need to be reduced. Nuclear power and non-renewable sources are finite resources of energy. Biofuels and biomass create air pollution. Algae fuel can be used for heat, biofuel, and biomass. Hydrogen gas is a completely clean fuel but making commercial hydrogen not cost effective. Hydroelectricity, wind farms and ocean current turbines and ocean thermal energy are alternate energy sources. Electric vehicles, plug-in hybrid electric vehicles, solar energy, geothermal energy sources need investment. India's energy policy centers on transition from coal-fired power plants, green industrialization strategy aiming at zero-emission technologies, expansion of mass public transit systems, and development of domestic electric vehicle with zero-emission.

Efforts for mitigation of air pollution, sustainable urbanization, infrastructure, transportation, green buildings, focus on governance, investment in education, employment, digitalization, energy efficient services, proper land use, focus on food security, bioenergy, increasing energy efficiency, electrification of end uses are significant areas for energy transition. Significant emissions reductions can be achieved by expanding renewable Energy for electrification, gradual phasing out coal for rapid decarbonization of the energy system, decarbonizing transport with a focus on electric mobility, decarbonizing energy-intensive industry. These policies need coordination between energy and other infrastructure sectors and to connect demand and supply-side policies to address job losses and creation, rehabilitation of ecosystem services, avoidance of resettlements and reduced health and environmental costs.

■■■■

SOCIAL SECURITY CODE BILL, 2019

Recently, the central government has introduced Social Security Code Bill 2019.

About:

- The **Social Security Code Bill** is part of larger exercise of the government to codify 44 labour laws into four broad codes on wages, occupational safety, industrial relations and social security.
- The informal or unorganized sector accounts for nearly 50% of India's Gross Domestic Product and is responsible for more than 80% of total job creation in the country, but still they are out of the reach of social security schemes.

Key Provisions of the Bill:

- It proposes **universalization of social security benefits, and reduction of employees' provident fund (EPF) monthly contribution** by workers in select sectors.
- The bill seeks to **establish a social security fund** and **tap** the corporate social responsibility fund **to offer unorganized sector workers** medical, pension, death and disability benefits via the employee's state insurance corporation.
- It proposes to offer **gratuity to fixed term employees after one year of service on a pro-rata basis** as against the current practice of five years.
- It will offer flexibility to the government lower the EPFO monthly contribution by employees to boost their take home salary. It, however, **won't change** the employers' share of 12% towards monthly EPF contribution.
- It will merge **eight existing labour laws, including** Employees' Compensation Act, 1923; Employees' State Insurance Act, 1948; Employees' Provident Funds and Miscellaneous Provisions Act, 1952; Maternity Benefit Act, 1961; Payment of Gratuity Act, 1972; Cine Workers Welfare Fund Act, 1981; Building and Other Construction Workers Cess Act, 1996 and Unorganized Workers' Social Security Act, 2008.
- A proposal for **corporatization of social security organizations like EPFO and ESIC.**
- The bill once passed will empower the central government to exempt select establishments from all or any of the provisions of the code and makes Aadhaar mandatory for availing benefits under various social security schemes.

What are the Advantages of the Code?

- Codification of labour laws will help the government to formulate and notify, from time to time, suitable welfare schemes for unorganized workers on matter relating to life

and disability cover; health and maternity benefits; old age protection; and any other benefit as may be determined by the central government.

- It will facilitate implementation and remove the multiplicity of different labour laws.
- It will facilitate the use of technology ensuring transparency and accountability leading to effective enforcement.
- It will help the existing labour laws to sync with the emerging economic scenario;
- It will lead to ease of compliance, catalyzing the setting up of manufacturing units including boosting Labour intensive industries such as agriculture and manufacturing exports.
- Thus, the code bill will not only lead to enhancement in employment opportunities, but also in its formalization along with ensuring safety, social security and welfare of workers.

WORKERS GAIN	BETTER EASE OF DOING BUSINESS
SCOPE of EPFO and ESIC widened **FIRMS** with 10 or more employees will have to provide health, pension and other benefits **FIRMS** with less than 10 workers can do it voluntarily **FOR** hazardous sectors, govt will notify benefits **EMPLOYEES** given flexibility to reduce their contribution to PF kitty **GRATUITY** to fixed term workers on pro rata basis **SOCIAL** security fund to be created; CSR funds could be used **NO** option to switch to NPS	**SINGLE** registration and single return for employers **FLEXIBILITY** for procuring compulsory insurance from IRDA

What are the Criticism of the Bill?

- The Bill fails to appreciate that provision of meaningful social security on such a massive scale is **beyond the capacity of any single ministry at any single level** of government.
- Social security has to be fundamentally rethought, instead of creating a patchwork drawn from different extant laws.

Way Forward:

- It is essential to rethink social security from top to bottom. It should be envisaged holistically, its different components delegated to different arms and agencies of the government at all levels.
- Quality education that equips people to learn throughout their lives and regular upgradation of skills in this era of rapid technological obsolescence should also be part of it.a

UNEMPLOYMENT AND LABOUR PARTICIPATION RATE FALLS IN INDIA: CMIE

Recently, the Centre for Monitoring Indian Economy (CMIE) released its 10th Statistical Profile on Unemployment in India.

About:

According to CMIE report (all data for January - April 2019):

- The labour force is nearly 445.9 million. Out of this nearly 41.7 million of working age (16-64 years) are unemployed in India.
- Almost 404.3 million persons were employed for the same period.
- Of the 404.3 million persons employed, only 44.6 million were women.
- The overall unemployment rate is almost 6.87 per cent.
- The urban unemployment rate is higher at 7.56 per cent in comparison to the rural rate of 6.55 per cent.
- Male unemployment rate is much lower than women.
- The labour participation rate of female is much lower in comparison to male.
  - Only 9.8 per cent of urban women participated in the labour markets compared to 11.6 per cent in rural markets.
- Urban women suffered a much higher unemployment rate compared to rural.
- Almost 60 per cent of the unemployed who are willing to work but not actively looking for jobs are women.
- According to CMIE, if labour continues to face a rising unemployment rate, and poor employment opportunities, it may start getting discouraged from entering the labour markets.

The 41.7 Million Job Creation Challenge
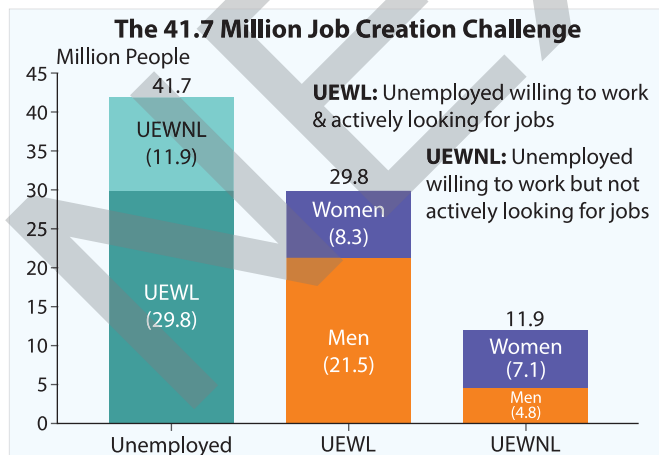
- The biggest challenge that India faces is to harness these 42 million people who are willing to work independent of whether they are actively looking for a job or not. Thus, once again, women face the double whammy of low participation rates and simultaneously, high unemployment rate.

What is an Unemployment?

Unemployment may be defined as "a situation in which the person is capable of working both physically and mentally at the existing wage rate, but does not get a job to work".

MAIN TYPES OF UNEMPLOYMENT

Seasonal Regular seasonal changes in employment/labour demand

Structural Arises from the mismatch of skills and job opportunities as the pattern of labour demand in the economy changes

Frictional Transitional unemployment due to people moving between job

Cyclical Caused by a fall in aggregate demand leading to a decline in GDP and employment

What are the Major Causes of Unemployment in India?

- **Slow Economic Growth:** Indian economy is underdeveloped and pace of economic growth has been very slow. This slow growth has failed to provide enough employment opportunities to the constantly increasing population.
- **Less Savings and Investment:** There is inadequate capital in India to support the people. On top of that, this capital hasn't been judiciously invested because investment depends on savings and savings itself are inadequate. Due to this shortage of savings and investment, employment opportunities are also less.
- **Unavailability of resources:** There is also low availability of means of production which is the main cause of under employment. As a result, people do not get employment for whole year due to shortage of coal, electricity and other raw materials.
- **No alternative for agriculture and small scale & cottage industries:** Since agriculture is seasonal, the people remain unemployed for months. The small scale and cottage industries have vanished due to growth of large industries making thousands of people unemployed. There are no alternative jobs provided to all these people by government.
- **Expansion of Universities:** The number of universities in the country has increased manifold. There are 877 universities in 2019. A result of this, the educated unemployment or white-collar unemployment has also increased, as the quality of education provided is poor.

- **Immobility of labour:** Due to family attachments, people do not go too far off places for jobs. This results in low mobility of labour in India. Factors like religion, language and climate are also responsible for this low mobility of labor which in turn increases the unemployment.
- **Large families:** In India, generally big joint families having large business establishments, due to which many family members are found who do not do any work and depend on the joint income of the family. Although, joint family system is more prevalent in rural areas; hence a high degree of disguised unemployment there.
- **Lack of proper planning:** The five-year plans implemented by the government have not contributed proportionately towards generation of employment. The assumption was that growth in economy will automatically generate enough employment. But in reality, there are gaps between the required number of jobs and the actual numbers generated.

7.6%	1.9 times	7.61%	15
Unemployment rate in April 2019, which was the highest in two years	Increase in unemployment rate in the past two years	Rural unemployment rate in April 2019, which was the highest in two years	Percentage point increase in unemployment rate in youth (20-24 yrs) in past two years

Rise of the unemployed | Both rural and urban unemployment rates have risen in the past two years.

What are the Consequences of Unemployment?

- The unemployment wave in India has significantly hurt the unorganized sector, which also includes a fair amount of season labour.
- Demand slowdown leading to joblessness among Daily-wage labourers.
- Witnessing a sharp contraction in demand, several manufacturers tend to cut down on production, resulting in further joblessness among individuals working especially the daily wage and contractual workers.
- Unemployment has forced roughly 37 million workers to quit agriculture in the last six years.

MIXED SIGNAL

In million
% share

Others **10.8** (2.7)
Poultry, animal h'dry **4.2** (1.0)
Manufacturing **40.3** (10.0)
A Crop cultivation **138.8** (34.3)
Services **(64.9)** (16.1)
B Retail trade **57.8** (14.3)
C P'snl non-prof. services **27.6** (6.8)
D Construction **59.9** (14.8)

High share in low-skilled jobs in Indian labour market

A, B, C, D are low-skilled jobs
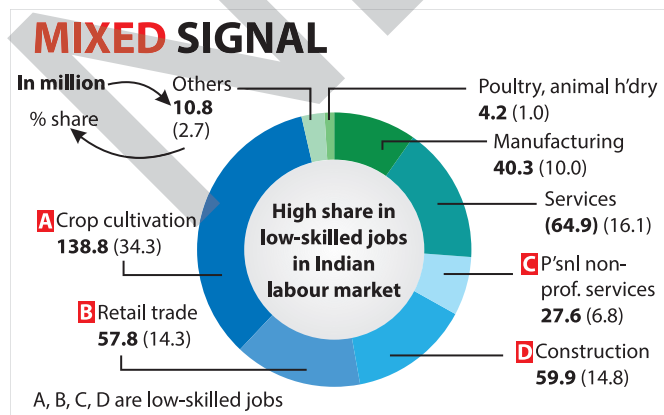
- During the same time, nearly 25 million women workers were forced out of the workforce.
- In order to cut the extra costs, firms either organised or unorganized prefer non-contractual employment resulting in violation of labour laws.

Periodic Labour Force Survey (PLFS)

- **Periodic Labour Force** refers to the part of the population which supplies or offers to supply labour for pursuing economic activities for the production of goods and services.
- It is conducted by National Statistical Office (NSO), under Ministry of Statistics and Programme Implementation.
- It includes both employed and unemployed persons.
- Most of the decline in employment has happened due to the fall in the number of workers in agriculture and a sharp fall in the absolute number of female workers.
- **Labour force participation rate (LFPR):** It is defined as the percentage of population in the labour-force.

What can be done?

- A constructive long-term development strategy that doesn't change with any paradigm shift, be it political or economic, is the need of hour.
- Developing strategies to create skilled labour force.
- Education, coupled with right practical skill sets to hire, train and retain youth as productive workforce.
- Creating awareness about demerits of overpopulation and developing initiatives to control the population.
- Updating current education system to make it more relevant with industrial requirements.
- The minimum wage norms should be regulated by the government in the private sector including MNCs.
- Government should encourage and develop agriculture-based industries (such as pesticides, fertilizers, tractors manufacturing companies, etc.) so that the rural people get enough opportunities in their own cities and don't have to migrate to the urban cities.
- Besides, Government should allow more foreign companies to establish their manufacturing units in India, so that more employment opportunities will be created and it will also increase Foreign Direct Investment (FDI) inflow into the country.

Conclusion:

- The reforms required for tackling unemployment problem in India may seem a lot at first but with application of modern technologies it can be simplified.
- With government efforts such as- easing small business loans through organizations like Micro Units Development and Refinance Agency (MUDRA) etc., this unemployment wave can be tackled at the grassroot level.

ELECTORAL BONDS
WORTH MORE THAN ₹ 6000 CRORE SOLD

According to Association of Democratic Reforms (ADR), electoral bonds worth Rs 6,128 crore were sold between March 2018 and October 2019.

About:

- Some petitioners have recently moved to the Supreme Court with a **plea to stay the Electoral Bonds Scheme.**
- Also, the Election Commission in the past has filed an affidavit to the SC, putting serious questions on the transparency of political funding.

What are Electoral Bonds?

- In an attempt to cleanse the system of political funding in the country, the scheme of Electoral bond was **announced** in the **Union Budget of 2017-18.**
- An electoral bond is **like a promissory note** and are similar to bank notes that are **payable to the bearer on demand.**

Promissory Note

- It is a financial instrument that contains a written promise by one party (the note's issuer or maker) to pay another party (the note's payee) a definite sum of money, either on demand or at a specified future date.
- It typically contains all the terms pertaining to the indebtedness, such as the principal amount, interest rate, maturity date etc.

- These are **free of interest** and can be bought by **any Indian citizen or company** incorporated **in India**.
- These can be brought from **select branches** of **State Bank of India only.**

ELECTORAL BONDS SCHEME NOTIFIED

To help cleanse the political funding system in the country

Nature

▶ Bearer instrument in the nature of a promissory Note

▶ Interest free banking instrument

Eligibility

▶ A citizen of India or a body incorporated in India

▶ On fulfillment of all the extant KYC norms

▶ By making payment from a bank account
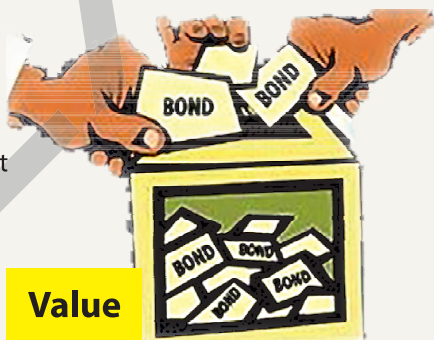
Value

Issued/Purchsed in multiples of Rs.1,000, Rs.10,000, Rs.1,00,000, Rs. 10,00,000 and Rs.1,00,00,000

Available from the Specified Branches of the State Bank of India (SBI)

Lifespan

▶ Shelf life of only 15 days

▶ Can be used for making donation only to the political parties registered u/s 29A of the Representation of the Peoples Act, 1951

Period of Purchase

▶ Available for purchase for a period of 10 days each in the months of January, April, July and October, as may be specified by the Government

- They can be purchased through **cheques or digital medium only.**
- It can be encashed only through an **ECI approved** bank account of the party.

What are the Eligibility Criteria?

- Any political party that is **registered under** Section 29 A of the **Representation of People Act, 1951.**
- It must **have secured not less than 1 per cent** of the votes polled in the last elections to the Lok Sabha or legislative Assembly.

What are the Criticisms of Electoral Bonds?

- Opacity due to lack of information on the amount donated or donor's identity.
  - Non-disclosure of donor's identity puts the shareholders of corporation or voters in dark especially about the funding sources of political parties.
- Abolition of upper cap on the quantum of electoral bonds raises serious doubts on the intent of the scheme as thousands of crores can be channeled by big business houses to government without their identity being revealed.
- Threat due to chances of influx of black money.
- Besides, there is a fear of penalization from ruling party as SBI being a government owned bank can provide information of the donors to the party in power.

What are the Arguments put by Election Commission's Against the Scheme?

The electoral bond scheme deprives the Election commission to check the violation of provisions under the Representation of the People Act, as:

- **Any donation received** by a political party **through an electoral bond** has been **taken out** of the **ambit of reporting** under the Contribution Report. Example the Representation of the People Act, 1951 prohibits the political parties from taking donations from government companies.
- It permits unchecked foreign funding, through an amendment to the **Foreign Contribution Regulation Act (FCRA)** which allow political parties to receive funding from foreign companies with a majority stake in Indian companies.
  - It can lead to Indian policies being influenced by foreign companies.

What are the Arguments by Government in Defense of this Scheme?

- Government believes that this scheme will limit the use of cash in political funding:

- This scheme will put an end to the practice of cash donation as earlier, massive amounts of political donations were being made in cash, by individuals/corporates, using illicit means of funding and identity of the donors was not known.
- It will **help in curbing the black money** in economy, as:
  - Buyers of these bonds must comply with KYC requirements.
  - Beneficiary political party has to disclose the receipt of this money and must account for the same.
- Limiting the time for which the bond is valid ensures that the bonds do not become a parallel currency.
- Records of the purchaser are always available in the banking channel and may be retrieved as and when required by enforcement agencies.
- It will protect donor from political victimization- as non-disclosure of the identity of the donor is the core objective of the scheme.
- Stringent clause of eligibility for the political parties will help in eliminating fraudulent political parties, which are formed on pretext of tax evasion.

What is the Stand of Supreme Court?

- The Supreme Court has asked political parties to reveal details of the donations they received through electoral bonds to the Election Commission.
- Besides, the poll panel has also been asked to keep all the details in a sealed cover until further orders of the top court.

What are the Possible Measures to Complement Electoral Bonds?

Although Election Commission of India (ECI) is empowered by existing laws to implement reforms related to electoral funding, following steps can help in improving transparency and accountability of electoral funding:

- Bringing political parties under the ambit of RTI.
- Mandatory disclosure under Section 29C of the Representation of the People Act, 1951, which requires political parties to publicly disclose donors for all contributions exceeding Rs. 20,000.
- Establishment of a national electoral fund through which the donor's contribution and funds can be distributed among different parties.

Conclusion:

Government's electoral bonds scheme is a process in the right direction, however, the points raised by the petitioners and the Election Commission should be addressed so as to ensure that the intent behind their introduction is achieved completely.

■■■■

OFFICE-OF-PROFIT

Recently, President of India has rejected a petition demanding disqualification of 11 MLAs on the grounds of Office-of-Profit.

About:

- In 2017, a petition was filed before the President seeking disqualification of some members of Legislative Assembly(MLA) for being co-chairpersons of the district disaster management authorities, as they were enjoying office of profit.
- In this regard, the Election Commission (EC) has held that the office of co-chairperson of a district disaster management authority does not attract disqualification as MLA as:
  - There is no remuneration by way of salary, allowances, sitting fee.
  - Nor is there any other facility such as staff car, office space, supporting staff, telephone or residence provided.
  - The commission also held that the **Delhi Members of Legislative Assembly (Removal of Disqualification Act), 1997** provides for **exemption** for the office.
  - The president has recently **rejected the petition challenging their exemption** from the Office of Profit.

What is the Concept of 'Office of Profit'?

- The office of profit is **inspired from United Kingdom** but in there is no general theory of disqualifications and specific list of such offices is provided under legislation.
- **In India**, there is general disqualification prescribed under the constitution while parliament specifies specific exemptions by law.
- The main objective is to enforce the principle of separation of power between the legislature and the executive.
- It has been interpreted to be a position that brings to the office-holder some financial gain, or advantage, or benefit.
- The intent is that there should be **no conflict between the duties and interests** of an office holder or an elected member.

Since the MPs (Members of Parliament) and MLAs (Members of Legislative Assembly), as members of the legislature, hold the government accountable for its work. Unless given **exemptions** as per law, any abuse of their "office" for personal or preferential profit draws the ground for disqualification under office of profit.

Exemptions

- Although there is no bar on how many offices can be exempted from the purview of the law. The state assemblies have over the years enacted many laws in this regard.

- **Goa:** Exemption through an ordinance Puducherry: exemption by passing an amendment bill in 2009.
- Besides, **Parliament** has enacted the **Parliament (Prevention of Disqualification) Act, 1959,** which has the exempted list of offices from purview of Office of Profit.

What is the Stand of Supreme Court?

Although, the law does **not clearly define** what constitutes an **office of profit but,** the definition has **evolved over the years** with interpretations made in various court judgments.

In 1964, the **Supreme Court** outlined the following **questions for the test for office of Profit:**

- Whether the government makes the appointment;
- Whether the government has the right to remove or dismiss the holder;
- Whether the government pays the remuneration;
- What are the functions of the holder and does he perform them for the government;
- Does the government exercise any control over the performance of those functions?
- In **Jaya Bacchan vs Union of India case**, the Supreme Court **defined** office of profit as "an office which is capable of yielding a profit or pecuniary gain."
- Thus it is not the actual 'receipt' of profit but the 'potential' for profit that is the deciding factor in an 'office of profit' case.

BEHIND THE RULE	KEY INSTANCES
The office of profit rule is meant to insulate the legislative from the executive so that people who make laws are not influenced by their positions	**Sonia Gandhi** quit as MP in 2006 and sought re-election since she was NAC chairperson
The term has not been defined but Constitution bans MPs and MLAs from holding positions in government unless it is that of a minister	
A financial benefit is not a requisite and any administrative position can fall afoul of the law	Samajwadi Party MP Jaya Bachchan lost her seat in 2004 for UP film body position
The NCT act setting up Delhi's assembly says those with office of profit can be disqualified by the President on advice of the EC	

What are the Provisions under Constitution?

Constitutional Provisions:

Article 102: Disqualifications for membership.

A person shall be disqualified as a Member of Parliament for

- Holding an office of profit under government of India or state government;
- Being of unsound mind;
- Being an undischarged insolvent;
- Not being an Indian citizen or for acquiring citizenship of another country.

Article 191:

- Disqualification of members for the members of state assemblies for holding Office of Profit and other disqualifications mentioned above.

Govt. of National Capital Territory of Delhi (GNCTD) act, 1991:

- A person shall be disqualified for being chosen as, and for being, a member of the legislative assembly if he holds any office of profit" under the government of India, a state or a union territory" other than an office protected by law.

Who is Parliamentary Secretary?

- In some Indian states like- Manipur, Himachal Pradesh, Mizoram, Assam, Rajasthan, Punjab, Goa, the **MLAs are appointed as Parliament Secretaries** by the Government.
- He/She assists a more senior minister with his or her duties.
- They often hold the **rank of Minister of State** and have the same entitlements.
- They are generally assigned to a government department.

What are the Issues with Appointments to the Office of Parliamentary Secretaries?

- Although in some states, the appointment of legislators as parliamentary secretaries is exempted by law from the purview of the office of profit, it has been struck down by courts in several judgements.
- **Calcutta High Court judgment in 2015:** It held that since the position may confer the rank of a junior minister on the legislator, the appointment of MLAs as parliamentary secretaries was **an attempt by state governments to bypass** the constitutional ceiling on the number of ministers.
- **Bombay High Court in 2019:** It held that appointing parliamentary secretaries of the rank and status of a Cabinet Minister is in violation of **Article 164 (1A)** of the Constitution.
- The **number of ministers including the Chief Minister** should **not exceed 15%** of the total number of members in the assembly.

What are the Arguments in Favor of Disqualifications?

- It is **against** the ethos of **separation of powers**, as the legislator who is holding an office of Profit cannot exercise his functions independent of executive of which he/she becomes a part.
- It dilutes constitutional provisions as office of Parliamentary Secretaries or other such offices are used by State Governments **to circumvent the constitutional ceiling of 15% (10% in case of Delhi)** on the number of ministers they can appoint.

What are the Criticisms of Office of Profit?

- The vagueness around Office of Profit raises several doubts as, lack of codification makes them susceptible to being misused by political representatives.
- If a large number of legislators are appointed to such offices, their role in scrutinizing the work of the government may be impaired.
- They are misused to secure political support and as alternatives to ministerial berths in era of Coalition Politics.
- Unlike ministers, the Parliamentary Secretaries are not administered under the Oath of Secrecy **(Article 239)** yet may be privy to such information which may threaten public interest, breed corruption or may even threaten national security.
- Thus, any abuse not only dampens the public trust in elected representatives but also contravene the spirit of constitutional mandate.

Joint Committee on Offices of Profit:

Recently, a Joint committee consisting of 15 members drawn from both the houses of Parliament was constituted to examines and define Office of Profit.

Major Excerpts:

- Whether the **holder draws any remuneration,** like sitting fee, honorarium, salary, etc. other than Compensatory allowance.
- Whether the body in which an office is held, **exercises executive, legislative or judicial powers** or confers powers of disbursement of funds, allotments of lands, issue of licences, etc., or gives powers of appointment, grant of scholarship, etc.
- Whether the **body** in which an office is held **wields influence** or power by **way of patronage.**

Conclusion:

- Parliamentary Secretaries participate in high level meetings of the government. Having full time access to the ministers and ministerial files enables them to wield influence and power by way of patronage.
- As the Judicial pronouncements on Office of Profit have been varied, there is need to bring a codified uniformity across the country. Enactment through legislature will be a welcome step in that direction.

FACEBOOK TRANSPARENCY REPORT 2019

Recently, the requests for Facebook user data by Indian government has seen an increase of 37%, second only to U.S.

About:

- According to the recently released Facebook Transparency Report 2019, Indian government has made 22,684 requests in the first half of 2019, **out of which 7% were emergency-related**.
- Government requests for user data are classified into legal process and emergency disclosure accompanied by legal tools, such as search warrant and are responded as per Facebook's service terms and law.

Major Highlights:

- India **tops** the list of Internet disruptions.
- The Election Commission of India has requested 488 political advertisements to be "temporarily restricted".
- Although the Government claims that content restricted was either violating Section 69A of the Information Technology Act (IT), 2000 or falls in the categories of hate speech, anti-religion content causing incitement to violence, defamation, extremism, anti-government and anti-state content.
- In this light, let us examine data privacy laws in India.

What is Data Privacy and Data Protection?

- **Data Privacy:** It refers to the use and governance of personal data. It can include everything from personally identifiable information (PII) to financial information, to information about a person's career, education, health, family or criminal history.
- It is concerned with the right to protect one's data in several forms including genetics or biometrics.
- **Data Protection:** It refers to the set of privacy laws, policies and procedures that aim to minimise intrusion into one's privacy caused by the collection, storage and dissemination of personal data.

Different laws concerned with data protection in India:

International Conventions:

- India has ratified following conventions which talks about data privacy.
- **Article 12** of the Universal Declaration of Human Rights **(UDHR)**.
- Article 17 of the International Covenant on Civil and Political Rights.
- Both the articles are aimed at protecting basic human rights so that, no one shall be subjected to arbitrary interference with his privacy or attacks upon his honour and reputation.

Indian Constitution:

- Although the original constitution did not explicitly grant the fundamental right to privacy. It was in the landmark case of **Justice K S Puttaswamy vs. Union of India**, that the constitution bench of Supreme Court held that:
- Right to Privacy is a fundamental right
- It is **intrinsic** part of **right to life** and personal liberty **under Article 21** of the Constitution of India.

Personal Data Protection Draft Bill

Srikrishna Committee: In an attempt to bring in a Personal Data Protection law. an experts Committee under the chairmanship of **Justice B. N. Srikrishna** was constituted by the Ministry of Electronics & Information Technology (MeitY) to put together a draft of data protection law for India. Some important provisions of the Personal Data Protection Draft bill are:

- It defines "personal information", "Sensitive personal data" and explains the role of a "Data Controller."
- It has recognized the right to privacy as a fundamental right and protection of personal data as an essential facet of informational privacy.
- **Bill intents to:**
  - Protect individual autonomy in relation to their personal data.
  - Specify where flow and usage of personal data is appropriate.
  - Specify rights of individuals towards their data
  - Create a framework for processing of personal data
  - Layout norms for cross-border transfer of personal data
  - Ensure accountability of entities processing personal data
  - Provide remedies for unauthorized processing of data and procedure for grievance redressal.
- Establish a **Data Protection Authority** for overseeing processing activities.

Legal Frameworks:

- Presently, India does not have a comprehensive and specific legislation on data protection, but certain provisions of some acts deals with misuse of personal data and violation of contractual terms in respect of personal data. For example:

- **Information Technology (IT) Act, 2000:**
  - **Section 43A:** It deals with liability for agencies that possess, deals or handles any sensitive personal data but is negligent in maintaining reasonable security practices resulting in wrongful loss or gain to any person.
  - **Section 66C:** Punishment for identity theft
  - **Section 66E:** Punishment for violation for privacy
  - **Section 72A:** Punishment for disclosure of information, knowingly and intentionally, without the consent of the person concerned.
- **The Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011:** It deals with protection of "Sensitive personal data", which includes information relating to
  - Passwords or Financial information such as bank account or payment instrument details
  - Physical and mental health conditions
  - Medical records, Sexual orientation and Biometric information.
- **Indian Medical Council (Professional conduct, Etiquette and Ethics) Regulations, 2002:** It governs issues relating to collection of personal data of patients including issues of consent.
- **SEBI's Data Sharing Policy:** It aims to formalise data protection measures to prevent data from misuse.
- **Government Committees:** In an attempt to bring Data Protection laws, the Ministry of Electronics & Information Technology (MeitY) has constituted experts committee from time to time:
- **Justice B. N. Srikrishna Committee:** It was constituted by to put together a draft of data protection law for India.
- **Kris Gopalakrishnan Committee:** It aims to provide governance framework to regulate **non-personal data**.

Non-personal data is usually held by large commercial entities like cab-aggregators, e-commerce companies etc and anonymised datasets provided to government bodies by large internet companies to assist in policymaking.

What are the Laws that allows Government to interfere with personal data?

- **Section 69 of the Information Technology (Amendment) Act 2008:** It provides that when the Government is satisfied that it is necessary in the interest of:
  - Sovereignty or integrity of India
  - Defence and security of India
  - Friendly relations with foreign States
  - Public order or for preventing incitement of any cognizable offence.
- Government may by order can direct any government agency to **intercept, monitor or decrypt** any personal information generated, transmitted, received or stored in any computer resource.
- **Information Technology (Procedures and Safeguards for Blocking for Access of Information) Rules, 2009:** It allows government to block access to various websites.

International Practices on Data Privacy:

- **European Union (EU):** Right to privacy, consent of an individual and the right to have it rectified form the basis of Article 8 fundamental rights of the European Union.
  - EU's **General Data Protection Regulation** 2018 is applicable to all 28 of the European Union members and it lays down the liability of data breach on the data controller.
- **Japan:** It has an Act on the Protection of Personal Information (APPI) that makes consent of a data subject essence of the legislation. It is **mandatory** in case of transmitting data to a third party.
- **Australia** and **Canada** has laws that guarantee data privacy.

Way Ahead:

With India moving towards digitization, a robust and efficient data protection law is required to enhance individual rights by providing full control over their personal data, while ensuring a high level of data protection.

Data Protection: What's on the ANVIL?

The Justice B.N. Srikrishna committee submitted to the government a draft of the Personal Data Protection Bill, 2018. Following are the key highlights of the proposed law:

- ▶ The law will have jurisdiction over personal data that is used, shared, disclosed, collected, or otherwise, processed in India.
- ▶ The law will not have retrospective application and will come into force in a structured and phased manner.
- ▶ It will cover personal data used by companies incorporated under Indian law, irrespective of the data being processed in India, or not.
- ▶ The law will cover processing of personal data by both public and private entities.
- ▶ Sensitive personal data will include passwords, financial data, health data, sex life, sexual orientation, biometric and genetic data.
- ▶ A regulator–Data Protection Authority of India (DPA)–will be set up for the effective implementation and enforcement of the law.
- ▶ The new regulator will have a chairperson and six whole-time members.
- ▶ For consent from individuals to be valid, it should be free informed, specific, clear and capable or being withdrawn.

- ▶ For sensitive personal data, consent will have to be explicit.
- ▶ Individuals will have the right to access their personal data with entities, make corrections to it and also restrict its usage.
- ▶ Penalties may be imposed for violating the data protection law.
- ▶ Any person below the age of 18 years will be considered a child under the law.
- ▶ Entities processing data of children will have to develop appropriate mechanisms for age verification and get parental consent.
- ▶ Data collecting entities will be responsible for data quality and storage limitation. However, accuracy of personal data is the responsibility of the individual.
- ▶ The committee has identified 50 statutes and regulations, which potentially over lap with the data protection framework.
- ▶ The Aadhaar Act needs to be amended to bolster data protection, and the committee has suggested amendments to the Act.

DISHA BILL

Andhra Pradesh Assembly passed "AP Disha Bill 2019" to protect women and children in sexual offences cases by providing speedy investigation and justice to victims.

About:

- The Nirbhaya case and the recent Disha case have compelled the need for "AP Disha Act".
- Known as the **Andhra Pradesh Criminal Law (Amendment) Act 2019**, the bill provides for expediting the verdict in trials on rape and gang rape cases and also awarding death penalty within 21 days.
- The law prescribes exclusive death penalty for rapes where adequate conclusive evidence is present. The provision will be provided by amending Section 376 of IPC, 1860.

Key Provisions of the act are:

- In cases of rape crimes with substantial conclusive evidence, the total judgement period has been reduced to 21 working days from date of offence. The investigation shall be completed in 7 working days and trial shall be completed in 14 working days.
- Apart from rape, Government of Andhra Pradesh prescribes **life imprisonment for other sexual offences against children.**
  - In cases of molestation/sexual assault on children under the POCSO Act, 2012, punishment ranges from a minimum of three years to maximum of seven years of imprisonment.
  - However, in DISHA Bill 2019, there is provision for life imprisonment for other sexual offences against children.
  - New **Sections 354F and Section 354G 'Sexual Assault on Children' is being inserted in the Indian Penal Code, 1860.**
- In cases of harassment of women through mail, social media, digital mode or any other form, the guilty shall be punishable with imprisonment.

NEW LAW, A GAME CHANGER?

MN Samdani writes about present laws and what differences will the new law bring in

1 Death penalty for rape
- Under present laws, offender gets a fixed jail term up to life or death sentence for extreme cases of rape

AP Disha Act, 2019
- AP government has prescribed death for rape crimes if adequate evidence is there, No other options provided

- Provision given by amending Section 376 of Indian Penal Code, 1860

2 Reducing judgement period to 21 days
- As per Nirbhaya Act, 2013 and Criminal Amendment Act, 2018 it is 4 months

AP Disha Act, 2019
- Judgement period reduced to 21 working days
- Probe shall be over in 7 working days, trial completed in 14 working days

3 Sexual offences against children
- In cases of molestation/ sexual assault on kids under POCSO Act, 2012, punishment ranges from 3 to 7 years of jail

AP Disha Act, 2019
- The new law prescribes life imprisonment for other sexual offences against children New Section 354F and section 354 'Sexual Assault on children' is being inserted in Indian Penal code, 1860

4 Sexual assault on children
- In existing laws, the period for completing the trial in sexual abuse cases on children is 12 months

AP Disha Act, 2019
- In case of sexual assault on kids, judgment period has been cut to 21 working days
- Investigation shall be completed in 7 working days and trial shall be completed in 14 working days

5 Social media abuse against women
- No such provision in IPC

AP Disha Act, 2019
- In cases of harassment through mail, social media, digital mode or any other form, the guilty shall get jail
- **The jail term:** Two years on first conviction, four years on subsequent conviction

6 Special courts in every district
- A few states have special courts but not in every district. These are designated courts, not exclusive in nature

AP Disha Act, 2019
- These courts will deal with offences against women, children including rape, acid attacks, stalking, voyeurism, social media harassment, sexual harassment and all cases under POCSO Act
- Introducing 'Andhara Pradesh' Special Courts for Specified offences Against Women & children Act, 2019' for this
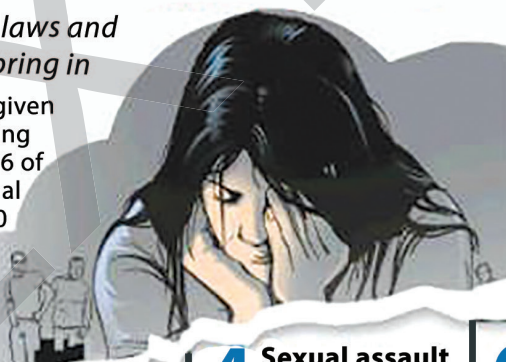
- According to **DISHA Bill**, the imprisonment will be for a term which may extend to two years on first conviction and with imprisonment for a term which may extend to four years on second and subsequent conviction. At present, no such provision exists in the **Indian Penal Code**.
- To ensure a speedy trial, Government is establishing **Exclusive Special Courts** in each district. These courts will exclusively deal with cases of offences against women and children including rape, gangrape, acid attacks, stalking, voyeurism, social media harassment of women, sexual harassment and all cases under POCSO Act.
  - The state government has introduced the **'Andhra Pradesh Special Courts for Specified Offences against Women & Children Act, 2019.**
  - A new Section 354E 'Harassment of Women' is being added in Indian Penal Code, 1860
- Period for disposal of appeal cases has been reduced to 3 months.
  - At present, the period for disposal of appeal cases related to rape cases against women and children is six months.
  - Amendments are being made in **Section 374 and 377 of Code of Criminal Procedure Act, 1973.**
- The state government will constitute a Special Police team at District level to be called District Special Police Team to be headed by DSP for investigation of offences related to Women & Children.
- The government will also appoint a Special Public Prosecutor for each exclusive Special Court.
- Government of Andhra Pradesh will establish, operate and maintain a register in electronic form, to be called the 'Women & Children Offenders Registry'. This registry will be made public and will be available to law enforcement agencies.

Impact of Violence Against Women:

- Serious consequences for our efforts to eradicate poverty and promote inclusive, sustainable development.
- Prevents women from participating in all areas of society in the decisions that impact their lives.
- Gender-based violence (GBV) inflicts huge economic, political and social losses to individuals, households, and nation-states.

Way Forward:

- The government should ensure the economic empowerment of women (rural and urban).
- The enforcement agencies should be made more gender sensitive.
- The attainment of the Sustainable Development Goals (SDGs), and its promise - to leave no one behind - cannot be fulfilled without putting an end to violence against women and girls.

National Registry of Sexual Offenders:

- **The Criminal Law Act, 2018**, provides for a national registry of sexual offenders.
- It contains names, addresses, photographs, fingerprints, DNA samples, and PAN and Aadhaar numbers of convicted sex offenders.
- **National Crime Records Bureau**, under the Ministry of Home Affairs will maintain the database. It will be made available to law enforcement agencies for various purposes, including investigation and employee verification.
- The registry will also store details of persons arrested or chargesheeted for sexual offences, but access to this information will be limited to officers with requisite clearances.
- The State Police have been requested to regularly update the database from 2005 onwards.
- India is the ninth country in the world to have such a registry, emulating the United States, Britain, Ireland, Canada, Australia, New Zealand, South Africa, and Trinidad and Tobago.

Cyber Crime Prevention against Women and Children (CCPWC):

- **Objective:** To check objectionable online content.
- It enable complainants in reporting cases without disclosing their identity and thus help the civil society organizations and responsible citizens to anonymously report complaints pertaining to child pornography, child sexual abuse material or sexually explicit material such as rape and gang rape.

National Crime Records Bureau (NCRB) 2017 report (Crime against women):

- India registered over 50 lakh cases of cognisable offences, which, according to reports, is a 3.6 percent increase in the registration of cases as compared to 2016.
- Uttar Pradesh has been listed as the most unsafe for women, with the state registering the maximum number of cases. Madhya Pradesh, meanwhile, has been ranked as the 'rape capital' of India. The state recorded the highest number of rape cases. On the other hand, Delhi saw a decline in crimes against women for the third straight year.
- NCRB has classified 'crimes against women' as 'murder, rape, dowry death, suicide abatement, acid attack, cruelty against women and kidnapping'.

PROTECTION OF PLANT VARIETIES AND FARMERS RIGHTS AUTHORITY (PPV&FRA)

Recently, the FAQs relating to farmer's rights in the PPV&FRA have been revised.

About:

- The Frequently Asked Questions or FAQ document had claimed that "only small and marginal farmers involved in subsistence farming" are eligible to claim rights under the Protection of Plant Varieties and Farmers Rights (PPV&FR) Act, 2001.
- The FAQ also said these rights are not for "commercial farmers" and are only meant for "small scale" use.

Background:

- In April 2019, alleging Intellectual Property Rights (IPR) infringement, PepsiCo India had sued the farmers from Gujarat for buying seeds and selling potato of the FL 2027 variety, also known as FC-5, which the former has registered under the Protection of Plant Varieties and Farmers' Rights (PPV&FR) Act, 2001.
- The variety is used for PepsiCo's chips product Lay's.
- Following PepsiCo's move, farmers' organizations across Gujarat and other states launched a campaign against the multinational, demanding immediate government intervention which led PepsiCo to withdraw the case.
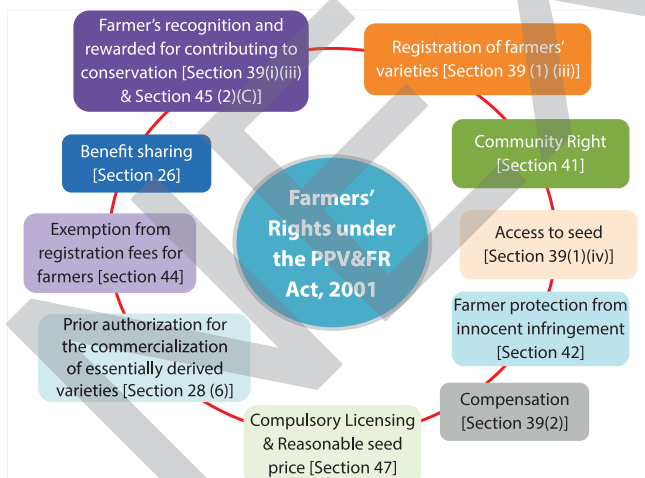
Protection of Plant Varieties and Farmers' Rights Act, 2001:

- The Government of India enacted "The Protection of Plant Varieties and Farmers' Rights (PPV &FR) Act, 2001" adopting the sui generis system. The law is not only in conformity with International Union for the Protection of New Varieties of Plants (UPOV), 1978, but also has sufficient provisions to protect the interests of public sector breeding institutions and the farmers.

- The law recognizes the contributions of both commercial plant breeders and farmers in plant breeding activity and also provides to implement TRIPs in a way that supports the specific socio-economic interests of all the stakeholders including private, public sectors and research institutions, as well as resource-constrained farmers.

Need:

- In order to provide for the establishment of an effective system for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants, it has been considered necessary to recognize and to protect the rights of the farmers in respect their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties.

Objectives:

- To establish an effective system for the protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.
- To recognize and protect the rights of farmers in respect of their contributions made at any time in conserving, improving and making available plant genetic resources for the development of new plant varieties.
- To accelerate agricultural development in the country, protect plant breeders' rights; stimulate investment for research and development both in the public & private sectors for the development new of plant varieties.
- Facilitate the growth of the seed industry in the country which will ensure the availability of high-quality seeds and planting material to the farmers.

Why the protection of plant varieties has become an important issue?

The breeding activities and exploitation of new varieties are the decisive factors for improving rural income and their overall economic development. Since the process of plant breeding is long and expensive, it is important to provide an effective system of plant variety protection with an aim to encourage the development of new varieties of plants for the benefit of society.

What is the difference between a patent and PPV&FR Act?

- A patent deals with IPR over devices of Industrial applications whereas PPV & FR Act, 2001 confers IPR to plant breeders who have bred or developed plant varieties.
- A patent is a set of exclusive rights granted by a state (national government) to an inventor or their assignee for a limited period of time in exchange for the public disclosure of an invention.
- The PPV&FR Act gives rights to farmers, breeders and researches besides giving protection to varieties of all crop species which are notified under the Act.
- There is also provision for benefits sharing, compensation to the farmers, recognition, and award to the farmers for supporting conservation and sustainable use of plant genetic resources.

Rights under the Act:

- **Breeders' Rights:** Breeders will have exclusive rights to produce, sell, market, distribute, import or export the protected variety. A breeder can appoint agent/ licensee and may exercise for civil remedy in case of infringement of rights.
- **Researchers' Rights:** Researchers can use any of the registered variety under the Act for conducting an experiment or research. This includes the use of a variety as an initial source of variety for the purpose of developing another variety but repeated use needs prior permission of the registered breeder.

- **Farmers' Rights**
  - A farmer who has evolved or developed a new variety is entitled to registration and protection in like manner as a breeder of a variety;
  - Farmer's variety can also be registered as an extant variety;
  - A farmer can save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under the PPV&FR Act, 2001 in the same manner as he was entitled before the coming into force of this Act provided farmer shall not be entitled to sell branded seed of a variety protected under the PPV&FR Act, 2001;
  - Farmers are eligible for recognition and rewards for the conservation of Plant Genetic Resources of landraces and wild relatives of economic plants;
  - There is also a provision for compensation to the farmers for non-performance of variety under Section 39 (2) of the Act, 2001 and
  - The farmer shall not be liable to pay any fee in any proceeding before the Authority or Registrar or the Tribunal or the High Court under the Act.

IMPACTS ON FARMERS AND CONSUMERS OF AMENDING THE PLANT VARIETIES PROTECTION ACT

Seeds will become **200-600%** more expensive as the rights of corporations are extended along with expanded patent projection, reducing farmers rights in saving seeds for replanting.

More expensive food - production costs will go up while food diversity will suffer.

Seed diversity will suffer Corporations favour seeds that can -be grown in monocultures -Farmers can't collect seeds for planting in the next season or for swapping with their neighbours

Giant corporations will extend their seed monopolies- small scale plant breeders will have greater difficulties in accessing seeds

Giant corporations will be able to use plant varieties without sharing benefits - the general definition of indigenous plants will be changed so corporations don't have to pay in those cases

10TH SCHEDULE AND ANTI-DEFECTION LAW

Recently, Five INLD MLAs were disqualified from Haryana Assembly on the ground of defection.

About:

- In an attempt to curb horse-trading practices, the Anti-defection law was introduced into India polity through 52nd Amendment Act of 1985.
- It sought to prevent any such political defections which may be due to reward of office or other similar considerations. Added the 10th schedule to the constitution.

What are the Grounds for Disqualification?

- It lays down the process by which legislators may be disqualified on grounds of defection by the Presiding Officer of a legislature based on a petition by any other member.
- A legislator is deemed to have defected if he either voluntarily gives up the membership of his party or disobeys the directives of the party leadership on a vote.
- This implies that a legislator defying (abstaining or voting against) the party whip on any issue can lose his membership of the House.
- The law applies to both Parliament and state assemblies.
- An independent member of a House (elected without being set up as a candidate by any political party) becomes disqualified to remain a member of the House if he joins any political party after such election.
- A nominated member of a House becomes disqualified for being a member of the House if he joins any political party after the expiry of six months from the date on which he takes his seat in the House.

Are there any Exceptions under the Law?

Under certain circumstances, legislators may change their party without the risk of disqualification.

- **Merger:** The law allows a party to merge with or into another party provided that at least two-thirds of its legislators are in favour of the merger.
- In such a scenario, neither the members who decide to merge, nor the ones who stay with the original party will face disqualification.
- **Voluntary:** If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or re-joins it after he ceases to hold that office. This exemption has been provided in view of the dignity and impartiality of this office.

Changes Introduced through 91st Amendment, 2003:

- Provision of the 10th Schedule pertaining to exemption from disqualification in case of split by one-third members of legislature party has been deleted by the 91st Amendment Act of 2003.
- It means that the defectors have no more protection on grounds of splits.
- The earlier exemption/protection was criticised on the ground that it allows bulk defections while declaring individual defections as illegal.
- The provision for exemption from disqualification in case of splits as provided in the Tenth Schedule has, in particular, come under severe criticism on account of its destabilising effect on the Government.
- The Act also made provisions to limit the size of Council of Ministers, to debar defectors from holding public offices, and to strengthen the anti-defection law.
  - The total number of ministers, including the Prime Minister, in the Central Council of Ministers shall not exceed 15 per cent of the total strength of the Lok Sabha - Article 75.
  - A member of either House of Parliament belonging to any political party who is disqualified on the ground of defection shall also be disqualified to be appointed as a minister -Article 75.
  - The total number of ministers, including the Chief Minister, in the Council of Ministers in a state shall not exceed 15 per cent of the total strength of the Legislative Assembly of that state. But, the number of ministers, including the CM, in a state shall not be less than 12 - Article 164.
  - A member of either House of a state legislature belonging to any political party who is disqualified on the ground of defection shall also be disqualified to be appointed as a minister - Article 164.

Decision of the Presiding Officer is Subject to Judicial Review:

- The law initially stated that the decision of the Presiding Officer was final and is not subject to judicial review.
- This condition was struck down by the Supreme Court in 1992 in the Kihoto Hollohan, thereby allowing appeals against the Presiding Officer's decision in the High Courts and SC.
- However, it held that there may not be any judicial intervention until the Presiding Officer gives his order.

- In 2015, the Hyderabad High Court, refused to intervene after hearing a petition which alleged that there had been delay by the Telangana Assembly Speaker in acting against a member under the anti-defection law.

What are the Major Issues Concerning Present Norm?

- The law does not specify a time-period for the Presiding Officer to decide on a disqualification plea.
- Given that courts can intervene only after the Presiding Officer has decided on the matter, the petitioner seeking disqualification has no option but to wait for this decision to be made.
- The presiding officer can take up a defection case only when he receives a complaint from a member of the House.
- Before taking the final decision, he must give the member (against whom the complaint has been made) a chance to submit his explanation.
- He may also refer the matter to the committee of privileges for inquiry.
- Hence, defection has no immediate and automatic effect.

Does the Anti-Defection Law Affect the Ability of Legislators to make Decisions?

- The anti-defection law seeks to provide a stable government by ensuring the legislators do not switch sides.
- However, this law also restricts a legislator from voting in line with his conscience, judgement and interests of his electorate.
- Such a situation impedes the oversight function of the legislature over the government, by ensuring that members vote based on the decisions taken by the party leadership, and not what their constituents would like them to vote for.
- Political parties issue a direction to MPs on how to vote on most issues, irrespective of the nature of the issue.
- Several experts have suggested that the law should be valid only for those votes that determine the stability of the government like annual budget or no-confidence motions.

What are its Advantages?

- It provides for greater stability in the body politic by checking the propensity of legislators to change parties.
- It facilitates democratic realignment of parties in the legislature by way of merger of parties.
- It reduces corruption at the political level as well as non-developmental expenditure incurred on irregular elections.
- It gives, for the first time, a clear-cut constitutional recognition to the existence of political parties.

What are its Criticism?

- It does not make a differentiation between dissent and defection as it curbs the legislator's right to dissent and freedom of conscience.

- Its distinction between individual defection and group defection is irrational. In other words, 'it banned only retail defections and legalised wholesale defections.
- It does not provide for the expulsion of a legislator from his party for his activities outside the legislature.
- Its discrimination between an independent member and a nominated member is illogical. If the former joins a party, he is disqualified while the latter is allowed to do the same.
- Its vesting of decision-making authority in the presiding officer is criticised on two grounds. Firstly, he may not exercise this authority in an impartial and objective manner due to political exigencies. Secondly, he lacks the legal knowledge and experience to adjudicate upon the cases. In fact, two Speakers of the Lok Sabha (Rabi Ray—1991 and Shivraj Patil —1993) have themselves expressed doubts on their suitability to adjudicate upon the cases related to defections.

NCRWC Recommendations:

The National Commission to Review the Working of the Constitution (NCRWC) was set up by a resolution of the Government of India in 2001. The 11-member Commission was headed by **M.N. Venkatachaliah**, the former Chief Justice of India2. It submitted its report in 2002.

- All persons defecting (whether individually or in groups) from the party or the alliance of parties, on whose ticket they had been elected, must resign from their parliamentary or assembly seats and must contest fresh elections.
- The defectors should be debarred to hold any public office of a minister or any other remunerative political post for at least the duration of the remaining term of the existing legislature or until the next elections whichever is earlier.
- The vote cast by a defector to topple a government should be treated as invalid.
- The power to decide questions regarding disqualification on ground of defection should vest in the Election Commission instead of in the Speaker/Chairman of the House concerned.

Way Ahead:

- Various expert committees have recommended that rather than the Presiding Officer, the decision to disqualify a member should be made by the President (in case of MPs) or the Governor (in case of MLAs) on the advice of the Election Commission.
- This would be similar to the process followed for disqualification in case the person holds an office of profit (i.e. the person holds an office under the central or state government which carries a remuneration, and has not been excluded in a list made by the legislature).

WORLD MALARIA REPORT 2019

Recently, WHO's World Malaria Report, 2019 stated that despite Africa and India indicating maximum dip in malaria cases between 2017 and 2018, they still accounted for 85 per cent deaths.

About:

- The World Malaria Report 2019 was released by the **World Health Organization (WHO)** on December 4, 2019.
- The report provides a comprehensive update on global and regional malaria data and trends.
- It also tracks investments in malaria programmes and research as well as progress across all intervention areas – prevention, diagnosis, treatment, elimination and surveillance.
- It includes **dedicated chapters on the consequences of malaria** on maternal, infant and child health, the "High Burden to High Impact" approach as well as biological threats to the fight against malaria.
- The 2019 report is based on information received from **more than 80 countries** and areas with ongoing malaria transmission.

Malaria:

- Malaria is caused by **Plasmodium parasites**.
- The parasites are spread to people through the bites of **infected female Anopheles mosquitoes**, called "malaria vectors."
- There are 5 parasite species that cause malaria in humans.
- 2 of these species – **P. falciparum and P. vivax** – pose the greatest threat.
- Malaria is an acute febrile illness. In a non-immune individual, symptoms usually appear 10–15 days after the infective mosquito bite.
  - The first symptoms – fever, headache, and chills – may be mild and difficult to recognize as malaria.
  - If not treated within 24 hours, P. falciparum malaria can progress to severe illness, often leading to death.

Malaria Vaccine:

- **RTS,S vaccine** has been developed by GSK (Glaxo Smith Kline).
- RTS,S/AS01 (RTS,S) is the world's first malaria vaccine shown to provide partial protection against malaria in young children.
- It aims to trigger the immune system to defend against the first stages of malaria when the Plasmodium falciparum parasite enters the human host's bloodstream through a mosquito bite and infects liver cells.
- The vaccine is designed to prevent the parasite from infecting the liver, where it can mature, multiply, re-enter the

bloodstream, and infect red blood cells, which can lead to disease symptoms".

How Badly is India affected by Malaria?

- India ranks very high in the list of countries with a serious malaria burden.
- Malaria is a notifiable disease; it is only voluntary notification and there are no penalties for doctors or hospitals not doing so.
- Therefore, there are questions regarding the veracity of Indian data for the number of reported cases.
- **Six states bear the brunt of malaria in India:** Odisha (40%), Chhattisgarh (20%), Jharkhand (20%), Meghalaya, Arunachal Pradesh and Mizoram (5-7%).
- These 6 states, along with the tribal areas of Maharashtra and Madhya Pradesh, account for 90% of India's malaria burden.

Highlights of the Report:

- Globally, 228 million malaria cases were reported in 2018, which is marginally lower than the number of cases in 2017 (231 million), as per the Report 2019.
- **19 countries in sub-Saharan Africa and India accounted for 85%** of the global malaria burden in 2018 despite maximum dip in the number of cases.
- **In the South-East Asia region,** the major challenges remain decreased funding, treatment failures and vector resistance to pyrethroids, the insectides used against the vectors.
- Despite previous decreases in case incidence between 2010 and 2015, all of the countries had an increase between 2015 and 2018, which means that currently none are on track to achieve the GTS **(Global Technical Strategy) target** of at least a 40% reduction in incidence by 2020.
- Without accelerated change, the Global technical strategy for malaria 2016–2030 milestones for morbidity in 2025 and 2030 will not be achieved.
- **Malaria and India:** India Registered a fall of 2.6 million malarial cases in 2018 as compared to previous year.
  - The country also has one of the lowest funding per person at risk of being inflicted with malaria at just US$0.2.
- **Malaria and Africa:** The biggest region of concern for the WHO is the African region as it contributes 93% cases to the global burden.

SAANS CAMPAIGN

Recently, the Ministry of Health and Family Welfare (MoH&FW) has launched SAANS campaign to reduce child mortality due to pneumonia.

About:

- During National Health Mission (NHM) Summit on public healthcare systems, the Union Health Minister has inaugurated the Sixth National Summit on Good, Replicable Practices and Innovations and the **SAANS campaign.**

PNEUMONIA OF THE LUNGS

Trachea
Lung
Bronchi
Brochiole
Fluid in Alveoli
Fluid Brochiole
Alveoli
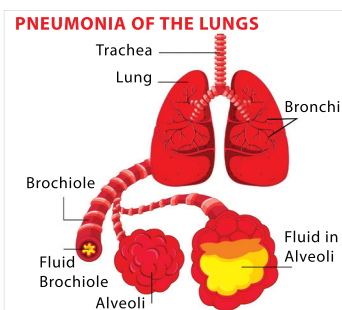
What is SAANS Campaign?

- SAANS or 'Social Awareness and Action to Neutralise Pneumonia Successfully' campaign is the brainchild of health ministry with an **aim to control Pneumonia**, which contributes to around **15% deaths** annually of **children under the age of five.**

Major Objectives:

- To reduce pneumonia-caused deaths **by 2025** to less than 3 deaths out of 1000 live births.
- To mobilise people to protect children from pneumonia.
- To train health personnel and other stakeholders to provide prioritised treatment to control the disease.
- **Treatment of pneumonia with** pre-referral dose of **Amoxicillin** by Accredited Social Health Activist (ASHA).
- Availability of **Pulse Oximeter** (device to monitor oxygen saturation) at Health and wellness centres to identify low oxygen levels in the blood of a child.
- Besides, a mass awareness campaign will be launched to provide effective solutions for pneumonia prevention such as breastfeeding, and age-appropriate complementary feeding, immunization, good quality air, etc.

Why is it Needed?

- As per the data from the Health Management Information System (HMIS), a digital initiative by National Health Mission, Pneumonia is **one of the most fatal childhood** illnesses.
- It is basically a **disease of lungs and respiratory system**.
- Of the total under-five mortality rate (i.e. 39 deaths per 1,000 live births) nearly, 5.3 deaths are caused due to pneumonia.
- It will help states in **achieving SDG-3 target** of ending preventable deaths of newborns and children under 5 years of age, in order to reduce.
  - Neonatal mortality to 12 per 1000 live births

- Under-5 mortality to 25 per 1000 live births.
- In India, **Madhya Pradesh has the highest** number of pneumonia caused child deaths, followed by Gujarat.

National Health Mission (NHM)

It was launched in 2013, after subsuming the National Rural Health Mission and National Urban Health Mission.

Objectives:

- To achieve universal access to equitable, affordable & quality health care services that is accountable and responsive to people's needs.
- Reduce Maternal Mortality Rate (MMR) to 1/1000 live births.
- Reduce Infant Mortality Rate (IMR) to 25/1000 live births.
- Reduce Total Fertility Rate (TFR) to 2.1.
- Reduce mortality & morbidity from communicable, non-communicable; injuries and emerging diseases.
- In 2018, it was **further extended until March 2020.**

Besides, the Health Ministry also holds a **National Summit** on Good, Replicable Practices and Innovations annually with the objective **to improve health outcomes though better implementation** of programmes under the National Health Mission **(NHM).**

Conclusion:

Considering the status of Pneumonia in this country, SAANS Campaign is a step in the right direction. It will also help states to achieve Sustainable Development Goal 3 i.e. Ensuring healthy lives and promote wellbeing for all at all ages.

Pneumonia

- The lungs have many small sacs, called as alveoli, which help to take out oxygen from the air. In the case of pneumonia, these alveoli get inflamed, filled up with a fluid and can no longer absorb as much oxygen as before. This makes it hard for the person with pneumonia to breathe.
- Bacteria, viruses, fungi or parasites can cause pneumonia. It can also be caused by chemical or physical damage done to the lungs.
- It is most serious for infants and young children, people older than age 65.
- It is preventable through vaccination and curable through medication.

CLIMATE CHANGE PERFORMANCE INDEX (CCPI)

Recently, the latest Climate Change Performance Index (CCPI) 2020 was presented at the climate summit COP25 held in Madrid.

About:

- **Purpose:** Climate Change Performance Index (CCPI) is an independent monitoring tool for tracking countries' climate protection performance.
- It measures the emissions, renewable energy shares and climate policies of 57 countries and the European Union – collectively responsible for about 90% of the global GHG emissions.
- It has been published since 2005.
- It is **released by** three international NGOs - **Germanwatch, New Climate Institute and Climate Action Network (CAN)**.
    - Germanwatch (founded in 1991) is a non-profit, non-governmental organization based in Bonn, Germany.
    - New Climate Institute for Climate Policy and Global Sustainability generates ideas on climate change and drives their implementation.
    - CAN is a worldwide network of over 1300 Non-Governmental Organizations (NGOs) in more than 120 countries, working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels.
- The CCPI assesses countries' performance in 14 indicators within the four categories:
    - GHG Emissions - 40% of overall score
    - Renewable Energy - 20% of overall score
    - Energy Use - 20% of overall score
    - Climate Policy - 20% of overall score

Objectives of CCPI:

- It aims to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries.
- It can be a powerful instrument to hold governments accountable for their responsibility to act on the climate crisis – and of stimulating a race to the top in climate action as it has been a long-standing reliable tool for identifying leaders and laggards in climate protection.
    - The implementation phase of the Paris Agreement enters a crucial phase in 2020, where countries are due to submit their updated Nationally Determined Contributions (NDCs).
    - In light of this, the CCPI aims to inform the process of raising climate ambition.

India's Performance:

- **India, ranked 9th** and for the first time it ranks among the top ten in this year's CCPI. Last year India was ranked – 11th.
- **GHG Emissions and Energy Use categories:** The current levels of per capita emissions and energy use are still comparatively low and, along with ambitious 2030 targets.
- **Renewable Energy category:** India's 2030 renewable energy target is rated very high for its well-below-2°C compatibility.
- **Climate Policy performance:** The government has yet to develop a roadmap for the phase-out of fossil fuel subsidies that would consequently reduce the country's high dependence on coal.

Key Results:

- Still no country made it to the top three ranks as no country performs well enough in all index categories to achieve an overall very high rating in the index.
- Decreasing emissions in 31 out of 57 high emitting countries – global coal consumption falling.
- But more ambition and accelerated action needed.
- **G20 performance:** Only two G20 countries rank among high performers (UK and India), while eight G20 countries rank under very low performers.
- **Top three performers:**
    - **Sweden** is leading the group of high performing countries, as it has in the past two years.
    - **Denmark** moves up ten ranks to become the second best performing country in this year's CCPI.
    - **Morocco** falls one place in the overall ranking but keeps its overall high performance.
- **Bottom three performers:**
    - **Chinese Taipei** falls three places and now ranks 59th.
    - **Saudi Arabia** still ranks very low, but for the first time does not occupy the bottom rank of the index.
    - The **United States**, after falling three positions in last year's ranking, continues the downwards trend, sinking to the bottom of the ranking.
- **U.S. and Saudi Arabia** are among major polluters showing "hardly any signs" of reducing their greenhouse gas production.
- **Turkey, Poland, Japan, Russia, Canada and Australia** are among the very low performers.

■■■■

NATIONAL AQUIFER MAPPING AND MANAGEMENT PROGRAMME (NAQUIM)

Central Ground Water Board (CGWB) is implementing NAQUIM for aquifer mapping in the country including in areas which have recorded a high depletion of ground water.

About:

- It is a flagship programme of the **Ministry of Water Resources (MoWR),** for mapping and managing the entire aquifer systems in the country.
- The vision of the NAQUIM is
  - To identify and map aquifers at the micro level,
  - To quantify the available groundwater resources,
  - To propose plans appropriate to the scale of demand and aquifer characteristics, and institutional arrangements for participatory management.
- **Current status:** Out of the total mappable area of nearly 25 lakh sq km, so far aquifer maps and management plans have been prepared for an area of nearly 11.24 lakh sq km spread over various parts of the country.

Status of Groundwater in India:

- Assessment by the Central Ground Water Board (CGWB) and research based on **GRACE (Gravity Recovery and Climate Experiment) satellite** data amply demonstrated rapid aquifer desaturation at many places.
- Of the 6,881 blocks/talukas assessed in the country, **17 per cent are overexploited.** These overexploited areas have invaded all aquifer typologies — from **prolific soft rocks aquifer system** in Punjab, Haryana and western Uttar Pradesh, **complex heterogeneous aquifer systems** in arid areas of Rajasthan and Gujarat to **low-potential hard rock aquifers** in Karnataka, Tamil Nadu, Telangana and Maharashtra.
- **Water being a State subject**, initiatives on water management including conservation and artificial recharge to ground water in the Country is primarily States' responsibility.
- However, the Central Government has taken up important long term policies initiatives for conservation of ground water and rain water harvesting to recharge ground water in order to control depletion of ground water level in the country.

Need for NAQUIM & Groundwater Challenges:

- Groundwater in India is a vital resource.
- More than 60% of irrigated agriculture and 85% of drinking water supplies are dependent on groundwater.
- India utilizes 61% of its annual replenishable ground water resource and is the largest user of groundwater in the world.
- With the country experiencing a fast growing demand for groundwater, an increasing number of aquifers are reaching unsustainable levels of exploitation.
- Aquifers are depleting in the most populated and economically productive areas. This has serious implications on the sustainability of agriculture, long-term food security and water security, livelihoods, and economic growth.
- On the other hand, there are places where groundwater is still underdeveloped with regard to its potential uses. This represents a potential for improving livelihoods.
- In some places, the aquifers have naturally high level of **geogenic contaminants**, such as **arsenic, fluoride, and iron,** which render them unsafe for usage.
- Excess application of chemical fertilisers, disposal of untreated organic and industrial wastes, excess pumping of ground water in the coastal tracts makes the aquifer system more vulnerable for contamination.

Measures taken by the Central Government:

- Creation of a new **Ministry of Jal Shakti** for dealing with all matters relating to water at one place in an integrated manner.
- **National Water Policy (2012)** has been formulated by Department of Water Resources (DoWR), River Development (RD) & Ganga Rejuvenation (GR), inter-alia, advocates rain water harvesting and conservation of water and highlights the need for augmenting the availability of water through direct use of rainfall.
- An **'Inter-Ministerial Committee'** under the Chairmanship of Secretary (WR, RD & GR) has been constituted to take forward the subject of 'Push on Water Conservation Related Activities for Optimum Utilization of Monsoon Rainfall'.
- DoWR, RD &GR has circulated a **Model Bill** to all the States/UTs to enable them to enact suitable ground water legislation for its regulation and development, which includes provision of rain water harvesting.
- Central Ground Water Authority (CGWA) has issued directions **under Section 5 of "The Environment Protection Act, 1986"** for mandatory Rain Water Harvesting / Roof Top Rain Water Harvesting for all target areas in the Country including UTs. While granting **'No Objection Certificate (NOC)'** for drawing ground water, CGWA insists for mandatory rain water harvesting as per the guidelines issued.
- Department of Water Resource, RD&GR has instituted **National Water Awards** to incentivise good practices in water conservation and ground water recharge.
- **Watershed Development Component (WDC)** of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

15th EDITION OF THE
GLOBAL CLIMATE RISK INDEX 2020

According to the Global Climate Risk Index 2020, India is the 5th most Vulnerable country to climate change.

About:

- **15th edition of the Global Climate Risk Index (CRI)** 2020 was recently released by Bonn-based environmental think-tank **Germanwatch**.
  - Germanwatch, based in Bonn and Berlin (Germany), is an independent development and environmental organisation which works for sustainable global development.
- **The index analyses** to what extent countries and regions have been affected by impacts of weather-related loss events (storms, floods, heat waves etc.).
- Japan is the most vulnerable, followed by the Philippines, Germany and Madagascar.
- The **index does not take into account the slower processes of rising sea levels, glacier melting** or more acidic and warmer seas due to climate change.
- Extreme weather, linked with climate change, is not only affecting poorer countries like Myanmar and Haiti, but also some of the world's richest countries. Japan is the worst-hit country in 2018 (the last year covered by the data), while Germany and Canada were both also in the 'bottom 10', that is, the most affected.

CRI and India:

- In the Climate Risk Index 2020, India's rank has worsened from the 14th spot in 2017 to **5th in 2018 in the global vulnerability ladder.**
- India has also recorded the highest number of fatalities due to climate change and the second highest monetary losses from its impact in 2018.
  - **India had the most (2,081) deaths in 2018** due to extreme weather events caused by climate change – cyclones, heavy rainfall, floods and landslides.
- India's high rank is due to severe rainfalls, followed by heavy flooding and landslide that killed over 1000 people.
  - India's east coast was also hit by two cyclones, 'Titli' and 'Gaja', in October and November 2018, respectively.
- India also experienced the longest ever recorded heatwaves with temperatures rising to 48 degrees Celsius. This, compounded with a water shortage, led to prolonged drought, widespread crop failures, violent riots and increased migration.
- The worst-hit regions in the central, northern and western parts of the country, were also among India's poorest.

What needs to be done?

- **Funding:** As climate change begins to result in permanent loss and damage across the world, there is **still no specific UN climate finance facility** to reimburse the loss of land, culture and human lives. So far, the industrialised countries have refused to even negotiate it.
- This year's climate summit (COP25) needs to address the lack of additional climate finance to help the poorest people and countries to address Loss and Damage.
  - Otherwise, the poorest countries will continue to rely on loans to cope with the consequences of climate change, which means they are threatened with excessive debts, undermining often already vulnerable economies.
- The climate summit needs to result in –
  - A decision on how the need for support for vulnerable countries concerning future loss and damage is to be determined on an ongoing basis.
  - The necessary steps to generate and make available financial resources to meet these needs.
  - Strengthening the **implementation of measures for adapting** to climate change.

CLIMATE RISK INDEX 2020
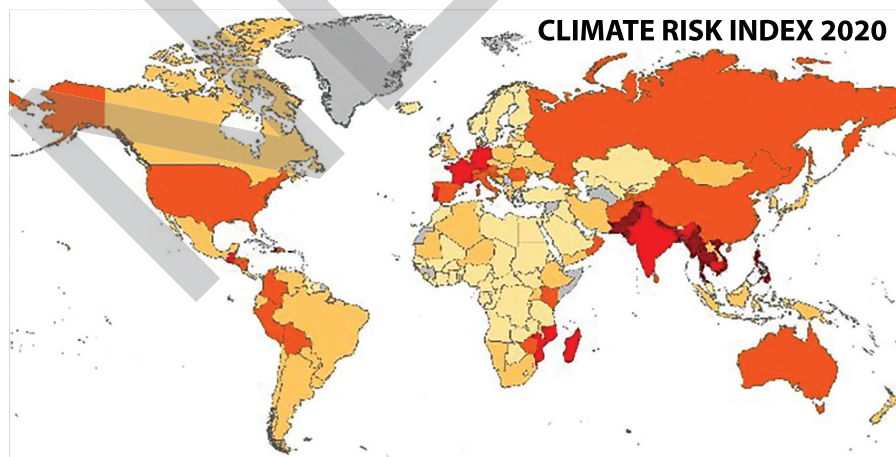
Climate Risk Index: Ranking 1999-2018

| 1-10 | 11-20 | 21-50 | 51-100 | >100 | No data |

COP 25 IS DECLARED AS 'BLUE COP'

Chile has declared COP 25 as the 'Blue COP' and through 'Because the Ocean Declaration' is encouraging countries to include ocean component in their climate action plans.

About:

- 25th Conference of the Parties to the UN Framework Convention on Climate Change (COP25) took place under the Presidency of the Government of Chile and was held at Spain's capital, Madrid.
- **COP25, for the first time**, financial support for climate-related loss and damage is high on the agenda. For the poorest and most vulnerable countries, this climate summit is therefore of utmost importance.
  - They demand that states agree a deal to support those who are suffering, or at least acknowledge the necessity, with a pathway towards real help.
  - They are hit hardest by climate change impacts because they are more vulnerable to the damaging effects of a hazard but have lower coping capacity.
- Chile, in its role as the **presidency of COP25** is promoting the conference as an opportunity to raise awareness on the importance of **including an ocean component in climate action declaring COP 25 as the 'Blue COP.'**
- Chile launched the **Platform for Science-Based Ocean Solutions (PSBOS)** which aims:
  - To promote the necessity of addressing ocean and climate issues synergistically and to encourage the incorporation of the ocean in country climate commitments and strategies.
  - Outlines the impacts of climate change on the ocean, and highlights potential marine nature-based solutions.
  - Highlights the findings of the **Intergovernmental Panel on Climate Change (IPCC) Special Report** on the **Ocean and Cryosphere in a Changing Climate (SROCC),** which warned that the climate impacts on the ocean are already significant and will be increasingly dangerous without urgent mitigation and adaptation actions.
  - To engage a large number of actors in ocean-climate action, including the public and private sectors, civil society and academia.

Because the Ocean Declaration:

- **'Because the Ocean Initiative' was launched by 23** countries at COP21 in Paris in November 2015.
- The declaration is in support of implementation of Sustainable Development Goal (SDG) 14, which focuses on the ocean, and promoted an **Ocean Action Plan within the UN Framework Convention on Climate Change.**

- It aims to 'encourage UNFCCC Parties to consider submitting Nationally Determined Contributions (NDCs) that promote, as appropriate, ambitious climate action in order to minimize the adverse effects of climate change in the ocean and to contribute to its protection and conservation.'
- In the last five years, the Because the Ocean Initiative has encouraged progress on the incorporation of the ocean in the climate change policy debate, with a special focus on the inclusion of ocean action into NDCs under the Paris Agreement, and more widely into climate strategies.

Relationship between Climate and Ocean:

- The ocean regulates the climate by exchanging energy and water with the atmosphere.
  - Through oceanic circulation, heat is distributed from the tropics to the poles and into the deep sea, determining rainfall patterns and surface temperatures, which in turn influence regional climates.
- The ocean has served to limit the global impact of growing CO_2 emissions by absorbing both the CO_2 itself, and the excess heat it produces.
- The increase in water temperature is resulting in dramatic changes in oceanic circulation and thermal stratification, oxygen loss, melting of polar ice and glaciers, and sea level rise.
- Acidification of ocean water has increases with **CO_2 in seawater which forms carbonic acid.** It results in change of the chemical composition of the ocean, depleting it of the carbonate that many forms of sea life need.
- Taken together, these phenomena are already expected to induce impacts on fisheries, aquaculture and marine ecosystems, and these impacts are expected to increase over time.
- Coastal and marine ecosystems often serve as the first line of defence in protecting low-lying communities from extreme weather events.

Need to Raise Awareness:

- Understanding and anticipating changes to the Earth's climate system requires paying special attention to the functioning of the ocean and the interactions of its biophysical elements and its ecosystems with the climate system.

- According to the SROCC, **around 28% of the global population lives on coasts.**

- It is estimated that approximately **170 million tons of seafood** are caught from the ocean every year.

- The ocean contributes to **social well-being** by providing recreational opportunities and genetic resources increasingly used for medicinal purposes.

- Indigenous and traditional uses of the ocean, especially important to the cultural identity of Arctic communities and Small Island Developing States (SIDS), are being compromised by climate change.

Actions to Incorporate Ocean within Climate Strategies

- Workshops organized by the Because the Ocean initiative starting in 2016, aimed at identifying the do's and don'ts of ocean-based climate action.

- Encouraging natural carbon sequestration by coastal ecosystems
  - Enhance, create or regenerate 'blue carbon' (carbon stored by vegetation and benthic sediments in coastal and marine ecosystems) ecosystems, leading to additional carbon sequestration.
  - Implement specific management measures to increase carbon sequestration for coastal ecosystems by improving the catchment level.
  - Prevent carbon release due to ecosystem degradation and improve coastal ecosystem conservation through regulatory protection.
  - Adapt economic activities, in particular fishing, to **minimise their impacts on blue carbon ecosystems**.

- Developing a range of sustainable ocean-based renewable energy (Blue Energy) solutions
  - The ocean offers excellent opportunities to reduce reliance on fossil fuel consumption, especially for coastal and island communities.
  - Ocean energy is an autochthonous source of energy, with the potential to reduce energy dependency from other countries and high costs (including environmental costs) of shipping.
  - Main sources of Blue Energy are:
    - Offshore winds
    - Tidal range
    - Wave energy
    - OTEC – Ocean Thermal Energy Conversion
    - Ocean and tidal currents
    - Salinity gradient

- Promoting adaptation and resilience solutions for vulnerable populations, ecosystems and ecosystem services threatened by climate change
  - Reduce local anthropogenic disturbances and support co-benefit opportunities.
  - Develop innovative climate-smart Marine Protected Areas (MPAs) and support R&D.

- **Implementing hybrid solutions** supporting both adaptation and mitigation in the fisheries and aquaculture sector
  - Improvement of fishing gears by implementing non-propulsion innovations.
  - Restore and sustain coastal fisheries through sustainable, ecosystem-based and more inclusive fisheries management.
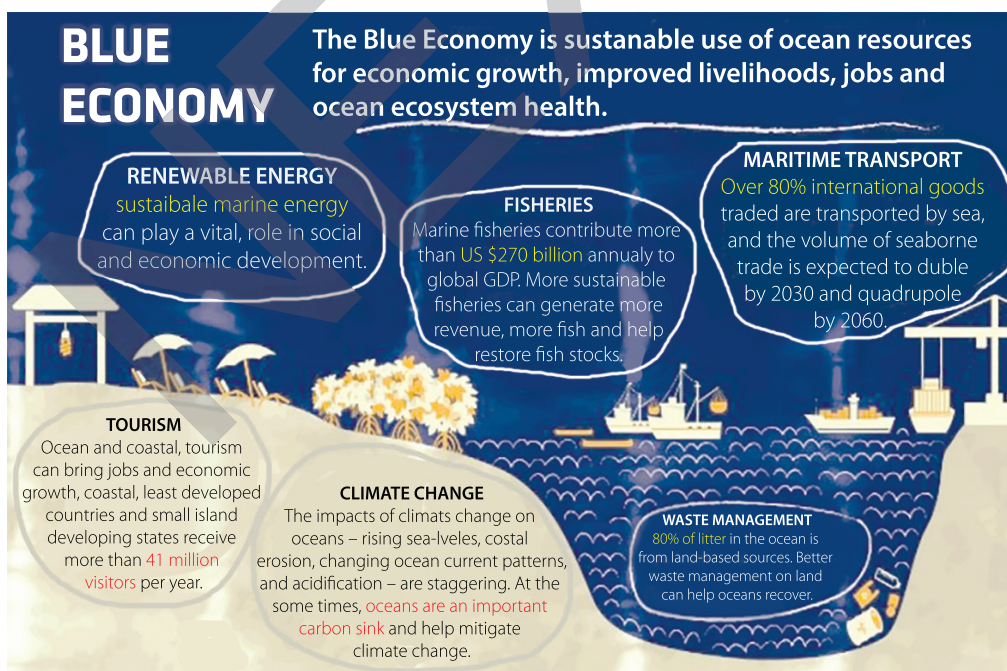
- **Solutions in the shipping sector.**
  - Greening Shipping to improve the environmental performance of transport vessels by diminishing the emission of pollutants and increasing fuel efficiency.
  - Adapt port infrastructures - when docked, in most cases ships (including cruise ships) continue to burn fuel to operate their electrical systems, causing air pollution hazards in port cities as well as contributing to climate change.

BLUE ECONOMY

The Blue Economy is sustainable use of ocean resources for economic growth, improved livelihoods, jobs and ocean ecosystem health.

RENEWABLE ENERGY
sustaibale marine energy can play a vital, role in social and economic development.

FISHERIES
Marine fisheries contribute more than US $270 billion annualy to global GDP. More sustainable fisheries can generate more revenue, more fish and help restore fish stocks.

MARITIME TRANSPORT
Over 80% international goods traded are transported by sea, and the volume of seaborne trade is expected to duble by 2030 and quadrupole by 2060.

TOURISM
Ocean and coastal, tourism can bring jobs and economic growth, coastal, least developed countries and small island developing states receive more than 41 million visitors per year.

CLIMATE CHANGE
The impacts of climats change on oceans – rising sea-lveles, costal erosion, changing ocean current patterns, and acidification – are staggering. At the some times, oceans are an important carbon sink and help mitigate climate change.

WASTE MANAGEMENT
80% of litter in the ocean is from land-based sources. Better waste management on land can help oceans recover.

HYDROGEN FUEL-CELL VEHICLES

The Supreme Court directed the government to look into the feasibility of introducing such technology to deal with air pollution in the National Capital Region.

About:

- **The Hydrogen Fuel-cell or fuel cell electric vehicles (FCEV)** is a device that uses a source of fuel, such as hydrogen, and an oxidant to create electricity by an electrochemical process.

- The fuel cell combines hydrogen and oxygen to generate an electric current, water being the only byproduct. Like conventional batteries, **hydrogen fuel cells convert chemical energy into electrical energy.**
- From a long-term viability perspective, FCEVs are billed as vehicles of the future, given that **hydrogen is the most abundant resource in the universe.**

Is FCEV a Conventional Vehicle or an Electric Vehicle?

- While the fuel cells generate electricity through an electrochemical process, unlike a battery-electricity vehicle, it does not store energy and, instead, relies on a constant supply of fuel and oxygen — in the same way that an internal combustion engine relies on a constant supply of petrol or diesel, and oxygen.
- But unlike the combustion engine cars, it more efficient than conventional internal combustion engine vehicles and produce no tailpipe emissions—they only emit water vapor and warm air.

Advantages of FCEV:

- Fuel cells have strong advantages over conventional combustion-based technologies currently used in many power plants and cars, given that they produce much smaller quantities of greenhouse gases and none of the air pollutants that cause health problems.
- Also, if pure hydrogen is used, fuel cells emit only heat and water as a byproduct. Such cells are also far more energy efficient than traditional combustion technologies.
- Refueling a hydrogen car requires much less change in the vehicle and refilling stations than battery electric cars.
- Unlike battery-powered electric vehicles, fuel cell vehicles do not need to be plugged in, and most models exceed 300 km of range on a full tank. They are filled up with a nozzle, just like in a petrol or diesel station.

Disadvantages:

- While FCEVs do not generate gases that contribute to global warming, the **process of making hydrogen needs energy-often from fossil fuel sources.**
- There is **high cost involved** in the production of hydrogen, fuel-cell stacks and establishment of hydrogen fuel stations.
- There is also the **concern of safety**, since hydrogen, in its pure form, is highly reactive (more explosive than petrol).

What is a Fuel Cell?

- Fuel cell is a device that **converts chemical energy stored in molecular bonds of chemicals into electrical energy**.
- In more commonly-used hydrogen fuel cells, **platinum catalyst is used for splitting hydrogen atoms** into positively-charged hydrogen ions and electrons. While electrons flow out to produce direct current electricity, positive hydrogen ions combine with oxygen supplied through another electrode to produce water, paving the way for the production of the one of the cleanest forms of energy.

Significance:

- Fuel cells can play an instrumental role and may find increasing applications in automotive industry and in off-grid power generation among others.
- One of the major limiting factors that prevent them from being widespread is the **prohibitive cost of platinum.**
- Low-cost materials that have a high catalytic activity and durability have remained elusive, so industrial use is largely limited to platinum-based catalysts for fuel cells, for example, in automotive applications.

Sources of Hydrogen:

- The hydrogen can be produced through a number of sources, be it thermal, wind, solar, CNG, LNG etc.
- But the **most feasible sources of hydrogen**, which is also available in surplus, is biomass. India has a huge biomass reserve which is either burnt of simply goes waste.
- Apart from livestock dung, agriculture and forest **residual and sewage sludge are also CO2** free sources from which hydrogen can be obtained.

- Similarly, by virtue of electrolysis, hydrogen can be produced from the 40 per cent excess electricity available through renewable resources such as wind, water, solar and Geothermal.

HYDROGEN CAN BE PRODUCED FROM VARIOUS SOURCES
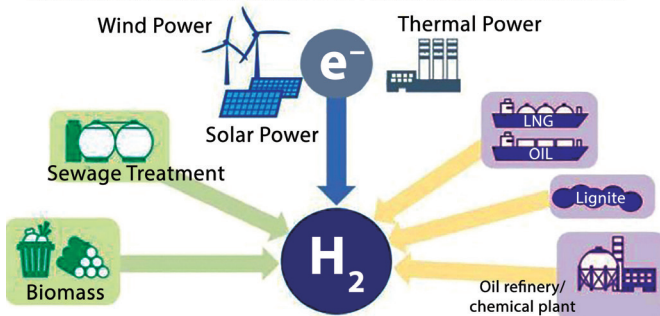
What is the Progress in India?

- In India, so far, the definition of EV (Electric Vehicle) only covers BEVs (Battery Electric Vehicles).

- The **Ministry of New and Renewable Energy**, under its Research, Development and Demonstration (RD&D) programme, has been supporting various such projects in academic institutions, research and development organisations and industry for development.

- Recently, scientists at **Indian Institute of Technology (IIT) Madras have developed cheaper catalysts to cut fuel cell cost**, these catalysts are made up of zirconium nitride nanoparticles which could be a superior alternative to platinum catalysts for use in fuel cells and metal-air batteries.

- **In India, we currently do not have a single hydrogen fuel station**. On the contrary, countries such as Japan, China, United States of America, Korea and some European countries have started to build hydrogen-based transportation in their respective countries.

Way Forward:

- If the authorities addressed the challenges in an effective and sustainable manner, then we can expect FCEVs to start entering into the main-stream transportation sector.

CANADA'S CPPIB TO INVEST IN NIIF MASTER FUND

> *Recently, Canada Pension Plan Investment Board (CPPIB) has agreed to invest about $600 million in NIIF through its Master Fund.*

About:

- With CPPIB's investment, NIIF Master Fund now has $2.1 billion in commitments.
- **Importance:** It will help enable the NIIF Master Fund to be invested at the scale required for India's large infrastructure requirements such as transportation, energy and urban infrastructure.

What is NIIF?

- NIIF is **India's first sovereign wealth fund** that was **set up by the Government of India** in **2015.**
- **It aims** to address the **long-term financing needs** of the **infrastructure sector** in India.
- It was set up as an **alternative investment fund (AIF)** with a **planned corpus of ₹ 40,000 crores (USD 6 billion).**
- The **Indian government has 49 per cent stake** in NIIF with the rest held by foreign and domestic investors.
    - The whole of 49% is contributed by the Government of India directly.
- It also raises funds by **issuing offshore credit enhanced bonds.**
- **Structure:** It has a pure equity structure, spanning **three** investment **sub funds –**

1. **The Master Fund:** This fund primarily invests in operating **assets in core infrastructure sectors**, such as roads, ports, airports, energy etc.
    - Target businesses are **typically mature entities** with a **long-term track record**.
2. **Fund of Funds:** This fund invests in funds managed by fund managers in infrastructure and associated sectors.
    - Sectors of focus include Green Infrastructure, Mid-Income & Affordable Housing, Infrastructure, services and allied sectors.

Alternative Investment Funds (AIFs):

According to SEBI, AIF means any fund established or incorporated in India which is a **privately pooled** investment vehicle which collects funds from sophisticated investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors.

What is Credit Enhancement?

- Credit enhancement is a strategy for improving the credit risk profile of a business, usually to obtain better terms for repaying debt.
- This can be achieved in various ways:
    - By providing additional collateral
    - By obtaining insurance guaranteeing payment
    - By arranging for a third-party guarantee.

3. **Strategic Investment Fund:** This fund is aimed at growth and development-stage investments in large scale projects/companies in a broad range of sectors of economic and commercial importance.
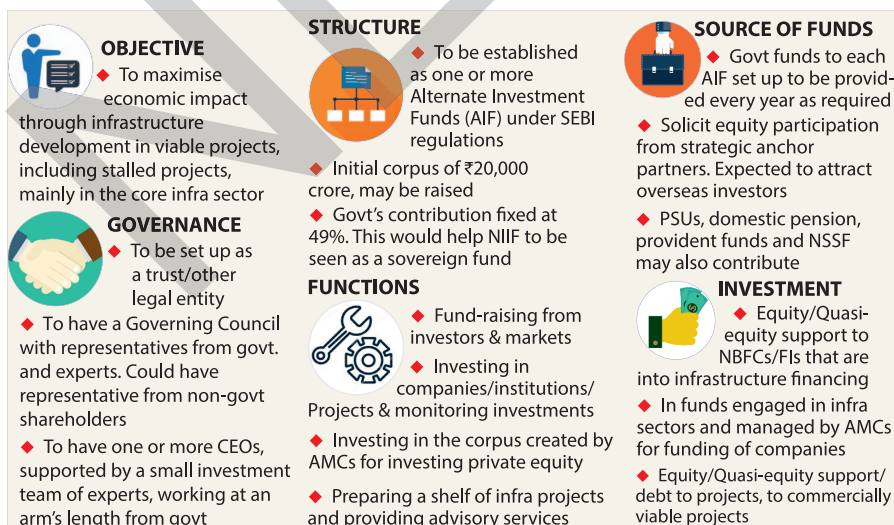
- These funds are **registered with SEBI as Alternative Investment Funds (AIFs).**

Way Ahead:

- NIIF's funds have mandate to invest in infrastructure assets and related businesses that are likely to benefit the long-term growth trajectory of the Indian economy.
- With an aim to generate attractive long-term risk-adjusted returns for investors on a sustainable basis, NIIF is a welcome step in the right direction to help India in securing capital needs for its large infrastructure requirements.

OBJECTIVE
- To maximise economic impact through infrastructure development in viable projects, including stalled projects, mainly in the core infra sector

GOVERNANCE
- To be set up as a trust/other legal entity
- To have a Governing Council with representatives from govt. and experts. Could have representative from non-govt shareholders
- To have one or more CEOs, supported by a small investment team of experts, working at an arm's length from govt

STRUCTURE
- To be established as one or more Alternate Investment Funds (AIF) under SEBI regulations
- Initial corpus of ₹20,000 crore, may be raised
- Govt's contribution fixed at 49%. This would help NIIF to be seen as a sovereign fund

FUNCTIONS
- Fund-raising from investors & markets
- Investing in companies/institutions/Projects & monitoring investments
- Investing in the corpus created by AMCs for investing private equity
- Preparing a shelf of infra projects and providing advisory services

SOURCE OF FUNDS
- Govt funds to each AIF set up to be provided every year as required
- Solicit equity participation from strategic anchor partners. Expected to attract overseas investors
- PSUs, domestic pension, provident funds and NSSF may also contribute

INVESTMENT
- Equity/Quasi-equity support to NBFCs/FIs that are into infrastructure financing
- In funds engaged in infra sectors and managed by AMCs for funding of companies
- Equity/Quasi-equity support/debt to projects, to commercially viable projects

GOVERNMENT LAUNCHES REGIONAL CONNECTIVITY SCHEME 4.0 - UDAN

Government has launched the 4th round of UDAN to further enhance the connectivity to remote and regional areas.

About:

- It is an innovative **Regional Connectivity Scheme (RCS)** launched **to develop the regional aviation market** where airlines compete to win subsidies for operating **flights linking small airports with bigger ones.**
- **Focus States:** North-eastern states, hilly states, Jammu and Kashmir, Ladakh and islands.
- It was launched by **Ministry of Civil Aviation** in **October 2017** and is now in its **fourth phase.**
- The **operation of helicopter and sea plane** would be allowed under this round.

How does it Work?

- **Market Based:** It has a **unique market-based** model to develop regional connectivity.
  - **Interested airline and helicopter operators** can start operations on hitherto un-connected routes by submitting proposals to the Implementing Agency.
- **Finance Mechanism:** The operators could seek a **Viability Gap Funding (VGF)** apart from getting various concessions from Central and State governments and airport operators.
- All such route proposals would then be offered for **competitive bidding** through a reverse bidding mechanism and the route would be awarded to the participant **quoting the lowest VGF per Seat.**
- The selected airline operator would have to abide by the terms and conditions on **capped fares, minimum and maximum UDAN seats, frequency etc.**
- A **Regional Connectivity Fund** has been created to meet the viability gap funding requirements under the scheme.

What are the Benefits of UDAN?

- **Affordability:** It has created affordable yet economically viable and profitable flights on regional routes so that flying became affordable to **the common man even in small towns.**
- **Increased Connectivity: The Centre** was able to expand the regional air connectivity and market.
- **Development: The state governments** have reaped the benefit of development **of remote areas; enhanced trade and commerce and more tourism expansion.**
- **Profitability: Incumbent airlines** have got new routes and more passengers while **start-up airlines** got the opportunity of new, scalable business.

What are Some Issues Surrounding the UDAN Scheme?

- At least eight regional airlines have ceased operations in the last two years highlighting the challenges Indian carriers are facing. Some reasons for their closure are
  - High costs
  - Scarcity of airport slots
  - Maintenance woes
  - Inadequate manpower
  - Inability of promoters to raise capital.

What can be done?

- Steps from the state governments, like reducing taxes on fuel, can push some airlines to start their services in some of the under-connected routes.
- High cost structure that's associated with airlines business, and improve infrastructure need to be changed and reduced to minimum.

International UDAN

- It was launched in 2018 and is an extension of the domestic UDAN scheme.
- It aims to connect India's **smaller cities directly to some key foreign destinations** in the neighborhood.
- Such direct air connectivity would promote the development of the city and the State by wooing tourists and businesspeople to travel via smaller towns, instead of their flying through the metros.
- Only the State government provides the financial support for flights under international UDAN.

AGRIDEX: AGRI-FUTURES INDEX LAUNCHED

Recently, Agri-commodity exchange NCDEX announced the launch of a return-based agri-futures index "AGRIDEX" in partnership with NSE Indices Ltd.

About:

- NCDEX AGRIDEX will track and replicate the performance of the ten most liquid commodities traded on the NCDEX platform.

WEIGHTS

- SYOREF, 7.88%
- CASTOR, 7.43%
- SYBEANIDR, 18.18%
- CHANA, 17.36%
- DHANIYA, 3.00%
- COCUDAKL, 6.91%
- GUARGUMS, 7.53%
- RMSEED, 13.26%
- JEERAUNJHA, 3.73%
- GUARSEED10, 14.73%
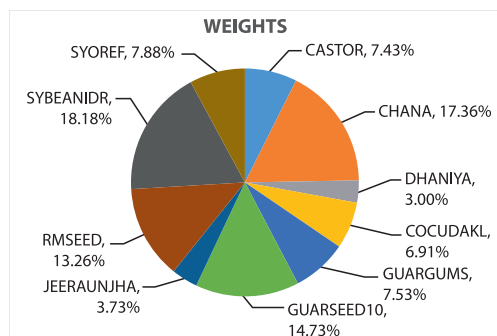
Benefits of the Index:

- It will act as a robust indicator of the broader market and its strong surveillance will give enough confidence to the traders.
- As the index represents a diverse basket of commodities, it is a less risky and more predictable compared to individual commodity.
- Futures trading on AGRIDEX will also enhance overall liquidity on exchange platform.
- These index futures contracts will provide the opportunity to hedge position in more dynamic way and it will also provide unique trading and arbitrage opportunities for market participants.

NCDEX

- The National Commodity & Derivatives Exchange (NCDEX) is a nation-level, technology driven de-mutualised on-line commodity exchange with an independent Board of Directors and professional management - both not having any vested interest in commodity markets.is a nation-level, technology driven de-mutualised on-line commodity exchange.Exchanges like NCDEX have also played a key role in improving Indian agricultural practices.
- NCDEX is regulated by Securities and Exchange Board of India.
- The shareholders of NCDEX comprises of large national level institutions, large public sector bank and companies.

AGRICULTURE EXPORT POLICY

The Union Cabinet has approved the Agriculture Export Policy, 2018.

About:

- In order to provide an impetus to agricultural exports, the Government has come out with a comprehensive **"Agriculture Export Policy"** aimed at **doubling the agricultural exports**.
- The policy seeks to integrate the Indian farmer with the global value chain by diversifying the export basket and promoting high-value exports with a focus on perishables.
- Exports of agricultural products will play a pivotal role in doubling farmer's income.

Objectives of the Agriculture Export Policy:

- **Double agricultural exports** from present USD 30 bn to USD 60 bn by 2022 and reach USD 100 bn in the next few years thereafter, with a stable trade policy regime.
- **Diversify** export basket, destinations and boost high value and value added agricultural exports including focus on perishables.

- **Promote novel, indigenous, organic, ethnic, traditional** and non-traditional Agricultural products exports.
- Provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- **Double India's share in world agricultural exports** by integrating with global value chain at the earliest.
- **Set up 'Brand India'** to promote exports and establish as strong quality regime for exports, and states will be extensively involved.
- **Attract private investment** into production and processing sector.

Need for Export Policy:

- India's share in global exports of agriculture products was merely 2.2 % in 2016.
- Low growth rate in agriculture income. It has taken two decades to double farmer's income according to NITI Aayog report.
- To address challenges like low farm productivity, poor infrastructure, global price volatility, market access.
- India has remained at the lower end of the global agriculture export value chain given that the majority of its exports are low value, semi-processed and marketed in bulk.
- Almost half of population is still in agriculture sector and there is disguised employment problem which needs to be addressed.
- The vision of doubling farmer's income by 2022 will require a series of interventions to improve production and productivity along with economizing the cost of production.
- Vision of making India 5 trillion dollar economy by 2024-25 can be realized by focusing on mainly exports.

ELEMENT OF AGRICULTURE EXPORT POLICY

Strategic	Operational
Policy Measures	Focus on Clusters
Infrastructure and Logistics Support	Promoting Value-added Exports
Holistic Approach to Boost Exports	Marketing and Promotion of "Brand India"
Greater Involvement of State Governments in Agri Exports	Attract Private Investments into Production and Processing
	Establishment of Strong Quality Regimen
	Research & Development
	Miscellaneous

- Indian horticulture sector and agro-processing industries are sunshine industries with high growth potential and export potential as well.

Key Recommendations of Agricultural Export Policy:

- **Establishment of Monitoring Framework** at Centre with Commerce as the nodal Department to oversee the implementation of Agriculture Export Policy.
- **Stable Trade Policy Measures** to ensure that the processed agricultural products and organic products are not brought under any kind of export restriction.
- **Model Agricultural produce market committee (APMC) act** must be adopted by all states and E-NAM must be established.
- **Liberalizing Land Leasing Norms** and adoption of the **Model Contract Farming Act** by state governments in order to promote agricultural exports.
- **Infrastructure and Logistics** boost by identifying ports for the export of agricultural products. Development in port infrastructure like dedicated perishable berths.
- **Whole Government approach** will ensure better horizontal (various departments of center government) and vertical integration (center-state co-ordination).
- **State government involvement:** As Agriculture is a state subject it is necessary to bring on board the state governments for positive agricultural reforms.
- **Focus on Export centric Clusters** for pre- and post-harvest management eg. Mega Food Parks alongwith quality assessment and accreditation.
- Promoting Value Added Exports of indigenous and tribal products.
- Need to promote organic products and research and development in local medicinal products as well.
- **Digitization of land records**, geo-mapping of lands, registration of farmers and farm producer organizations (FPOs) is critical to smooth agricultural exports.
- **Establishment of Strong Quality Regimen** with the focus on strong R&D, new varieties, state of the art lab and a lab networking process for effective accreditation and monitoring.
- Setting up of an **agricultural-startup fund**.

INDUSTRIAL RELATIONS CODE BILL HIGHLIGHTS

> *The government introduced the Industrial Relation Code Bill, 2019 in Lok Sabha.*

About:

- The industrial relations code is the third of four labour codes that have got approval from the Cabinet.

- It seeks to replace three labour laws: (i) the Industrial Disputes Act, 1947, (ii) the Trade Unions Act, 1926, and (iii) the Industrial Employment (Standing Orders) Act, 1946.
- The bill proposes to make it easier for an employer to engage and disengage workers based on requirement. This will make the process of hiring and firing smoother depending on elasticity of demand in the shop floor.
- The bill, however, underlines that fixed-term employees will get all statutory benefits on a par with the regular employees who are doing work of the same or similar nature.

Highlights of Industrial Relation Code Bill, 2019:

- **Trade unions:** Under the Code, seven or more members of a trade union can apply to register it. Trade unions that have a membership of at least 10% of the workers or 100 workers, whichever is less, will be registered. The central or state government may recognise a trade union or a federation of trade unions as Central or State Trade Unions respectively.
- **Negotiating Union:** In case of multiple trade unions, the trade union with support of at least 75% of workers will be recognised as the negotiating union by the central or state government for negotiating with the employer.
- **Unfair labour practices:** The Code prohibits employers, workers, and trade unions from committing any unfair labour practices listed in a Schedule of the Code. These include: (i) restricting workers from forming trade unions, (ii) establishing employer sponsored trade union of workers, and (iii) coercing workers to join trade unions.
- **Standing orders:** All industrial establishments with at least 100 workers must prepare standing orders on matters listed in a Schedule to the Code.
- **Notice of change:** Employers who propose changes in the conditions of service are required to give a notice to the workers.
- **Lay-off and retrenchment:** The Code defines lay-off as the inability of an employer, due to shortage of coal, power, or breakdown of machinery, from giving employment to a worker. It also provides for employers to terminate the services of a worker, i.e., retrenchment.
- **Voluntary arbitration:** The Code allows for industrial disputes to be voluntarily referred to arbitration by the employer and workers.
- **Resolution of industrial disputes:** The central or state governments may appoint conciliation officers to mediate and promote settlement of industrial disputes.
- The Code provides for the constitution of **Industrial Tribunals** for the settlement of industrial disputes and the central government may also constitute **National Industrial Tribunals** for settlement of industrial disputes.

Relation Building

Industrial Relations Code Bill seeks to improve ease of doing business

KEY ELEMENTS

Fixed-term employment allowed under law	**Termination** after fixed term will not be retrenchment

Fixed-term works will get all statutory benefits

Mass casual leave will be under ambit of strike	**Trade union with** support of 75% workers will be recognised	**HOW WILL IT HELP?**
14-day notice before any strike or lockout	**Negotiating** council will be formed in absence of 75% support	**Codification** to remove multiplicity of definitions / **Paves way for requirement-based hiring** / **Would bring transparency and accountability**
Re-skilling fund will be set up to train retrenched employees	**Govt to have** power of litigations involving minor disputes	**Will promote setting up of more enterprises, thus creating employment opportunities**

Significance:

- Speedier disposal of cases
- **Flexibility to the exit provisions** (relating to retrenchment etc.), for which, the threshold for prior approval of appropriate Government has been kept unchanged at 100 employees.
- Help improve the ease of doing business.
- In view of the present globalized economy, fluctuation in quantum of production of goods and services (depending upon demand and supply), necessitates engagement/ disengagement of workers based on requirement.
- **Reskilling fund** provides an opportunity to the retrenched worker to acquire new skills.
- **Ease of compliance of labour laws** will promote setting up of more enterprises, thus catalysing the creation of employment opportunities in the country.

Criticism:

- Some labour unions criticized this bill on the grounds that it will lead to contractualization of the workforce.Legal strike virtually banned, diluting rights and bargaining power of workers.
- Dilution of threshold for lay-offs, retrenchment and closure,
- From permanent to fix term employment as it would create a new category of workers as permanent jobs would be converted to fix term jobs with social security and wages at par with the former but "no job security or permanency".
- Outsiders restricted in unorganised sector-trade unions.

Way Ahead:

- The fixed-term employment needs to be introduced with adequate safeguards, otherwise it runs the risk of encouraging conversion of permanent employment into fixed-term employment. Fixed-term employment will help in keeping salaries and facilities to workers such as PF, gratuity, and medical benefits, the same as those for permanent labour.
- India is competing with global players so there should be a level playing field. For that the government should protect employment as much as possible, when there is commercial viability.

DEVELOPMENT BANKS IN INDIA

The government has decided to set up development banks in India.

About:

- Development banks are financial institutions that provide long-term credit for capital-intensive, long term investments yielding low rates of return, such as urban infrastructure, mining and heavy industry, and irrigation systems.
- Development banks often lend at low and stable rates of interest to promote long-term investments with considerable social benefits.
- Development banks are also known as term-lending institutions or development finance institutions.
- **Financing of Development banks:** Development Banks obtain their finances by issuing long-dated securities in capital market, which are subscribed by long-term savings institutions such as pension and life insurance funds and post office deposits.
- **Government Support:** Considering the social benefits of such investments, and uncertainties associated with them, development banks are often supported by governments or international institutions. Government may provide tax incentives or issue administrative mandates for private sector banks and financial institutions to invest in securities issued by development banks.

Global Examples of Development Bank

- China's development banks — the Agricultural Development Bank of China, China Development Bank, and the Export-Import Bank of China — have been at the forefront of financing its industrial prowess. After the global financial crisis, these institutions have underwritten China's risky technological investments helping it gain global dominance in IT hardware and software companies.
- Germany's development bank, KfW, has been spearheading long-term investment in green technologies and for sustainable development efforts requiring long-term capital.

Need to Establish Development Bank:

- To improve access to long-term finance, provide credit enhancement and enhance debt flow towards infrastructure and housing projects.

LUMP SUM TURN KEY (LSTK) CONTRACT FOR COAL GASIFICATION PLANT

Government of India has awarded Lump Sum Turn Key (LSTK) contract for Coal Gasification Plant PF Talcher Fertilizers Limited to Chinese enterprise Wuhuan Engineering Co. Ltd

About:

- **Objective:** To revive the closed units of Fertilizer Corporation of India Ltd. (FCIL) and Hindustan Fertilizers Corporation Ltd (HFCL).
- Government has mandated Talcher Fertilizers Ltd (TFL), a Joint Venture Company of RCF, GAIL, CIL, and FCIL to revive the Talcher unit of FCIL.
- The Talcher fertiliser unit will use the **coal gasification technology** to produce 1.27 million tonne of neem-coated urea annually.

What is Lump Sum Turn Key (LSTK) Contract?

- A "Lump Sum Turn Key (LSTK) Contract" refers to bidding terms and conditions between the End User and an EPC (Engineering, Procurement, and Construction) which don't allow any financial change for a given scope of work until the EPC is able the deliver the newly built plant in full operations to the end user.

What is the Significance of this Project?

- **First in India:** TFL is implementing this project based on Coal Gasification Technology, being first of its kind in India.
  - The Plant shall use a blend of coal and petcoke as feedstock for production of urea.
- **Eco Friendly:** This project will promote use of abundantly available domestic coal in an environment friendly manner.
- **Other Products:** Success of this technology shall also propel usage of coal for production of other chemical products.
- **Self sufficiency:** The project shall improve India's self-sufficiency in Urea; promote agriculture growth and availability of Urea to farmers of Odisha.
- **Employment:** This initiative would generate direct and indirect employment of about 4,500.

Coal Gasification Technology

- **Definition:** It is a thermo-chemical process in which the gasifier's heat and pressure break down coal into its chemical constituents.

- The resulting **"syngas"** is comprised primarily of **carbon monoxide and hydrogen**, and occasionally other gaseous compounds.
- This syngas can be used for electricity production, used in energy-efficient fuel cell technology, or as chemical "building blocks" for industrial purposes.

Benefits:

- **Efficiency:** It has greater efficiency than conventional coal-burning because it can effectively use the gases twice: the coal gases are first cleansed of impurities and fired in a turbine to generate electricity. Then, the exhaust heat from the gas turbine can be captured and used to generate steam for a steam turbine-generator.
- **Transportation** of gas is much cheaper than transporting coal.
- However, some concerns are also there like water contamination, land subsidence and disposing of waste water safely.

Way Ahead:

- Further success of this technology shall open up new areas in the Indian energy context leading to alternative use of high ash Indian coal in the areas other than conventional thermal power production.
- The coal requirement in India stands at around 20 million tonnes.
  - India imports petrochemicals worth Rs. 70,000 crores annually. This can be brought down significantly if India gets economically viable coal gasification technology.

BHARATIYA POSHAN KRISHI KOSH

The Ministry of Women and Child Development (WCD) along with Bill & Melinda Gates Foundation has launched the Bharatiya Poshan Krishi Kosh (BPKK).

About:

- The **Bharatiya Poshan Krishi Kosh** aims to promote and reinforce healthy dietary practices both at the individual and community level and tackle malnutrition in a sustainable manner.
- The Kosh aims at reducing malnutrition through a multi-sectoral results-based framework, including agriculture, among women and children across the country.
- It is a repository of diverse crops across 128 agro-climatic zones for better nutritional outcomes.
- It is built on an essential understanding of social, behavioural and cultural practices that promotes healthy dietary behavior.

BHARTIYA POSHAN KRISHI KOSH

▶ Calorie rich diet for women, expectant mothers and children
▶ Intake of proteins in the form of pulses to eradicate protein hunger in women and children
▶ Eradicate hidden hunger due to deficiency of micro nutrients like vitamin A, vitamin B, Iron and Zinc
▶ Clean drinking water supply
▶ Spreading nutrition literacy in every village

Malnutrition

- It refers to **deficiencies, excesses or imbalances** in a person's intake of energy and/or nutrients.
- According to UNICEF, "People are malnourished if their diet does not provide adequate nutrients for growth and maintenance or if they are unable to fully utilize the food they eat due to illness (undernutrition). They are also malnourished if they consume too much energy (overnutrition).

Economic Impact of Malnutrition:

- **On workforce:** In the 1990s, it was found that 46 per cent of the children in India were stunted due to malnutrition and today, they form the country's workforce, designing and directing the nation's economy and health.
- **Annual cost:** The World Bank reports that the annual cost of malnutrition in India is at least **$10 billion** and is driven by loss of productivity, illness and death.
- To achieve Goal 2 of SDG, India will have to liberate nearly 50,000 people from hunger, every day.

Malnutrition in India:

- As per the National Family Health Survey (NFHS)-4 (2015-16), 35.7% children below five years are underweight, 38.4% are stunted and 21% are wasted in the country.
- **Government's initiatives to reduce malnutritionIntegrated Child Development Services (ICDS) Scheme** which has specific interventions targeted towards the vulnerable groups including children below 6 years and women.
- **Mid Day meal scheme:** It provides that every child within the age group of six to fourteen years studying in classes I to VIII who enrols and attends the school shall be provided with a hot cooked meal.
- **National Iron Plus Initiative (NIPI)** for Anemia control among children from 6 to 60 months of age.
- **Rashtriya Bal Swasthya Karyakram (RBSK)** which provides for child health screening for common health conditions at block level.
- **Village Health and Nutrition Days and Mother and Child Protection Card** to address the nutrition concerns in children, pregnant women and lactating mothers, a joint initiative of Ministry of Women and Child and Ministry of Health and Family Welfare.

Methodology:

- There will be identification of 12 high focus states which are representative of the geographical, social, economic, cultural and structural diversities of India.
- In each of the states or group of states, a local partner organization will be identified which has relevant work experience in Social and Behavior Change Communication (SBCC) and nutrition for developing the food atlas.

NIRVIK

Ministry of Commerce & Industry has introduced a new Export Credit Insurance Scheme (ECIS) called NIRVIK.

About:

- Export Credit Guarantee Corporation (ECGC) has introduced 'NIRVIK' scheme to ease the lending process and enhance loan availability to exporters.
- Under the NIRVIK scheme, also known as Export Credit Insurance Scheme (ECIS), insurance cover percentage has been enhanced to 90% from the present 60% for both Principal and Interest.

Key Features of the Scheme:

- Enhanced cover will ensure that Foreign and Rupee export credit interest rates will be below 4% and 8% respectively for exporters. The insurance cover will include both pre and post shipment credit.
- The ECGC cover provides additional comfort to banks as the credit rating of the borrower is enhanced to AA rated account. Further, the additional outgo due to the enhanced cover would be supported by the government.
- The scope of cover has been enlarged to cover not only the principal outstanding but also for the unpaid Interest (for a maximum of two quarters or the NPA date, whichever is earlier).

Export Credit Guarantee Corporation of India Limited (ECGC)

- ECGC is a fully Government of India owned company established in the year 1957 to promote exports by providing credit insurance services.
- ECGC provides Export Credit Insurance to Banks (ECIB) to protect the Banks from losses on account of export credit at the Pre and Post-Shipment stage given to exporters due to the risks of insolvency and/or protracted default of the exporter borrower.
- ECGC is essentially an export promotion organization, seeking to improve the competitiveness of the Indian exports by providing them with credit insurance covers.

Benefits of the Scheme:

- **Boost to MSME:** The stimulus package will catalyze Banks to enhance volume of export credit lending particularly to the MSME Sector with optimal pricing due to capital and risk optimization.
- **Ensures cheaper credit:** The proposed cover will bring down the cost of credit due to capital relief, less provision requirement and liquidity due to quick settlement of claims and will ensure timely and adequate working capital to the export sector.
- **Export competitiveness:** It will enhance accessibility and affordability of credit for exporters, which will make Indian exports competitive and ECGC procedures exporter friendly.

PUBLIC FINANCE MANAGEMENT SYSTEM

Recently, the Punjab government has directed all government procurement agencies to link the bank accounts of farmers with the Public Finance Management System (PFMS) portal before the procurement of paddy begins.

About:

- It is an online platform developed and implemented by the office of the Controller General of Accounts (CGA) and administered by the Department of Expenditure under the Union Ministry of Finance.
- The PFMS portal is used to make direct payments to beneficiaries of government schemes.
- Public Financial Management System (PFMS) is the successor of CPSMS (Central Plan Scheme Monitoring System) of the erstwhile Planning Commission in 2008-09 as a pilot in four States of Madhya Pradesh, Bihar, Punjab and Mizoram.
- The national rollout of CPSMS, PFMS), links the financial networks of Central, State Governments and the agencies of State Governments.

Controller General of Accounts (CGA)

- The Controller General of Accounts is the apex Accounting Authority of the Central Government and exercises the powers derived from Article 150.
- It works under the Department of Expenditure, Ministry of Finance, and is responsible for establishing and maintaining a technically sound Management Accounting System.
- The Office of CGA prepares monthly and annual analysis of expenditure, revenues, borrowings and various fiscal indicators for the Union Government.
- It aims to brings transparency in the use and reporting of public funds through an integrated government-wide financial information system.

- PFMS has proved as a robust digital platform towards the vision of DIGITAL INDIA.

Functions:

- It is an end-to-end solution for processing payments, tracking, monitoring, accounting, reconciliation and reporting.
- Facilitates just-in-time release of funds and monitor their end uses.
- Efficient management of funds through tracking and real time reporting of expenditure and receipts through Treasury and Bank Interface.
- Monitor the utilization of funds provided to the implementing agencies and states governments.
- PFMS is also used for Direct Benefit Transfer (DBT) payments under MGNREGA and other notified schemes of the Government of India.

Advantages:

- It will enhance public accountability in the implementation of plan schemes.
- It will result in effectiveness and economy in Public Finance Management, better cash management, transparency in public expenditure, real-time information on resource availability and utilization across schemes.
- It will also result in improved programme administration and management, reduction of float in the system, direct payment to beneficiaries, thus, improving governance.
- This system would reduce the paper work involved and promote the use of technology in governance.
- It would enable tracking of any unnecessary parked funds, minimizing cases of delay and pending payments.

Challenges:

- The PFMS requires massive preparatory work including software/hardware up-gradation, training personnel at every level etc.
- There is a skewed nature of ICT (Information and Communication Technology) infrastructure in richer states, which also acts as a challenge with regard to less technologically developed states. The slow pace of adoption of technology in governance in some states.

RBI'S STUDY ON STATE-LEVEL BUDGETS

The Reserve Bank of India has released its annual study of state-level budgets.

About:

- **Fiscal Discipline:** Except during 2016-17, state governments have regularly met their **fiscal deficit target of 3% of GDP**.

- ◆ This should reduce a lot of apprehensions about state-level finances
- **Budget Reductions:** There has been a **reduction in the overall size of the state budget in 2017-19**.
  - ◆ This reduced state-level budget may have been responsible for deepening the ongoing slowdown in the domestic economic activity.
- **High Debt to GDP:** While states have met their fiscal deficits, the overall level of debt-to-GDP has reached **the 25% of GDP** prudential mark.
- As per the report most states met their fiscal deficit target not by increasing their revenues but by reducing their expenditure and increasingly borrowing from the market.
  - ◆ This reduction in state expenditure adversely affected the loans that state governments provided to power projects, food storage and warehousing, also it hurts the states' capital budget allocation for key social and infrastructure sectors.
  - ◆ **The possible reason** for inability of the states to increase their revenue may be low tax buoyancies, shrinking revenue autonomy under the GST framework and unpredictability associated with transfers of IGST and grants.

Why State Government Finances are Important?

- **Expenditure:** States spend one-and-a-half times more than the Union government.
- **Employment:** The states are the biggest employment generators as they employ five times more people than the Centre.
- Since financial year 2014-15, states have increasingly borrowed money from the market, although the amount is equivalent to the Union government. This has serious implications on the interest rates charged in the economy, the availability of funds for businesses to invest in new factories, and the ability of the private sector to employ new labour.

Recommendations of 14th Finance Commission

- States continue to maintain a fiscal deficit at 3% of their GSDP and eliminate revenue deficit.
- Fiscal deficit limit be relaxed to a maximum of 3.5%, if states were able to contain their debt and interest payments to specified levels.
- Proportion of central pool of taxes devolved to states should be increased from 32% to 42%.
- States should aim to eliminate revenue deficits.
- The Commission also estimated the revenue deficit that states would incur post-devolution, and suggested that the centre compensate these states through revenue deficit grants.

Fiscal Responsibility and Budget Management Committee (N.K. Singh Committee) recommendations:

- **Debt to GDP:** The combined debt-to-GDP ratio of the centre and states should be brought down **to 60 per cent by 2023** (comprising of 40 per cent for the Centre and 20% for states) as against the existing 49.4 per cent, and 21per cent respectively.
- **Fiscal Deficit:** The Committee advocated fiscal deficit as the operating target to bring down public debt. For fiscal consolidation, the centre should reduce its fiscal deficit from the current 3.5% (2017) to 2.5% by 2023.
- **Revenue Deficit:** The Committee also recommends that the central government should reduce its revenue deficit steadily by 0.25 percentage (of GDP) points each year to reach 0.8% by 2023.
- **Independent Fiscal Council:** It recommended setting up an independent Fiscal Council, which will provide several advisory functions and forecast key macro variables like real and nominal GDP growth, tax buoyancy, commodity prices.

Why Fiscal Deficit is Important for State Budget?

- State budgets are divided into two areas: revenue and capital.
  - ◆ Consistently over the years, State budgets have had deficits on revenue account and are able to meet fiscal prudence regulations by having a surplus on capital account.
- Each year's borrowing (or deficit) adds to the total debt. Paying back this debt depends on a state's ability to raise revenues.
- If a state, or all the states in aggregate, find it difficult to raise revenues, a rising mountain of debt- captured in the debt-to-GDP ratio- could begin a vicious cycle.
- Then, states end up paying more and more towards interest payments instead of spending their revenues on creating new assets that provide better education, health and welfare for their residents.
- In short, with each passing year, **state government finances have become more and more important not only for India's GDP growth and job creation but also for its macroeconomic stability**.

Impact on National Economy:

- The report states that the reduction in overall size of state budgets likely worsened the economic slowdown that was slowly setting in since the start of 2016-17.
- The states are facing problems in raising revenues, which are confronted with low tax buoyancies, shrinking revenue autonomy under the GST framework and unpredictability associated with transfers of IGST and grants.

◆ This could further reduce the spent on welfare schemes by the states and make the states more dependent on centre.

• The reduction in revenue collection forced the states to take the loan from external players like private organizations, international bodies on heavy interest rate.

• This could also result in increased inflation and put the burden on the common man.

Way Ahead:

• **Efficient functioning:** The state needs to look at the efficient functioning of its State enterprises, whether it is providing utilities to citizens — water, electricity and transport — or monetizing its assets such as land and minerals.

• **Accountability:** Public sector undertakings, including transport, as well as statutory boards, which includes metro water, electricity and housing, continue to incur losses.
  ◆ The outcome is that the board or corporation neglects maintenance and capacity addition.
  ◆ These corporations should be made accountable for financial targets and the State should fix dividend targets in case of purely commercial undertakings.

• **Support Startups:** The states need to support the startups through the creation of an incubation and entrepreneurship ecosystem even in small towns will lead to inclusive development.

• **Human resource:** The states should learn from southern states like Tamil Nadu and Kerala and improve their spending on education and healthcare sectors.

• **Collaboration with Private players:** The Government and the private sector should find ways of working together for better development.

• **Industry friendly:** The states need to eliminate bureaucratic attitude and adopt policies for an industry friendly environment.

• **Neutralize Revenue Deficit:** The earned capital should not get pumped into neutralising the revenue deficit and also create an architecture for better financial management and for supporting new growth drivers.

CENTRE RELEASES THE GST COMPENSATION CESS FOR STATES

The Centre released ₹35,298 crore to the States in Goods and Services Tax (GST) compensation, before the meeting of the GST Council

About:

• **Background:** In Nov. 2019, the Centre had written to States voicing concern that due to lower GST collections, the compensation cess might not be enough to pay for the losses arising out of the adoption of the tax system.

◆ While the government had budgeted for ₹ 6,63,343 crore in GST collections for the current fiscal, 2019-20, it had garnered only about **50% of its budget estimate in the first eight months**.

◆ The GST Council informed the States that the central government might not be able to compensate them for losses arising out of the implementation of the Goods and Services Tax (GST).

What is a Cess?

• A cess is a tax on tax, levied by the government for a specific purpose.

• The contributor and beneficiary of a cess must be relatable.

• Under Article 270 of the Constitution, proceeds of a cess can be retained exclusively by the Union and need not be shared with States.

• If there is an unspent amount, it is simply carried forward for use in the following year.

• The objective is to ensure that **expenditure goes for that specific purpose.**
  ◆ The collections from a cess are required to be kept outside of the Consolidated Fund of India (CFI).

GST Council

• **Article:** The GST Council is a constitutional body established under **Article 279A** of Indian Constitution.

• **Function:** It makes recommendations to the Union and State Government on issues related to Goods and Service Tax (GST).

• **Chairperson:** The GST Council is chaired by the Union Finance Minister.

Members: Its other members are the Union State Minister of Revenue or Finance and Ministers in-charge of Finance or Taxation of all the States.

What is GST Compensation Cess?

• As part of the GST reforms, this Cess has been introduced through the GST (Compensation to States) Act, 2017.

• It is levied on inter- and intra-State supply of notified goods such as aerated drinks, coal, tobacco, automobiles for 5 years.

• The proceeds will be distributed to loss-incurring States on the basis of a prescribed formula as compensation.

What are the Shortcomings of Compensation Cess?

• **Purpose diluted:** Once the money is transferred to State governments, it can be used to fund any scheme.
  ◆ It may even be used to fill the government's fiscal deficit.

◆ There is no relation between the persons contributing to the cess and the recipients, the State governments.

- **Burdening Select sin goods:** The goods earmarked for the cess, such as aerated drinks, coal, tobacco, automobiles and "other supplies", do not form a distinct category deserving the liability to pay this cess.
  - ◆ The sin goods argument also fails as the luxury goods & jewellery are not covered.
  - ◆ Ambiguous category: The term "other supplies" leaves much to the discretion of the government.

Is it Constitutionally Valid?

- The 122nd Constitution Amendment Bill initially proposed a 1% additional tax to compensate States but this was later withdrawn.
- Article 271 has been amended to state that an additional tax/surcharge cannot be imposed over and above the GST rates.
- The GST Council's power to recommend a special rate is confined to raising resources only during any natural calamity or disaster.
- So this cess cannot be justified under such power either.

What are the steps that could be taken?

- **Hikes** in the cess to manage the compensation payouts to states and some rate changes in exempted and low rate items.
- **Increasing the 5 per cent tax slab** to 6 per cent and raising tax on cigarettes and aerated drinks.
- **Comprehensive review** of the tax structure in the wake of growing revenue concerns.
- **Simplification of compliance** requirements and tightening of administrative measures.

New Math?

ON THE AGENDA

1. **Review** of exempted items
2 **GST & compensation** cess rates
3 **Rate calibration** to address inverted duty
4 **Compliance & other** measures to raise revenue

WHY THE REVIEW

GST revenues have been muted
Compensation cess falling short of requirement

WHAT IT MEANS

Some rates could go up
Compensation cess could rise temporarily

A **Committee of Officers** from the States and Centre has been set up to suggest measures to increase collections. In a little respite, the GST collections witnessed recovery crossing Rs 1 lakh crore mark to Rs 1.03 lakh crore in November.

INDIA MOVES INTO THE LIST OF TOP TEN COUNTRIES IN TERMS OF TOTAL GOLD RESERVES

According to the World Gold Council, India has the 10th largest gold reserves in the world and move into the list of top ten countries in terms of total gold reserves.

About:

- According to the World Gold Council, India has gold reserves totalling **618.2 tonnes**, which is 6.9 per cent of the share held in gold in total foreign reserves.
- In terms of individual countries, **India ranks 9th** since the International Monetary Fund (IMF) occupies the third position after the U.S. and Germany.

World Gold Council

- The World Gold Council is the market development organisation for the gold industry.
- The World Gold Council's **26 Members are some of the world's most forward-thinking gold mining companies**. They are headquartered across the world and have mining operations in over 45 countries.
- The council is U.K. based and conduct operations in India, China, Singapore and the United States.

What is the Composition of India's Foreign Exchange Reserves?

- India's gold reserves were valued at $26.86 billion or Rs 1.91 lakh crore till October 2019, while the total foreign exchange reserves were at $440.7 billion according to RBI data.
- Approximately 93 per cent of the reserves are in foreign currency assets in different currencies like the US dollar and the Euro.
- The remaining is in **special drawing rights** and Reserve Position with the International Monetary Fund.

Other Facts:

- According to the latest release by the World Gold Council, **U.S. leads the country list with total gold reserves of 8,133.5 tonnes** followed by **Germany with 3,366.8 tonnes**.
- While the **IMF is ranked third with a holding of 2,451.8 tonnes**, it is followed by countries such as **Italy, France, Russia, China Switzerland and Japan** before India at the 10th spot.

Why gold reserves value can change without change in quantity?

- The **value of the gold reserves can change even without a physical change in the quantity of gold held**, on account of change in gold prices and fluctuation in exchange rates.
- Foreign currency assets also keep changing depending on the performance of the currencies in the Indian basket. This is termed as the **revaluation effect**.

Why a central bank selling gold is a sign of crisis?
- The last time the central bank had to pledge its gold holdings was at the time of the financial crisis in 1991, when the dwindling foreign exchange reserves were insufficient to meet India's import bill for essential commodities.
- At the time, India pledged 67 tonnes of its gold reserves to the Bank of England and the Union Bank of Switzerland for $600 million to tide over its balance of payments crisis.

- India's entry into the list of top ten countries comes at a time when the quantum of monthly purchases is the lowest in over three years.
- India's gold reserves have grown substantially in the past couple of decades from 357.8 tonnes in the first quarter of 2000 to 618.2 tonnes (2019).

MINISTRY OF AGRICULTURE PLACES DRAFT SEEDS BILL 2019 IN PUBLIC DOMAIN

Ministry of Agriculture and Farmers' Welfare placed Revised draft Seeds Bill 2019 in the public domain recently for suggestions and comments.

About:
- Govt plans to change existing law to ensure **availability of quality seeds** to farmers.
- Proposed Bill is to replace **The Seeds Act, 1966** to meet its objective of 'regulating quality of seeds for sale, import, export'.

What are the Major Highlights of the Bill?
- **Compulsory registration:** Provides for **compulsory registration** of "any kind or variety of seeds" that are sought to be sold.
- The bill does away with the concept of "notified" variety (notified varieties refer to the ones that are mostly bred by public sector institutions and officially "released" for cultivation after multi-location trials).
- **Standards:** The seeds would have to meet the **minimum prescribed standards** relating to germination, physical and genetic purity, etc.
  - Breeders would be required to disclose the "expected performance" of their registered varieties "under given conditions".

- **Compensation:** If the seed of such registered kind or variety fails to provide the expected performance under such given conditions, the farmer may claim compensation from the producer, dealer, distributor or vendor under The **Consumer Protection Act, 1986**.
- **Clearance under EPA: Transgenic varieties** of seeds can be registered only after the applicant has obtained clearance under the **Environment (Protection) Act, 1986.**

What is the Significance of this Legislation?
- The 1966 legislation was enacted at the time of the Green Revolution, when the country hardly had any **private seed industry**. Today, more than 50% of India's seed production is undertaken in the private sector.
- The bill brings **greater accountability** from the seed industry.
- It helps seed companies as compulsory registration of all varieties/hybrids ensures **credibility of claims** made about the quality of seeds sold.
- **Minimizes** the **risk of farmers** being sold seeds of low-quality genetics.
- It aims to enhance seed replacement rates in Indian agriculture.

What are some of the Concerns with the Bill?
- The seed bill does not require the seed industry to declare the parents of the variety they register. Hence, there is no opportunity to claim benefit sharing as provided in the **Protection of Plant Varieties and Farmers Rights Act (PPVFRA)**,
  - According to PPVFRA if a plant breeder uses farmer varieties to breed his variety, he is required to pay a part of the profits of the new commercialized variety into a national gene bank.
- Consumer courts are not the ideal and friendly institutions that farmers can approach.
- **Exemptions** for **offences** committed by companies and company officils may be misused.
- The process of registration is **not time-bound**.
- **Lack of manpower and infrastructure** within the government system.
- May dis-incentivize seed-tech companies.
- The provision for **regulation of sale price** of seeds has been given both to the Centre and state governments. This may hard the seed industry.
- An **enabling atmosphere** through stronger presence of public institutions in seed research and production is not encouraged.

Way Forward:
- **Strong public agricultural research systems** would ensure that the choices between hybrids, varieties and farm-saved seeds remain open, and are not based on private profit concerns.
- **Seed prices** can also be kept **affordable**.

CABINET AUTHORIZES NHAI TO SET UP INFRASTRUCTURE INVESTMENT TRUSTS

The Union Cabinet authorized National Highways Authority of India (NHAI) to set up Infrastructure Investment Trust(s) (InvIT) as per InvIT Guidelines issued by SEBI.

About:
- Infrastructure Investment Trusts (InvITs) are **mutual fund** like institutions.
- It enables investments into the **infrastructure** sector by pooling small sums of money from multitude of individual investors.
- Then those investments are directly invested in infrastructure so as to return a portion of the income (after deducting expenditures) to unit holders of InvITs, who pooled in the money.

How do InvITs Work?
- **Working:** InvITs raise funds from a large number of investors and directly invest in infrastructure projects or through a special purpose vehicle.

SEBI (Security and Exchange Board Of India)
- The Securities and Exchange Board of India is the Regulator for the Securities market in India owned by Government of India.
- **Headquarters:** Mumbai
- It was established in 1988 and given Statutory Powers through the **SEBI Act, 1992**.
- SEBI was constituted as the regulator of capital markets in India under a resolution of the Government of India.

- ◆ Two types of InvITs have been allowed: one, which invests in completed and revenue generation projectsOther, which has the flexibility to invest in completed or under-construction projects.
- InvITs which invest in **completed projects** take the route of **public offer** of its units, while those investing in **under construction projects** take the route of **private placement** of units.
- **Structure:** InvITs are registered as trusts with SEBI and there are four parties — trustee, sponsors, investment manager and project manager.
  - ◆ Investment managers manage assets and investments of InvITs and undertake activities of the InvIT.
  - ◆ The project manager is responsible for executing the projects.
  - ◆ The trustee oversees the role of InvIT, investment managers and project manager and ensures that all rules are complied with.

What is the Significance of the Move?
Infrastructure Investment Trust(s) (InvIT) as an instrument provides greater flexibility to investors and is expected to create following opportunities:
- It would generate specialized Operation and Maintenance (O&M) Concessionaires.
- It would attract patient capital (for about 20-30 years) to Indian highway market, as these investors are unwilling towards construction risk and are interested in investment in assets which provide long-term stable returns.
- Retail domestic savings and corpus of special institutions such as mutual funds, Pension Fund Regulatory and Development Authority (PFRDA), among others, will be invested in infrastructure sector through InvIT.
- It will help freeing up of current developer's capital for reinvestment into new infrastructure projects.
- It will also help in refinancing/takeout of existing high cost debt with long-term low-cost capital and help banks free up/reduce loan exposure, and thereby help them create headroom for new funding requirements.

What do InvITs Mean for Investors?
- According to SEBI rules, at least 90% of funds collected, after paying for expenses, taxes and repayment of external debt, should be passed on to investors every six months.
- **Taxation:** Dividend income received by unit holders is tax exempt. Short-term capital gain on sale of units is taxed at 15%, while long-term capital gains are tax exempt. Interest distributed to unit holders is taxed.

THE NATIONWIDE CONDUCT OF SEVENTH ECONOMIC CENSUS UNDERWAY

The Seventh Economic Census is being conducted nationwide through Common Service Centers (CSC) and is expected to be completed by March 2020.

About:
- **Definition:** Economic census is the complete count of all establishments engaged in **non-agricultural** economic activities located within the geographical boundary of India.
  - ◆ It provides disaggregated information on various operational and structural variables of all establishments of the country.
- **Aim:** Preparation of a National Business Register which can be linked with existing databases at the central and state government levels.
- **Use of IT:** The seventh census would witness the use of Information Technology for data collection.

- **Ministry of Statistics and Programme Implementation** carries out economic census every five years.
  - The ministry has partnered with CSC e-Governance Services India Limited, a Special Purpose Vehicle under the Ministry of Electronics and Information.

History of Economic Census

- The Indian Economic Census was first launched in 1977.
- So far 6 censuses have been conducted in the years 1977, 1980, 1990, 1998, 2005, 2013. The economic census 1980 and 1990 were integrated with population census.

Significance:

- **Digital:** This is the first time the census is being conducted digitally.
- **Setting precedent:** It will set a precedent for the entire country for carrying out a large-scale survey work like this.
- **Sampling Frame:** The database so collected also serves as a sampling frame for drawing samples for socio economic surveys by Government and research organizations.
- **Accurate Data:** Planning of schemes would become more effective with availability of accurate data.
- **Sectoral Information:** This information is used for micro level or decentralized planning and to assess contribution of various sectors of economy in gross domestic product (GDP).

FOREX RESERVES CROSSES US$ 450 BILLION MARK

India's forex reserves cross US$450 Bn mark as on 29 November 2019.

About:

- India's forex reserves comprise **foreign currency assets (FCAs), gold reserves, special drawing rights (SDRs)** and **India's reserve position** with the International Monetary Fund (IMF).

Item	As on Nov. 29, 2019	
	₹ Cr.	US$ Mn.
	1	2
1 Total Reserves	3235893	451080
1.1 Foreign Currency Assets	3008401	419367
1.2 Gold	191164	26648
1.3 SDRs	10299	1436
1.4 Reserve Position in the IMF	26028	3629

- The growing reserves could help the RBI hold a war chest to **fight volatility** in the exchange rate and **global financial shocks**, or the government could take out higher surplus from the central bank under the new economic capital framework.
- If external debts are higher than the forex reserves, it makes the economy vulnerable to any oil price shock.
- Within the foreign exchange reserves, the **rise in reserves** was **mainly** on account of an increase in **foreign currency assets**, a major component of the overall reserves.

GLOBAL EXHIBITION ON SERVICES (GES)-2019

Recently, the 5th edition of GES was organized by Department of Commerce & Industry, at Bengaluru, Karnataka.

About:

- **Need:** It is an attempt towards escalating the Indian services bar in the global arena.

Service Export Promotion Council (SEPC)

- SEPC is an export promotion council set up by Ministry of Commerce and Industry, Government of India in 2006.
- It is as an apex trade body to facilitate service exporters of India.
- It actively contributes to the formulation of policies of Government of India.
- It acts as an interface between the services industry and the Government.

- **Partners:** Government in partnership with the **Services Promotion Council (SEPC)** and the **Confederation of Indian Industry (CII)** organizes the annual Global Exhibition on Services (GES) in Bengaluru.

What is GES?

- GES is the **largest services show in India.**
- **It is aimed** at exploring **12 Champion Services Sectors** including aviation and space programme, infrastructure, Intellectual Property management services and environmental/social impact assessment etc.

Major Objectives:

- To increase trade in services and enhance strategic cooperation.
- To engage industry and Governments across the world to promote greater exchange of trade and commerce in services.
- To develop synergies to tap the potential for services exports and increase FDI inflow.

Highlights of GES-2019:

- Promotion of tourism like the Buddhist circuit, adventure and camping tourism with separate state pavilion.
- Promotion of eSports industry, which is expected to grow rapidly to generate close to USD 1.8 billion in revenue by 2022.
- Creation of 'India Service Brand' by the government to represent the services sector in India.

Why is Service Sector Important for India?

Dubbed as the 'sector of the current millennium', services sector drives the Indian economy in an inclusive and equitable manner.

- Service sector contributes around **60 per cent of India's GDP.**
- Nearly **55 per cent of FDIs** in India coming in services alone.
- According to International Labour Organisation (ILO) estimates, nearly **34.49 per cent of India's employed population** works in the services sector.
- Share of service sector to **Gross Value Added (GVA) is about 61%** for India.
- In a challenging global environment, service sector is increasingly viewed as an instrument to create jobs, drive national growth and foster exchange of ideas, knowledge and technology.

Performance of Indian Service Sector:

- Despite playing a dominant role in Indian economy, the share of India's services sector in global services exports is miniscule at 3.3% highlighting the need for promoting this sector.
- **Healthcare Industry:** India's share is just $1 billion in the global Healthcare industry business of $100 billion.
- **Higher studies:** Out of the 50 lakh students travelling abroad for higher studies globally, only about 45,000 come to India.
- **Civil aviation:** India spends more than a billion dollars on maintenance in the civil aviation, most of which is outsourced to other countries.
- **Shipping industry:** India imports about $500 billion worth of goods every year and only a small fraction of this is on Indian carriers while, the global market of this sector is valued at $4 trillion.
- **Finance sector:** By 2022 financial services alone will be valued at $26.3 trillion and India's economy is currently at $2.8 trillion.

ADVANTAGE INDIA

India is Poised to be $5 trillion economy

Focus on infrastructure development

Large & Growing domestic market

Large competitive-priced skilled talent pool

Expertise acroos a spectrum of services

Fastest growing major economy in the world - 6th largest by nominal GDP and 3rd largest by PPP

1st rank globally in inward greenfield FDI inflows in 2016 and 8th rank in global services exports

Demonstrated capability to deliver high-quality, cost-effective solutions

Integrated tax structure

Access to technology

Embling business environment

Continuous improvement in ease of doing business

- **Tourism:** In the $5.4 trillion global tourism market India's share is only $234 billion. The country sees just 11 million foreign tourists every year which is miniscule.
- **Software:** Currently the global software product market is valued at USD 438 billion, with India being a net importer of software products. Of the total software business of USD 8.2 billion in the country, India's exports amount to just USD 2 billion.

Way Ahead:

- As India moves progressively towards becoming a knowledge-based economy, it becomes crucial for the country to focus on service sector.

BHARAT BOND EXCHANGE TRADED FUND

Recently, Cabinet approved launch of Bharat Bond Exchange Traded Fund.

About:

- It would be the **first corporate Bond ETF** in the country.
- The ETF will be a basket of bonds issued by Central Public Sector Enterprises **(CPSEs)**/ Central Public Sector Undertaking **(CPSU)** or any other Government organization Bonds (Initially, all AAA rated bonds).

📝 **DO YOU KNOW?**

- **AAA** is the highest possible **rating** that may be assigned to an issuer's **bonds** by any of the major credit **rating** agencies.
- **AAA-rated bonds** boast a high degree of creditworthiness, because their issuers are generally easily able meet their financial commitments and they consequently run lower risks of defaulting.

What is ETF?

- An ETF or exchange traded fund are **similar to mutual funds** and they invest in a basket of securities that mostly tracks a certain index.

- They can be **bought and sold only through the stock exchanges unlike** mutual funds.

- **In India, debt ETFs** must have at least eight issuers and no single issuer can account for a weight greater than 15%.

What is a Bond ETF?

- A bond ETF invests in a basket of bonds in the underlying index. It can invest in the government, corporate, or public sector unit bonds.

- A bond ETF is cheaper (having less expense ratio) than an actively-managed debt fund. For instance, Bharat Bond ETF will charge **0.0005%** only.
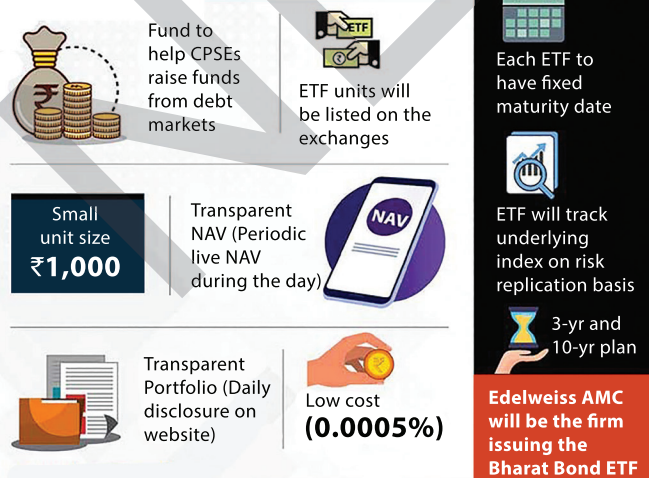
Benefits of Bharat Bond ETF for Investors:

- Provides **safety** (low risk as the bonds are issued by CPSEs and other Government owned entities), **liquidity** (tradability on exchange) and predictable **tax efficient returns** (target maturity structure).

- Provides **easy and low-cost access** to bond markets for retail investors (to invest in bonds with smaller amount as low as Rs. 1,000).

- **Increases participation** of retail investors who are currently not participating in bond markets due to liquidity and accessibility constraints.

- **Tax efficiency** compared to Bonds (Bond ETFs see lower tax on capital gains for investor).

BHARAT BOND ETF

Cabinet approves launch of India's first corporate bond ETF

FEATURES

Benefits of Bharat Bond ETF for CPSEs:

- Offers CPSEs, etc an **additional source** of meeting their borrowing requirements.

- **Expands** their **investor base** through retail and HNI participation which can increase demand for their bonds. Increased demand may reduce their cost of borrowing over a period of time.

- Bond ETFs trading on the exchange will help in **better price discovery** of the underlying bonds.

- Inculcates a **borrowing discipline** in the CPSEs (as a broad debt calendar has to be prepared).

Benefits of Bharat Bond ETF for Bond Markets:

- **Creates a yield curve** and a ladder of Bond ETFs with different maturities across calendar years.

- Expected to **create new eco-system** - Market Makers, index providers and awareness amongst investors.

- May eventually increase the size of bond ETFs in India leading to achieving key objectives at a larger scale - **deepening bond markets, enhancing retail participation and reducing borrowing costs**.

Concerns:

- The ETF **may not be liquid enough**.

- A **loss** may be incurred on account of this fluctuation of **one exits the fund** before maturity.

- The market price and Net Asset Value can fluctuate on account of liquidity or lack thereof, or interest rate movements.

CODE FOR RESPONSIBLE LENDING (CRL)

Recently, Former deputy governor of the Reserve Bank of India (RBI), H R Khan has been appointed as the chairman of committee of the CRL in micro-credit.

About:

- CRL was launched by Microfinance Institutions Network (MFIN) and Sa-Dhan, along with Finance Industry Development Council (FIDC).

- It is a **self-regulatory** step for the micro-credit industry making diverse entities like banks, NBFC-MFIs and NBFCs adhere to standards of customer protection.

- It aims to ensure uniform principles for customer-conduct in micro-credit.

- It aims at safeguarding the interests of low-income customers through enhancing transparency and compliance.

- It is focused on highlighting and advancing 'responsible lending' practices in microfinance.

- It has proposed to limit the loan size to Rs 1 lakh per micro borrower irrespective of the profile of lenders.
- CRL is the overall microfinance industry response to responsible lending to this sensitive customer segment.

What is Micro-credit?

- Microcredit is a common form of microfinance that involves an extremely small loan given to an individual to help them become self-employed or grow a small business.
- According to RBI, Micro Credit is the provision of thrift, credit and other financial services and products of very small amount to the poor in rural, semi-urban and urban areas for enabling them to raise their income levels and improve their living standards. It also defines microfinance customer as one that holds an annual household income of Rs 1 lakh in rural India and Rs 1.6 lakhs in urban India.
- In India, Micro-credit programmes are run primarily by NABARD in the field of agriculture and SIDBI in the field of Industry, Service and Business (ISB).

Sa-Dhan

- Sa-Dhan is the Association of Indian Community Development Finance Institutions.
- It is recognised by RBI as a self-regulatory organisations.
- It is empowered to monitor MFIs and ensure the lenders are in compliance with the rules.
- It encourages new and existing microfinance institutions through financing and capacity building.
- Sa-Dhan's mission is to build a strong demand system in the form of Community-based Development Financial Institutions (CBFIs).

MFIN:

- Microfinance Institutions Network (MFIN) was established in 2009 **post the recommendation of Y.H. Malegam** for a Self-Regulatory Organization(SRO) framework for MFIs to regulate the sector.
- It is an association of MFIs operating as non-banking financial companies (NBFCs).

Finance Industry Development Council (FIDC):

- FIDC is a representative Body of NBFCs into Assets and Loan Financing in India.
- It is an association of NBFCs for the micro-credit industry.
- It gives representation to small/medium and large NBFCs.

Way Ahead:

- With NBFC sector going through a challenging scenario for the last one year where banks, which are the major source of funding, have become risk-averse. CRL is a step in the right direction to restore the confidence in the Non-Bank lending community, as this will help in bringing better discipline and harmony among the Asset Financing, Loan Financing and Micro Financing NBFCs.

GOVERNMENT SCRAPS CONSUMER EXPENDITURE SURVEY (CES)

Recently, the Ministry of Statistics & Programme Implementation (MoSPI) has decided to dispose of the household Consumer Expenditure Survey of NSO.

About:

- The MoSPI has decided not to release the survey on household consumption expenditure, carried out in the **75th round** during July 2017-June 2018, citing data quality issues.
- This is the **first time** the govt. has scrapped an NSO survey of this scale since the erstwhile NSSO was established in 1950.
- There is also a proposal to set up a new committee which may suggest new instruments and periodicity for the survey.

What is All India household Consumer Expenditure Survey (CES)?

- Started in 1972, the CES is traditionally a **quinquennial** (recurring every five years) survey conducted by National Sample Survey Office (NSSO).
- It is designed to collect information regarding expenditure on consumption pattern of goods and services (food and non-food) of households across the country, both urban and rural.
- It generates the estimates of household Monthly Per Capita Consumer Expenditure (MPCE)
- It also highlights the distribution of households and persons over the MPCE classes.
- It helps in assessing living standards and growth trends across multiple strata.
- The government uses this dataset to estimate poverty and inequality in the country, apart from using it for changing the base year for gross domestic product (GDP).

Why was it Junked?

According to the now discarded report,

- MPCE has declined for the **first time since 1972-73.**
- Inflation-adjusted consumption expenditure in rural areas have declined by 8.8% over the six-year period,
- Urban households have reported a marginal 2% increase.
- The **government in its defense** has noted that a significant increase in the divergence in the levels in the consumption pattern. Also, the direction of the change when compared to the other administrative data sources like the actual production of goods and services have shown great variation.

- However, other macro-economic indicators including data from the **NSSO's Periodic Labour Force Survey (PLFS) too** have revealed a **decline in employment and stagnation in wage** levels.

National Statistical Office (NSO)

- NSO was **formed in 2019 after the merging** of the Central Statistical Office (CSO) and National Sample Survey Office (NSSO).
- It works under the Ministry of Statistics and Programme Implementation (MOSPI)
- It conducts an Annual Survey of Industries (ASI), etc.
- It also brings out the bi-annual journal titled "Sarvekshana"

Way Ahead:

- India being a subscriber to the International Monetary Fund's **Special Data Dissemination Standard (SDDS)**, is obliged to follow good practices including disseminating macroeconomic statistics to the public.

All about consumption

The Consumer Expenditure Surveys indicate pattern of consumption, level of living and well-being of households at the State and national levels which are used for planning and policy formulation by various government organisations

Food and non-food expenditure:
The chart shows % of food, non-food items in monthly per capita consumer expenditure (MPCE) –July, 2011-June 2012. Figures shows how data is captured, and must not be seen as current

Food items include:
Cereals and cereal substitutes | Pulses and their products | Milk and milk products | Edible oil | Egg, fish and meat | Vegetables | Fruits | Sugar, salt and spices | Beverages, refreshments, processed food

SHARE OF NON-FOOD ITEMS | SHARE OF FOOD ITEMS
SHARE OF FOOD ITEMS
SHARE OF NON-FOOD ITEMS

Non-food items include:
Paan, tobacco and intoxicant | Fuel and light | Clothing and footwear | Education | Medical | Conveyance | Consumer services ext. conveyance | Misc. goods, entertainment | Rent | Taxes and cesses | Durable goods

ALL-INDIA RURAL AND URBAN DISTRIBUTIONS OF MPCE (2011-12)

RURAL INDIA UPPER LIMIT (₹)   URBAN INDIA UPPER LIMIT (₹)

In rural India the poorest 59% spent a maximum of ₹ 616 month while the richest 596 spent almost ₹3,000. The gap was more pronounced in the urban regions with households in the 5th percentile group spending ₹8270 month and families in the 95th percentile spending over ₹6,000

URBAN INDIA UPPER LIMIT (₹)
RURAL INDIA UPPER LIMIT (₹)

0-5% 5-10% 10-20% 20-30% 30-40% 40-50% 50-60% 60-70% 70-80% 80-90% 90-95%

Different stories to tell
8.8% fall in rural expenditure in the 2017-18 survey (the govt. has withheld it; The Hindu has accessed it) from the inflation adjusted MPCE in 2011-12 in 2017-18
2% growth in urban spending in 2017-18

CHANGE IN RURAL EXPENDITURE
(IN %)
2011-12* 2017-18
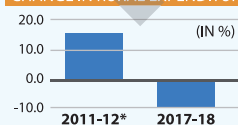
CHANGE IN URBAN EXPENDITURE
(IN %)
2011-12* 2017-18
*COMPARED TO INFLATION-ADJUSTED MPCE IN 2009-10
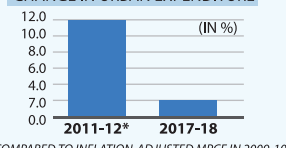
- There is need to improve transparency and independence of crucial institutions like NSO as, any delays or abrupt junking of adverse survey records not only risks greater scrutiny

of the credibility of the government data but also dampens public perception of government records.

MANUFACTURING PMI

Recently, PMI for manufacturing activity increased from a two-year low.

About:

- The **IHS Markit** India Manufacturing PMI recently rose to 51.2 from 50.6 (when it had fallen to a two-year low) driven by a modest increase in the growth of new orders and production.
- It however, highlights only a marginal improvement in the health of the manufacturing industry.

What is a PMI?

- PMI or a Purchasing Managers' Index (PMI) is an indicator of business activity both in the manufacturing and services sectors.
- It is compiled by IHS Markit from responses of the monthly questionnaires sent to purchasing managers in around 400 manufacturers.
- It is a survey-based measures that asks the respondents about changes in their perception of some key business variables from the month before.
- It is calculated separately for the manufacturing and services sectors and then a composite index is constructed.
- It is an indicator of the economic health and investor sentiments about the manufacturing sector (there is services PMI as well).
- It can be considered a true indicator of business activity as it is calculated every month, as against GDP data that is either quarterly or yearly.
- **For India,** the **PMI data is published by Japanese firm Nikkei but** compiled and constructed by Markit Economics (for the US, it is the ISM).

How to read the PMI?

- PMI is an indicator of the business activity that takes place in the month depending on the sector.
- PMI considers five indices, which contributes individual weightage to the final index.
- For Manufacturing PMI, the survey takes stock of New orders, Output, Employment, Suppliers' Delivery Times etc.
- A PMI **greater than 50 indicates an expansion** in the manufacturing and services sector.
- If **PMI less than 50, it indicates a contraction** in the manufacturing and services sector.

- **PMI at 50 indicates nil growth**, i.e. neither contraction nor expansion. While for Services PMI, the survey examines sales, employment, inventories and prices.

Why is PMI Important for an Economy?

- PMI is widely tracked by purchasing professionals, business decision-makers, analysts, investors and bond markets.
- Since the PMI is released at the start of the month, it acts as a good leading indicator of economic activity.
- It is a good indicator of industrial output, for which official statistics are released later.
- It helps Central banks to make decisions on interest rates.
- It is closely watched by investors as well as the bond markets as, it gives an indication of corporate earnings.
- A good reading enhances the attractiveness of an economy vis-a-vis another competing economy.
- It shows the investor sentiment in an economy's manufacturing sector.
- Since the same method is followed around the world to calculate PMI, it is used as a comparison of all world economies.
- PMI data presented is based on facts not opinions, therefore, it is considered as a true measure of the economy.

How PMI is different from IIP?

- The Index of Industrial Production (IIP) is compiled and published monthly by the Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation six weeks after the reference month ends.
- PMI is based on a survey conducted among purchasing executives in over 400 private companies, while IIP covers both private sector as well as PSUs.
- PMI is only a sentiment index while IIP is a volume-based production indicator.
- PMI covers both Manufacturing a well as Services while, **IIP covers only manufacturing** sector.

SMALL FINANCE BANKS (SFB)

> *Recently, Reserve Bank of India has released final guidelines for licensing of private sector SFBs.*

About:

- In an attempt to provide access to more deposits and boost profitability of Payment Banks, RBI has recently released the final guidelines for on-tap licensing of private sector SFBs.

What are Small Finance Banks?

- The concept of small finance banks was first recommended in the 2009 Report - A Hundred Small Steps - of the **Committee on Financial Sector Reforms** headed by **Dr. Raghu Ram Rajan.**

- Later, the Union **Budget 2014-2015 proposed** the creation of Small Finance Banks and Capital Small Finance Bank became the first SFB of India after getting approval **from RBI in 2017**.
- SFBs are private financial institutions intended to further the objectives of financial inclusion.
- They **can offer basic banking services**, such as accepting deposits and lending to un-served and underserved sections, including small businesses, small and marginal farmers, micro and small industries, and the unorganized sector.

Important Features:

- They are registered as a public limited company under the Companies Act, 2013.
- SFBs are required to have minimum paid-up capital of 100 crore **(now changed to ₹200 crore).**
- Adhere to all CRR, SLR norms as required by RBI
- They are required to extend **75 per cent** of its **Adjusted Net Bank Credit (ANBC)** to the priority sector lending **(PSL)** as prescribed by RBI.
- At least 50 per cent of its loan portfolio should constitute loans and advances of upto Rs. 25 lakh.
- They are required to maintain a **minimum capital adequacy ratio of 15%** of its risk weighted assets (RWA).

Who are eligible to start a new SFB?

- Resident individuals/professionals with **10 years of experience** in banking and finance;
- Companies and societies owned and controlled by residents.
- Existing Non-Banking Finance Companies (NBFCs), Micro Finance Institutions (MFIs), and Local Area Banks (LABs) that are owned and controlled by Indian residents.
- Besides these, **RBI has also allowed primary urban cooperative banks to convert** into SFBs, in its new guidelines, provided they comply with the on-tap licensing guidelines.

What are the Changes in the New Guidelines?

According to new RBI guidelines:

- **Payments banks may convert** to a small finance bank **after 5 years of business.**
- The promoter of a payments bank is eligible to set up an SFB, provided that both banks come under the **non-operating financial holding company (NOFHC)** structure.
- **Minimum paid-up capital** requirement for SFBs has been **increased from ₹100 crore to ₹200 crore.**
- The minimum paid-up voting equity capital / net worth requirement shall be ₹ 200 crores.
- SFBs should be listed within three years of reaching a net worth of ₹ 500 crore.
- SFBs will be given **scheduled bank status** immediately upon commencement of operations.

- SFBs will have **permission to open banking outlets** from the date of commencement of operations.
- Payment banks like Paytm, IndiaPost etc have recently expressed their interest in converting into SFBs.

GOING FURTHER AFIELD

While some services offered by payments banks and small finance banks will be similar, there are some key differences. Here is a look at what they will offer.

PAYMENTS BANK	SMALL FINANCE BANK
Can accept deposits, but only up to ₹1 lakh per individual customer	Allowed to take deposits of any amount
Can't lend in any form	Can lend but the focus will be on small lending
Can open small savings accounts	Can finance small business units, small and marginal farmers, micro and small industries and unorganised sector entities
Can provide remittance services	Can provide remittances as well as credit cards
Allowed to issue automated teller machine (ATM) or debit cards	Allowed to issue ATM or debit cards
Not allowed to issue credit cards	Has to ensure that 50% of loan portfolio constitutes advances of up to ₹25 lakh
Can distribute products such as mutual funds, insurance and third-party loans	Can distribute financial products such as mutual funds, insurance and pension

How this step will Benefit?

- Conversion of Payment Banks into SFBs are expected to **promote supply of credit** to small business units, micro and small industries.
- Small and marginal farmers and other unorganized sector entities are expected to benefit through **high technology-low cost operations of SFBs**.
- It will also help in promotion of financial inclusion primarily to unserved and underserved sections of the population.
- Licence as small finance banks will not only give Payment Banks access to more deposits but will also boost their profitability, which is at present under severe pressure.

Non-Operative Financial Holding Company (NOFHC)

The NOFHC are registered as a **non-deposit taking** non-banking financial company (NBFC) **with** the Department of Non-Banking Supervision (DNBS) of the RBI.

DRUG PRICE CONTROL ORDER, 2013

The government has for the first time invoked the Drug Price Control Order, 2013, (DPCO, 2013) to raise the prices of 21 formulations or medicines that are under price regulation to ensure their availability.

About:

- The raise in price would be a **one-time increase** of 50 per cent above the present ceiling prices.
- The drugs include widely used medicines, key antibiotics, anti-allergics, anti-malarial drugs, BCG vaccine and Vitamin C.

National Pharmaceutical Pricing Authority (NPPA):

- It is a government regulatory agency which performs the following functions
  - Controlling the prices of pharmaceutical drugs in India;
  - Enforce the Drugs Price Control Order (DPCO), 2013; and
  - Advising the Government of India in matters of drug policies and pricing.
  - To monitor the availability of drugs, identify shortages and to take remedial steps.
- **Parent agency:** Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers.
- It was established in 1997 by an executive order.

Drug Price Control Order (DPCO 2013):

- DPCO 2013 is an order issued by the Central Government having power under **section 3** of the **Essential Commodity Act, 1955** which enables it to fix the prices of essential bulk drugs and their formulations mentioned under the National List of Essential Medicines **(NLEM)**.
- The formulations which are included in NLEM i.e. first Schedule of the DPCO 2013 are known as **Scheduled Formulations**.

Drugs (Prices Control) Amendment Order, 2019

The Ministry of Chemicals and Fertilizers has recently released the Drugs (Prices Control) Amendment Order, 2019 on the basis of recommendations of NITI Aayog.

Key provisions:

- A drug maker who has brought in an innovative patented drug will be exempt from the price control regulations for 5 years from the date of marketing.
- Drugs for treating rare or "orphan" diseases too will be exempt from price control, with a view to encouraging their production.

National List of Essential Medicines (NLEM):

What is Essential Medicine?

- According to World Health Organization (WHO), Essential medicines are the medicines that **"satisfy the priority health care needs of the population"**. People should have access to these medicines at all times in sufficient amounts. The prices should be at generally affordable levels.

National List of Essential Medicines:

- NLEM is a list of medicines prepared by the **Ministry of Health and Family Welfare** based on **essentiality** and made part of the Drugs Price Control Orders (DPCO), 2013 (DPCO 2013) in the form of first Schedule of the DPCO 2013.

- NLEM is the basis for the **National Pharmaceutical Pricing Authority (NPPA)**, to revise the list of medicines that should come under government price control.

ECONOMIC CENSUS

The Seventh Economic Census is being conducted nationwide through Common Service Centers (CSC) and is expected to be completed by March 2020. This is the first time the census is being conducted digitally.

About:

- Economic census is the complete count of all establishments engaged in **non-agricultural** economic activities located within the geographical boundary of India.

- The data will be collected through **door to door** survey of each household and commercial establishment under the provisions of **Collection of Statistics Act 2008.**

- The economic census provides disaggregated information on various **operational** and **structural** variables of all establishments of the country.

- One of the main aims of the Economic Census is preparation of a **National Business Register** which can be linked with existing databases at the central and state government levels.

Economic Census History

- In **1977 CSO** conducted **First** economic census in collaboration with the **Directorate of Economics & Statistics (DES)** in the States/UTs.

- So far 6 censuses have been conducted in the years 1977, 1980, 1990, 1998, 2005, 2013.

- The economic census 1980 and 1990 were integrated with population census.

- The 6th edition of Economic Census was conducted in 2013.

7th Economic Census -2019

- The 7th Economic Census -2019 is being conducted by **MoSPI**.

- MoSPI has partnered with Common Service Centres for 7th Economic Census.

- An IT based digital platform for data capture, validation, report generation and dissemination will be used.

- **Significance:** It will be useful for assessing contribution of various sectors of economy, decentralized planning, research organisations and socio economic purposes.

INTERNATIONAL FINANCIAL SERVICES CENTERS AUTHORITY BILL, 2019 (IFSCAB)

The Union Cabinet has approved the IFSCA Bill, 2019 which aims to establish a unified authority for regulating all financial services in International Financial Services Centers (IFSCs).

About:

- An international financial services centre caters to customers outside the domestic economy, dealing with flows of finance, financial products and services across borders.

- Gujarat International Finance Tec-City Co. Ltd is being developed as the country's first IFSC.

- In India, IFSC has been **defined in SEZ Act, 2005.** As per the act:
  - The **Central Government may approve the setting up** of an International Financial Service Centre in a Special Economic Zone and may prescribe the requirements for setting up and operation of such centre.
  - The Central Government shall approve **only one International Financial Services Centre in a Special Economic Zone.**

- **Significance of IFSC:** Since India has **many restrictions on the financial sector**, such as **partial capital account convertibility, high SLR (statutory liquidity ratio) requirements and foreign investment restrictions**, an IFSC can serve as a testing ground for financial sector reforms before they are rolled out in the entire nation.

Need for an IFSC Authority:

- Currently, the banking, capital markets and insurance sectors in IFSC are regulated by **multiple regulators**, i.e. RBI, SEBI and IRDAI.

- The development of financial services and products in IFSCs would require **focused** and **dedicated regulatory interventions**.

- To provide a world class regulatory environment to financial market participants and to improve **ease of doing business**.

- To further development of IFSC in India in sync with the global best practices.

International Financial Services Centers Authority Bill, 2019:

- The Bill provides for the establishment of an Authority to develop and regulate the financial services market in the International Financial Services Centers in India.
  - **Composition:** IFSCAB will consist of nine members, appointed by the central government, including members from RBI, SEBI, IRDAI and PFRDA.

- The Bill seeks to **amend** 14 Acts, including the SEBI Act, the

IRDA Act and the PFRDA Act.

- All the laws of the land, including the **Prevention of Money Laundering Act**, would apply and would be audited by the **CVC** and the **CAG**.

- The Bill sets up an International Financial Services Centers Authority Fund.

Functions of the Authority:

- **To regulate** financial products, financial services, and financial institutions in an IFSC.

- Regulating any other financial products, financial services, or financial institutions in an IFSC, which may be notified by the central government, and recommending any other financial products, financial services, or financial institutions to the central government, which may be permitted in an IFSC.

FUNDS UNDER PM-KISAN TO BE TRANSFERRED ONLY TO AADHAAR-AUTHENTICATED BANK ACCOUNTS

> *Recently, the government has announced that funds under the Pradhan Mantri Kisan Samman Nidhi Yojana (PM-Kisan) will be transferred to only Aadhaar-authenticated bank accounts of eligible farmers from now onwards.*

About:

- Aadhaar was made optional for availing the first installment (December 2018 - March 2019) except for farmers of **Assam, Meghalaya and Jammu and Kashmir** who have been exempted till March 2020.

- **'Farmers corner'** has been provided in the PM-Kisan portal through which farmers can do their self-registration and also can know their payment status.

Pradhan Mantri KIsan SAmman Nidhi (PM-KISAN):

- **Objectives:** To augment the income of the Small and Marginal Farmers (SMFs).
  - It aims to **supplement the financial needs of the SMFs** in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income at the end of the each crop cycle.

- **Scheme:** A **direct payment of Rs. 6000 per year** will be transferred in three equal installments of Rs. 2000 each every four months into the Aadhar ceded bank accounts of eligible landholding SMFs families. The entire identification of the family rests with the state and Union Territory governments.

Benefits of PM-KISAN:

- **Crucial support:** The income support scheme is expected to help farmers living at the edge of subsistence while also giving them an **incentive to prosper**.

- **Boost productivity:** An assured income can also **encourage farmers to boost productivity and help them earn more**. The cash received, if invested in agriculture for higher returns, will be a support to the credit and insurance systems and promote agricultural growth in the country.

- **Enterprise upliftment:** With the support of a minimum income, **youths from farm households may be inspired to start enterprises** or take time out for higher training or even look for higher paying non-farm jobs.

- **Debt Protection:** This would also protect them from falling in the clutches of moneylenders for meeting such expenses and ensure their continuance in the farming activities.

- **Achieve SDG:** Accelerating progress towards Sustainable Development Goals (SDGs).

Criticism of PM- KISAN:

- It ignores tenant farmers and landless labourers.

- Even farmers holding two hectares of land could experience poverty if they are saddled with poor quality land, water shortage and unremunerative prices for their produce.

- In the **absence of updated land records**, where in some states they have not been updated since the 1930s.

Way Forward:

- **Better targeted subsidies:** PM-KISAN can be used to transform fertilizer and electricity subsidies into a size-independent cash transfer, which will not only make them progressive, but leave the small farmer better off than before. It will also improve environmental sustainability by spurring growth of reduced-chemical agriculture.

- **Temporary fix:** The Government cannot continue to attempt temporary fixes to the deep problems afflicting the agricultural sector by providing basic income to every farmer in the nation.

- **Collaborative federalism:** Any good solution must involve the Central and State governments working together.

- **Structural reforms** in the agriculture sector are important.

- **Revise support amount:** The cash transfer under this scheme, can be revised based on the rate of inflation, use of inputs and their respective prices.

- The PM-KISAN shows a potential to break the cycle of intergenerational poverty and low income of farmers through investment in modern technology.

INDO-PACIFIC OCEANS INITIATIVE

Indian Prime Minister proposed an "Indo-Pacific Oceans Initiative" for safe, secure and stable maritime domain.

About:

- The proposal was articulated during the **East Asia summit.**
- **Aim:** To conserve and sustainably use the maritime domain, and to make meaningful efforts to create a safe, secure and stable maritime domain.
- **Focus areas include** creating partnerships among interested states in Enhancing maritime security; Sustainably using marine resources; Disaster prevention & management, trade, and maritime transport.
- **Need:** Globalization, trade dependence, the seamless connectivity of the maritime domain and the changing nature of the maritime threat becoming more transnational in nature has blurred physical boundaries and raised awareness of the importance of ensuring secure seas for the unhindered movement of trade and energy.

East Asia Summit 2019

- The 14th East Asia Summit (EAS) was held in Bangkok, **Thailand.**
- The East Asia Summit (EAS) is a meeting of **18** regional leaders for strategic dialogue and cooperation on the key political, security, and economic challenges facing the Indo-Pacific region.
  - The EAS comprises the ten member states of the Association of Southeast Asian Nations (ASEAN) – Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam – as well as **Australia, China, Japan, India, New Zealand, the Republic of Korea, Russia and the United States.**
- The East Asia Summit is the premier forum in the Asia-Pacific region to deal with issues relating security and defence.

Why is India so Focused towards East?

- **China:** Rise of China and the need for India to counterbalance the former's aggressive posturing in the region, as well as break its monopoly as a line of credit and major economic partner.

- **ASEAN:** Institutions and institutional arrangements such as ASEAN are facing the strain of cooperation in an increasingly fraught context.
- **India:** India must leverage its own growth in capability as an economic, foreign policy and strategic actor in the region.

Why an Indo Pacific turn for India?

- **To secure the Indian ocean** via a series of military and non-military measures.
  - Involves building awareness of operations and movements in the region ('maritime domain awareness').
  - Expanding the reach and frequency of naval operations, building infrastructure and logistical capacities.
  - Strengthening regional institutions in order to build trust and address regional problems.
- **To integrate with Southeast Asia** beyond diplomatic contact and military posturing.
  - It involves a genuine attempt to build on erstwhile deep cultural and economic connections in order to foster a closer relationship.
- **Deepen partnerships with balancing powers** against China chiefly the **QUAD.**
  - Such balancers include the **'quad'** (India, Japan, Australia and the United States).
  - The group, is seen as a regional counter-weight to China.
  - With growing concerns in all four quad capitals about Chinese foreign policy and regional influence, the group has found renewed relevance.
  - India has been hesitant about the Quad, in part because it does not want to isolate China and because it has had a history of staying clear of security alliances.
  - Members of the Quad, **barring Australia**, are currently engaged in the annual **Malabar exercises.**

QATARI PM ATTENDS GULF SUMMIT

> *Recently Saudi King welcomed Qatar back to the Gulf Cooperation council. The summit was organised mainly to end the regional dispute.*

About:

- With a reception from Saudi King, Qatar was **welcomed back to the Gulf Cooperation Council (GCC)** at a summit in Riyadh. Qatar's Prime Minister attended summit in Saudi Arabia in the thaw to end the regional dispute.
- Saudi Arabia, UAE and non GCC member Egypt imposed political and economic boycott of Qatar over the allegations Doha backed Terrorism.
- The summit could be a step forward in resolving the long pending dispute between Qatar and Arab countries.

Historical Context:

- Qatar had been cut off by some of its neighbours over its alleged support for terrorism. Qatar acknowledges that it has provided assistance to some, such as the Muslim Brotherhood.
- The other key issue is Qatar's relations with Iran, with which it shares the world's largest gas field.

Efforts Made by Kuwait and United States:

Kuwait and the United States have tried to mediate the rift which shattered the GCC alliance and undermined Washington's efforts to form a united front against Iran.

Way Forward:

- GCC has to show a positive gesture towards Qatar to ensure regional stability. It will also lead to reduction of US-Iran tensions which are growing day by day.

MEA TO HOLD 6TH INDIAN OCEAN DIALOGUE

> *Recently, the Ministry of External Affairs (MEA) hosted the 6th edition of Indian Ocean Dialogue and Delhi Dialogue XI.*

About:

- For the first time, the two Track 1.5 dialogues—which are key elements of the Indian Ocean Rim Association (IORA) and India-ASEAN, was held consecutively and on similar themes.
  - The theme of the 6th Indian Ocean Dialogue (IOD) is **"Indo-Pacific: Re-imagining the Indian Ocean through an Expanded Geography".**
  - The theme for this year's Delhi Dialogue is **"Advancing Partnership in Indo-Pacific".** It is being organized with the assistance of the Research and Information System (RIS) for Developing Countries.

- **Objective:** The dialogue aims to built an inclusive approach for a cooperative, free and rules based Indo-Pacific" region.
- **Indian Ocean Rim Academic Group:** MEA will also host 6th Indian Ocean Rim Academic Group (IORAG) meeting, which is **a Track-II mechanism** with an advisory and catalytic role regarding policy-making among IORA members.

Indian Ocean Rim Association

- IORA formerly known as Indian Ocean Rim Initiative and Indian Ocean Rim Association for regional cooperation is a dynamic inter-governmental organisation aimed at strengthening regional cooperation and sustainable development within the Indian ocean region through its 22 member states and 9 dialogue partners.
- **Track 1.5 Diplomacy:** It is used by to define a solution where official and non-official actors cooperate in conflict resolution.
- **Track 2 Diplomacy:** Track 2 diplomacy or backchannel diplomacy involves non officials, academics, free-thinking bureaucrats and public intellectuals to find common ground that official negotiators can't.

INDIA RANKS 12TH AMONG 61 NATIONS IN THE 2019 GLOBAL DIPLOMACY INDEX

> *The Global Diplomacy Index, released by Lowy Institute ranks India 12th among 61 nations.*

About:

- **Publishing agency:** Global Diplomacy Index is released by a Sydney-based international policy think tank Lowy Institute.
- **Objective:** It assesses diplomatic networks of 61 G20, OECD and Asian countries and territories to.
  - Highlight gaps and concentrations in diplomatic networks
  - Indicate strengths and weaknesses in geographic coverage and geopolitical reach.

What are some Key Highlights of the Index?

- China has world's largest diplomatic network. With 276 embassies and consulates worldwide, it overtook the US. The next three spots are occupied by France, Japan and Russia
  - Beijing's diplomatic push is aided by its Belt and Road Initiative (BRI) – an intercontinental connectivity project aimed at building trading corridors connecting China.
- **India specific:** With 123 embassies and high commissions and 54 consulates globally, India ranks
  - 12th among 61 nations.
  - 11th among G20 countries.
  - 4th among BRICS countries (above South Africa but below China, Russia and Brazil).

What is Diplomacy?

- **Definition:** Diplomacy is an art and practice of conducting negotiations between representatives of states.
  - It is an area of specialty in International Relations that focuses on the study of inter-governmental relationships aimed to advance national interests without being confrontational between nations.

9 Tracks of Diplomacy

- **Track 1:** Government or Peacemaking through Diplomacy. Here, formal negotiations between nations are conducted by professional diplomats.
  - **Track 1.5:** It is used to define a situation, where official and non-official actors cooperate in conflict resolution.
- **Track 2:** Nongovernment/Professional or Peacemaking through Conflict Resolution. Here, non-state actors analyze, prevent, resolve, and manage international conflicts.
- **Track 3:** Business or Peacemaking through Commerce.
- **Track 4:** Private Citizen or Peacemaking through Personal Involvement. Here, peace and development activities are carried through citizen diplomacy, exchange programs, private voluntary organizations and special-interest groups.
- **Track 5:** Research, Training and Education or peacemaking through Learning. This track includes global or cross-cultural studies, world order studies, conflict management and resolution.
- **Track 6:** Activism or Peacemaking through Advocacy. This track covers environmental activism and issues like disarmament, human rights, social and economic justice etc.
- **Track 7:** Religion or Peacemaking through faith in action. It examines the beliefs and actions of spiritual and religious communities and morality-based movements such as nonviolence.
- **Track 8:** Funding or Peacemaking through Providing Resources. This refers to the funding community and philanthropists that provides financial support for activities undertaken by other tracks.
- **Track 9:** Communications and Media or Peacemaking through Information. This shows how public opinion gets shaped and expressed by the media-print and electronic systems.

11TH BRICS SUMMIT AT BRASILIA

The 11th summit of BRICS was recently held in Brasilia.

About:

- **Origin of BRICS:** In 2001, Jim O'Neill, then chairman of Goldman Sachs Asset Management, coined the term 'BRIC' to describe the four emerging economies of Brazil, Russia, India, and China.
- BRICS now brings together five economies accounting for **42% of the world's population, 23% of the global GDP and an around 17% share of world trade.**
- The five BRICS countries are also members of G-20.

What happened at the 11th BRICS Summit?

- India had taken the lead in galvanising BRICS to take a strong stand against terrorism.
- **Reforms in global organizations:** Countries agreed to strengthen and reform the United Nations and other multilateral organisations, including the WTO, to address the significant challenges being faced by the developing countries.
- The leaders reaffirmed their commitment to a strong, quota-based and adequately resourced International Monetary Fund (IMF) at the centre of the global financial safety net.

INDIA WILL HOST 19TH SCO COUNCIL

India will host the 19th Council of Heads of Government of the Shanghai Cooperation Organisation in 2020.

About:

- SCO is a **China-led** eight-member economic and security bloc, in which India and Pakistan were admitted as full members in 2017.
- Its founding members included **China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.**
- SCO has 40% of the world's population, an aggregate GDP of more than $18 trillion.

What are major Indian Interests to join SCO?

- **Counter Terrorism:** At SCO's **RATS**, fight against terrorism, extremism, drug trafficking and organized crime among others is the focus.
- **Pakistan:** India participated in **SCO's counter-terror** military exercise in 2018 which included troops from Pakistan. SCO is a major avenue to collaborate with Pakistan on key matters.
- **Afghanistan:** Importance of forums like SCO-Afghanistan Contact Group and the Moscow format in the efforts to stabilise Afghanistan.
- **Energy:** With the help of SCO membership, India is likely to get more access to vital gas and oil contracts in Central Asia.
- **Central Asia:** India proposed setting up of the 'India-Central Asia Development Group' during the meeting of the India–Central Asia Dialogue, which for the first time saw attendance by foreign ministers of all the five Central Asian states alongside the Indian EAM.

- **Balance of Power:** The mutual cooperation regarding security, economy and culture between Asian countries challenges the economically powerful countries of the world.

What are India's Challenges vis a vis SCO?

- **Diplomacy:** Growing closeness of Russia and China, even as India has promoted better relations with the US.
- **Bilateral relations:** The bilateral relations between India China and India Pakistan could affect the grouping as a whole to the extent of turning it dysfunctional.
- **Connectivity:** The lack of connectivity has also hampered development of energy ties between the hydrocarbon-rich region and India.
- **Trade:** India's bilateral trade with Central Asia stands at about $2 billion and with Russia about $10 billion in 2017.
  - China's trade with Russia has crossed $100 billion in 2018 while the bilateral figures for Central Asia stands at over $50 billion.
- **Other groupings:** Proliferation of other regional undertakings — Eurasian Economic Union (EAEU), BRI, Greater Eurasian Partnership, Collective Security Treaty Organization (CSTO)— will pose a challenge for SCO.

GLOBAL REFUGEE FORUM HELD AT GENEVA

Recently, the first Global Refugee forum held at Palais des Nations, Geneva Switzerland.

About:

- A refugee is someone who has been forced to flee his or her country because of persecution, war, or violence. A refugee has fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group.

What is the Global Compact on Refugees?

- **International solidarity with refugees:** The global compact represents the political will and ambition of the international community as a whole for strengthened cooperation and solidarity with refugees and affected host countries.
- **First Global Refugee Forum:** One year after the affirmation of the Global Compact on Refugees, the first Global Refugee Forum is building momentum towards achieving the objectives of new commitment and strengthens the collective response to refugee situations.
  - It is a deal for a stronger, fairer response to large refugee movements and situations of prolonged displacements.
  - It also aims to help refugees become more self-reliant so that they can contribute more to their own future and to that of their host communities.

- The global compact on refugees aims to strengthen the international response to large movements of refugees.
- The four key objectives of 'global compact on refugees' are to:
  - Ease the pressures on host countries;
  - Enhance refugee self-reliance;
  - Expand access to third-country solutions;
  - Support conditions in countries of origin for return in safety and dignity.

Analysis of the Refugee Problem:

- The refugee problem is a problem of individuals, but it also manifests itself in various forms of societal, governmental and international levels.
  - It is a humanitarian and moral issue, a development issue and to a growing extent also an environmental and natural resources issue.
- Roughly 60 percent of the world's 22 million refugees and 80 percent of the world's internally displaced population reside in cities rather than in camps.

Why has the scale of Refugees Grown so high?

- **Persecution:** The most common reason people become refugees are persecution which can take on many forms: religious, national, social, racial, or political.
- **War:** Most of history's refugees have been the direct or indirect product of war.
- **Gender:** It is widely documented that LGBTI individuals are the targets of killings, sexual and gender-based violence, physical attacks, torture, arbitrary detention, accusations of immoral or deviant behaviour, denial of the rights to assembly, expression and information, and discrimination in employment, health and education in all regions around the world.
- **Hunger:** It is also one of the major reasons of refugee problem. They are facing extreme drought, and many of these individuals are becoming refugees, forced from their homelands in search of stable food sources.
- **Disasters:** Natural disaster can also force people to seek refuge in other countries. Such disasters – floods, earthquakes, hurricanes, mudslides – are increasing in frequency and intensity.
- **Climate Change:** Displacement caused by the slow-onset effects of climate change is largely internal as well.
  - Through acceleration of drought, desertification, the salinisation of ground water and soil, and rising sea levels, climate change, too, can contribute to the displacement of people across international frontiers.
- **Deprivation:** Other human-made calamities, such as severe socio-economic deprivation, can also cause people to flee across borders. **While some may be escaping persecution, most leave because they lack any meaningful option to remain.**

What is the Worldwide Impact of the Refugee Crisis?

- **Economic:** Refugees compete with the local citizens for scarce resources such as land, water, housing, food and medical services.
  - Their presence leads to more substantial demands on natural resources, education and health facilities, energy, transportation, social services and employment.
  - They may cause inflationary pressures on prices and depress wages.
  - Likewise, increased demand for food and other commodities can lead to price rises in the market which will stimulate local economic activity, although, again, not benefiting the poorest.
  - The economic impact of refugees on host areas, however, is not necessarily negative. An economic stimulus may be generated by the presence of refugees and can lead to the opening and development of the host regions.
  - The presence of refugees also contributes to the creation of employment benefiting the local population.
- **Local Ecology and Infrastructure:** The spontaneous movement and displacement of large numbers of people may have significant impacts on the environment.
  - Arriving in an alien situation, refugees face hunger, fatigue, humiliation and grief.
  - Their first concern is to look after themselves, most often to find food and shelter.
  - Trees are felled to provide support for rudimentary shelters. Dead wood is collected to build a fire for warmth and as fuel for cooking.
  - With only a few families involved, the environmental impacts are unlikely to be too serious or long-lasting. With thousands of desperate people, however, the results can be disastrous for the environment. What is bad for the environment is ultimately bad for human welfare.
- **Socio-Cultural:** If refugees are from the same cultural and linguistic group as the local population, there is often identification with and sympathy for their situation.
  - Different ethnicity, however, can be a basis for problems. Traditional animosities may exist between groups. Even if it is not the case, failures in communication and understanding caused by language and/or culture can form serious barriers.
  - In some cases, the presence of one ethnic group of refugees may affect ethnic balances within the local population and exacerbate conflicts.
- **Political:** Local government and administrations, including law enforcement and the judiciary, may face additional pressures upon hosting refugee populations, even if they receive assistance from the UNHCR and other agencies.

- In addition to trying to coordinate different actors and a response, they are also under pressure from host communities to maintain security and stability.
- **Security:** The security implications of hosting refugees are the concerns raised most frequently by host states.
  - Refugees have the potential to destabilize the countries that take them in.
  - This may come in the form of political activists seeking to use the host country as a base for mobilizing and recruiting insurgents.
  - Host countries can also be vehicles of spill over violence, if those arriving bring weapons or militant ideologies with them, or possibly even harbour fighters masquerading as refugees.

United Nations High Commissioner for Refugees (UNHCR)

It is a global organisation dedicated to saving lives and protecting rights and building a better future for refugees, forcibly displaced communities and stateless people.

Way Forward:

- **Safe Routes:** Opening up safe routes to sanctuary for refugees is one important solution. That means allowing people to reunite with their relatives, and giving refugees visas so they don't have to spend their life savings and risk drowning to reach safety.
- **Resettlement:** Refugees should be resettled. Resettlement is a vital solution for the most vulnerable refugees including torture survivors and people with serious medical problems.
- **Prevent deaths:** World leaders also need to put saving lives first. No one should have to die crossing a border. Thousands of people fleeing persecution in Myanmar suffered for weeks on board boats.
- **Humane laws:** Whether refugees travel by land or by sea, people fleeing persecution or wars should be allowed to cross borders, with or without travel documents.
- Pushing people back and putting up massive fences only forces them to take more dangerous routes to safety.
- **Prosecute traffickers:** All countries should investigate and prosecute trafficking gangs who exploit refugees and migrants.
  - Survivors whom Amnesty met in Southeast Asia said traffickers killed people on board boats when their families couldn't pay ransoms.
- **Combat Xenophobia:** Governments also need to stop blaming refugees and migrants for economic and social problems, and instead combat all kinds of xenophobia and racial discrimination.

■■■■

INDIA CHINA JOINT MILITARY EXERCISE HAND-IN-HAND 2019 CONDUCTED IN MEGHALAYA

The Eighth Edition of India China joint military training exercise 'Hand-in-Hand-2019' was conducted at Umroi, Meghalaya.

About:

- Hand-in-Hand exercise is one of the **important confidence-building measures** between India and China armies. First, such exercise was held at Kunming (China) in 2007.
- **Theme - 2019:** Counter-terrorism under United Nations mandate.
- Two tactical exercises are scheduled during training:
  - One on counter-terrorism scenario and
  - Other on Humanitarian and Disaster Relief (HADR) operations.
- **Aim:**
  - Practice joint planning and conduct of counter-terror drills in semi-urban terrains.
  - Focus on training various lectures and operations associated with counter-terrorist handling and firing with each other's weapons.
  - Conduct special heliborne operations and study case studies of such operations.
    - Special Heliborne Operations provides the necessary momentum to surprise the enemy and multiply the chances of success of the overall plan at a higher plan.
- **Significance:** It is good for fostering ties and reducing tension between two armies, arising from differences in perception about the boundaries. It sends a strong signal to the world that both India and China understand the emerging threat of terrorism and stand shoulder to shoulder in countering this menace.

INDIA NEPAL PARTICIPATE IN JOINT MILITARY EXERCISE 'SURYA KIRAN – XIV'

Joint military exercise 'SURYA KIRAN – XIV' conducted between India and Nepal at Rupendehi district of Nepal.

About:

- Exercise SURYA KIRAN is an annual event, which is conducted alternatively in Nepal and India.
- **Aim:** To conduct a battalion-level combined training programme between Nepalese and Indian Army personnel

- To exchange theoretical, practical and special experiences with each other.
- To increase interoperability in jungle warfare and counter terrorist operations in mountainous terrains.
- Humanitarian assistance and disaster relief.
- Medical and environmental conservation including aviation aspects.
- **Significance:**
  - It is an important exercise in terms of the security challenges faced by both the nations in the realm of changing facets of global terrorism. It comes amid China's attempt to increase its influence in the region.
  - It enhances the level of defence cooperation, which will further foster the bilateral relations between two nations.

WHATSAPP LIKE APP FOR GOVERNMENT EMPLOYEES AND ORGANISATIONS

Government plans Government Instant Messaging System (GIMS), a WhatsApp like messaging app for government employees.

About:

- GIMS is an Indian equivalent of popular messaging platforms, such as WhatsApp and Telegram and is being packaged for employees of Central and state government departments and organisations for secure intra and inter organisation communications.
- **Pilot:** The platform is in the pilot testing stage across some states including Odisha (in the finance department) and in the Indian Navy.
- **Designer:** It is designed and developed by the Kerala unit of National Informatics Centre (NIC).
- **Indigenous:** It is being touted as a safer bet as the platform has been developed in India, the server hosting it is installed within the country and the information stored would be in government-based cloud — NIC-operated data centres that are only meant for captive use by the government and its departments.
- **Secure:** Like WhatsApp, GIMS employs end-to-end encryption for one-to-one messaging.
- A GIMS Portal is also being simultaneously developed for administration and monitoring of the platform. The platform is adaptable to both central and state government organisations, with an iOS version of GIMS released.

- The app has most of the features that WhatsApp has, can be downloaded on iOS and Android devices and offers end-to-encryption of messages as well.
- Besides one-to-one messaging and group messaging, there are specific provisions in GIMS for documents and media sharing in keeping with the hierarchies in the govt. system.
- Currently, Facebook-owned WhatsApp has been the default instant messaging platform among a majority of government departments and organisations. But tax department officers and those with enforcement agencies are reported to be more inclined to use Telegram and Signal.
- The launch comes amid the recent controversy over the WhatsApp breach in which some Indian users' mobile devices were targeted through a spyware called **Pegasus**. According to WhatsApp, the Pegasus spyware was developed by Israel-based NSO Group and it attempted to breach mobile phones of a possible 1,400 users globally, including 121 from India.

INDIA AND RUSSIA CONDUCT THE SECOND EDITION OF THE TRI-SERVICES EXERCISE INDRA

India and Russia conduct the second edition of the tri-services exercise INDRA 2019 simultaneously at Babina (near Jhansi), Goa and Pune.

About:
- **Background:** INDRA began as a bilateral naval exercise between the Indian and the Russian navies in 2003
  - It has now assumed a **tri-service** (Army, Air Force and Navy) scope with corresponding maturity and gradual increase in complexity and level of participation.
  - First joint Tri Services Exercise was conducted in 2017.
- **Aim:** Joint training of troops in counter terrorism operations under the United Nations mandate.
- **Highlights:**
  - In this exercise of ten days duration, contingents of both countries shared their expertise and professional experience. It focused on two the key areas of the **'espirit-de-corps'** and **'goodwill'**.
  - It consisted of a five-day training phase based on comprehensive training curriculum.
  - Tactical operations and drills such as cordon house intervention, handling and neutralization of Improvised Explosive Devices, prevention of arms smuggling through the sea route and anti-piracy measures were practiced. It was followed by a 72-hour validation exercise.
- **Significance:** It strengthens mutual confidence and interoperability between the armed forces of both countries. This security cooperation reinforces the long-standing bond of friendship between India and Russia.

INDIAN NAVY WILL HOST NAVAL EXERCISE MILAN 2020 AT VISAKHAPATNAM

Indian Navy will host Naval exercise Milan 2020 first time on mainland at Visakhapatnam.

About:
- MILAN is a series of biennial multilateral naval exercise, which commenced in 1995, was conducted at Andaman and Nicobar Command (ANC) until last year, will be conducted for the **first time** on the mainland at Eastern Naval Command (ENC) with increased scope and complexity.
- **Participation:** It will witness participation of 41 countries from South Asia, Southeast Asia, Africa and Europe. Notably, China has not been invited.
- **Aim:** It is aimed to enhance professional interaction between friendly foreign navies and learn from each other's strengths and best practices in the maritime domain. Government will pursue cooperation initiatives with friendly foreign countries including in Indian Ocean Region, through structured interactions like Staff Talks, Empowered Steering Group.
- **Areas of cooperation** includes capacity building, marine domain awareness, training, hydrography, technical assistance and operational exercise.

VIRTUAL POLICE STATION OPENED IN ANDHRA PRADESH AND RAJASTHAN

Virtual Police Station opened in Andhra Pradesh and Rajasthan to empower the public and ease the process of reporting grievances.

Rajasthan VPS:
- **About:** It is a **training tool** for the police and **empowerment tool for the public.**
- **Partners: Commonwealth Human Rights Initiative (CHRI)** has developed the Virtual Police Station (VPS) in cooperation with Rajasthan Police.
- **Uses:** VPS allows police, civil society and the public to enter a computerized police station to explore each room and learn the many processes and procedures that are performed daily.
  - This multi-language program works both online and offline, is completely integrated to social media, and has been called the **"next generation of police training"**.
- The rooms that can be explored in the program include the Station Writer's Room, Lock Up, Case Property Room, SHO Office and more.

Benefits*:*
- Many youth have been falling prey to **cyber fraudsters**. Girls are falling prey to different forms of crimes, and are not approaching the police due to social stigma.
- This is **another friendly policing initiative** which brings students closer to the police and make it easy for students to report their grievances. They can also send their complaints through an email.
- Students can use the facility to file their complaints which will be forwarded to police officials concerned after scrutiny by the control room. The system also has an **inbuilt complaint monitoring** and action-taken mechanism for **accountability and transparency**.
- After a complaint is filed, the police station concerned will take up the issue and initiate probe.
- Facility will initially be **open only to the students**.
- Replicating the model across other areas and institutions can reduce the gaps between the police and civil society.

HOME MINISTRY SENT ALERT TO STATES ABOUT AN ANDROID BUG

> *Union Home Ministry has sent an alert to all States warning them about the vulnerability of the Android operating system to a bug called 'StrandHogg'.*

About:
- The bug **StrandHogg**, allows cybercriminals to listen to microphone, steal login credentials, take photos using camera, read SMS and even access photos.
- The vulnerability in Android devices has now caught the eye of the cybersecurity wing of Ministry of Home Affairs.
  - Threat Analytical Unit of Indian Cyber Crime Coordination Centre has sent an alert to all states and police departments.
- Lookout has already identified 36 malicious apps including the notorious **BankBot banking trojan** that are exploiting the vulnerability.
- Several banks in the Czech Republic had reported **money disappearing** from customer accounts.

How does StrandHogg target Android Devices?
- **Weakness in the multi-tasking system** of Android OS called **'taskAffinity'**. It allows apps including malicious ones to freely **assume identity of another task** in the multitasking system.
- It allows the malicious activity to hijack the target's task, so the next time user opens the target app, the hijacked tasks will open up instead of the original tasks.
- While all versions of Android, including Android 10, are vulnerable to this bug, it may not be apparent to the affected

users that malware applications are already on board their device.
- During this interception, the malicious app will seek permission to access the device's camera, microphone, messages, GPS and storage. If the user grants these permissions, the malicious app gains access to these components.
- The malicious apps exploiting the vulnerability did not come directly through Google Play Store. Instead they were installed through dropper apps distributed on Google Play. **Dropper apps** either have or pretend to have the functionality of popular apps so it can bypass Google Play Protect and install additional apps to a device that can be malicious, or steal data.
- These malware can then potentially listen to their conversations, access photo album, read/send messages, make calls, record conversations and get login credentials to various accounts.

HARYANA POLICE ADOPT A UNIQUE BARCODING SOFTWARE FOR FORENSIC EVIDENCE MANAGEMENT

> *Haryana Police adopt Trakea software to prevent tampering of forensic reports during investigations.*

About:
- **Prevents Tampering:** Trakea is a software to ensure that thousands of forensic reports that form the backbone of the criminal investigation system and subsequent trials in the courts of law, are not tampered with. The samples are bar coded for real-time tracking, reducing case pendency.
- **Information secrecy:** It helps in coping with the problem of leakage of sensitive samples or crime exhibits forwarded to the Forensic Science Laboratories for examination.
- **Transparency:** Software will ensure **transparency** and **zero interference** of any outside agency or person.

How does the Traditional System Work?
- The conventional practice all over the country is to label the crime exhibits (samples/parcels) with complete details, including the case FIR number; the police station; and the names and addresses of the victim, accused, medical officers, etc.
  - With these details available, the crime exhibits can be easily traced and tracked by virtually anyone.
- The crime exhibits could include DNA samples, documents, and reports of ballistics examinations, lie-detection, etc.
  - From the time the sample is collected to the time when forensic experts draw their final conclusion, there are

multiple stages where the accused can use their influence to tamper with the sample in order to get a favourable forensic report.

- **Trakea** ensures foolproof security of the samples and the forensic analysis reports, and is different from these traditional methods.

How does the Software Work?

- Forensic evidence collected by the police from the crime spot will have the **bar code** instead of FIR details.
- System includes features of **two-stage barcoding** to maintain the secrecy of the samples, sent along with a strong, unbroken biometrically authenticated chain of custody trial.
- Due to this unique barcoding, only the authorized investigating officers and forensic science experts shall be able to track the crime exhibits and scientific examination reports, reducing the chances of tampering/leakage of the report at any stage.
- The **selection of forensic teams** is also done **randomly** through this software.
- The software will also connect the regional forensic labs with police stations, crime teams and hospitals. can also be accessed by the **judiciary** during the trial of a case significantly **cutting down on delays**.

INDIA CONDUCTED TRIAL OF THE INDIGENOUS PRITHVI-II MISSILE OFF THE ODISHA COAST

India conducted a night trial of its indigenously developed, nuclear-capable surface-to-surface Prithvi-II missile off Odisha coast.

Prithvi Missile:

- **First under IGMDP:** Prithvi is India's first ballistic missile developed by Defence Research and Development Organisation (DRDO) **under the Integrated Guided Missile Development Program (IGMDP).**
- Prithvi Air defence can tackle incoming threats at ranges 80-120 km (Exo-Atmospheric interception).

Prithvi Variants:

- Under Prithvi missile project three variants for use by the Indian Army, Indian Air Force and the Indian Navy are developed.

Prithvi-I Class:

- It is a single-stage liquid-fuelled, surface-to-surface ballistic missile having a maximum warhead mounting capability of 1,000 kg with a range of 150 km.

- It has an accuracy of 10–50 m and can be launched from transporter erector launchers.
- It has been in army service since 1994.

What is Ballistic Missile?

It is a rocket-propelled self-guided strategic-weapons system that follows a ballistic trajectory to deliver a payload from its launch site to a predetermined target. It can carry conventional high explosives as well as chemical, biological, or nuclear munitions. They can be launched from aircraft, ships, and submarines in addition to land-based silos and mobile platforms.

What is Integrated Guided Missile Development Program (IGMDP)?

Government of India launched the IGMDP in **1983** to achieve self-sufficiency in the development and production of wide range of missiles. Under IGMDP **Prithvi, Akash, Trishul, Nag and a Technology Demonstrator Agni Missile (remember PATNA)** are developed.

Prithvi-II Class:

- It is single-stage liquid-fuelled missile having a maximum warhead mounting capability of 500-1000 kg with an extended range of 250 km.
- It can carry both conventional as well as nuclear warhead. It is powered by liquid propulsion twin engines.
- It is currently in Air Force service.
- In its recent trial, it is launched with an extended range of 350 km and improved navigation due to an inertial navigation system.

Prithvi-III Class:

- It is a two-stage (first stage is solid fuelled and second stage is liquid-fuelled) surface-to-surface missile.
- It can carry a 1,000 kg warhead to a distance of 350 km and a 500 kg warhead to a distance of 600 km and a 250 kg warhead up to a distance of 750 km.
- It is a naval version of the Prithvi and also referred as **"Dhanush"**.
  - Dhanush system consists of a stabilization platform and the missile. It can be launched from a hydraulically stabilized launch pad.
- There are two versions of Dhanush missile under development. One having a range of 250 km and will be used as an anti-ship weapon. The Indian Navy is seeking another variant that will be capable of striking land targets within a range of 500 km.

CREAMY LAYER PRINCIPLE IN SC, ST QUOTA

Recently, the Central Government has urged the Supreme Court to reconsider the creamy layer principle applied to promotions for SC/STs.

About:

- Centre has recently requested the Court to **refer to the larger Bench** the creamy layer principle **in promotion** for Scheduled castes/Scheduled Tribes.
- In the past, the Supreme Court in a serious of judgements had ordered that **the creamy layer of SCs and STs** be **kept out from enjoying** the benefits of the quotas on jobs and admissions.
- In 2018 **(Jarnail Singh vs Lachhmi Narain Gupta case)**, Centre has contended that the 1992 Indra Sawhney judgment be re-approached as, the Supreme Court has **then did not apply** the **creamy layer** concept **to SCs and STs**.

What are the Court Judgements regarding Reservation Principle?

Indra Sawhney & Others Vs. Union of India, 1992: The 9 judges Constitution Bench of the Supreme Court held that:

- Backward class of citizen in **Article 16(4)** can be identified on the basis of the caste system & not only on economic basis.
- Backward classes in Article 16(4) were not similar to as socially & educationally backward in article 15(4).
- Creamy layer **must be excluded** from the **backward classes.**
- Reservation shall **not exceed 50% ceiling.**
- No reservation in promotion
- **M. Nagraj v. Union of India, 2006:** The Supreme Court held that the **State is not bound** to make reservation for SC/ST in matter of promotions.
- However, if they wish to exercise their discretion and make such provision, the states are bound to:
- **Provide quantifiable data** on the backwardness of SCs and STs,
- Facts about their **inadequate representation** in government jobs and
- Overall **administrative efficiency**
- **Before** providing **quota in promotions** to members of these communities.
- **Jarnail Singh vs Lachhmi Narain Gupta, 2018:** The M. Nagaraj case judgment was **challenged** in the Jarnail Singh case via two reference orders:

- The Centre argued that the Nagaraj judgment needed to be revisited.
- Centre positioned that given in Indra Sawhney case where the court held SC/ST to be backward among backward, there is no question of showing backwardness of the SCs and STs all over again.
- Centre held the creamy layer concept has not been applied in the Indra Sawhney case to the Scheduled Castes and the Scheduled Tribes.
- The court in this regard ruled that the creamy layer principle — of excluding the affluent among SC/ST communities from availing the benefit —**will apply**
- The court held that the objective of reservation which is to bring forward the marginalized would not be fulfilled if the creamy layer within that class bag all the coveted jobs in the public sector and perpetuate themselves.

EXTENSION OF RESERVATION FOR SC, ST QUOTA IN LEGISLATURES FOR ANOTHER 10 YEARS

Recently, the Cabinet approved extension of reservation for SCs and STs in the Lok Sabha and state assemblies by another 10 years.

About:

- The reservation for SC/ST categories in the Lok Sabha and State Assemblies was **due to expire** on 25th of January, 2020.
- In this regard, the Constitution (126th) Amendment Bill,2019 has been introduced in the Parliament recently.

What is the Significance of the Bill?

In order to ensure equity and fairness of chance to everyone, constitution introduced reservation system.

- The SC/ST communities are given reservation in legislature **under article 334.**
- It aims to secure capacity and assurance for the advancement of the weaker and backward sections of the society.

Features:

The Bill seeks to extend the reservation for SCs and STs by another 10 years **till January 25, 2030.**

- It is a **Constitution Amendment Bill**
- A similar reservation for the Anglo-Indian community in Lok Sabha and state assemblies is **not being extended.**
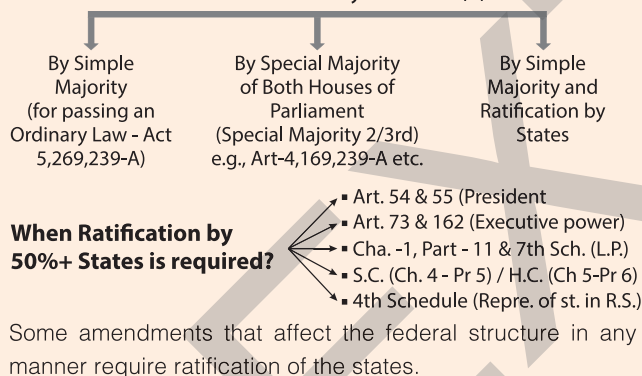
Special Provisions Relating to certain Classes [Art. 330 to Art. 342] Part XVI	
Articles	Provisions
15(4) & 29(2)	Special provision for BC including SC/ST
16(4)	Special provision for Backward classes
330	Reservation of seats for SC & STs in the Lok Sabha
332	Reservation of seats for SC & STs in the Legislative Assemblies of the States
335	Claims of SC's & ST's in Services & post
338 & 338A	National commission for SCs and National Commission for STs

- At present, out of 545 members in Lok Sabha, there are 84 members from the Scheduled Caste and 47 from the Scheduled Tribe communities.

Article 368

- **Part XX** of the Constitution deals with its amendment.
- Under Article **368(2),** Parliament can amend the Constitution.

PROCEDURE OF AMENDMENT IN CONSTITUTION
In Written Text - By Art - 368(2)

By Simple Majority (for passing an Ordinary Law - Act 5,269,239-A)

By Special Majority of Both Houses of Parliament (Special Majority 2/3rd) e.g., Art-4,169,239-A etc.

By Simple Majority and Ratification by States

When Ratification by 50%+ States is required?
- Art. 54 & 55 (President
- Art. 73 & 162 (Executive power)
- Cha. -1, Part - 11 & 7th Sch. (L.P.)
- S.C. (Ch. 4 - Pr 5) / H.C. (Ch 5-Pr 6)
- 4th Schedule (Repre. of st. in R.S.)

Some amendments that affect the federal structure in any manner require ratification of the states.
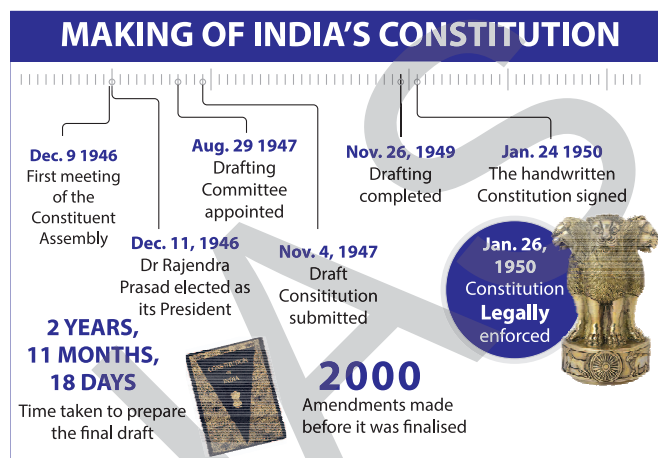
Way Ahead:

- Historically, a substantial segment of the general public was truly denied right to property, training, business and social equality as a result of the act of untouchability. With the end goal to make up for the verifiable disavowal and have shields against discrimination, this amendment law on reservation system is in the right direction in order to ensure their political empowerment.

CONSTITUTION DAY 2019: 70 YEARS OF THE CONSTITUTION

Recently, Constitution Day was observed marking the 70th year of the making of the Constitution.

About:

- Constitution day which is also known as the 'Samvidhan Divas' is celebrated every year on **November 26** to mark the day on which the Constitution of India was adopted.

MAKING OF INDIA'S CONSTITUTION

Dec. 9 1946 First meeting of the Constituent Assembly

Dec. 11, 1946 Dr Rajendra Prasad elected as its President

2 YEARS, 11 MONTHS, 18 DAYS Time taken to prepare the final draft

Aug. 29 1947 Drafting Committee appointed

Nov. 4, 1947 Draft Consititution submitted

Nov. 26, 1949 Drafting completed

2000 Amendments made before it was finalised

Jan. 24 1950 The handwritten Constitution signed

Jan. 26, 1950 Constitution **Legally** enforced

What is the Significance of the Day?

- While the adoption of the Constitution took place on **November 26, 1949**, it came into effect on January 26, 1950.
- Earlier, this day was commemorated as **National Law Day** but in 2015, the Ministry of **Social Justice and Empowerment** enshrined it as "Constitution Day"
- It aims to promote Constitution values among citizens.
- There is **no public holiday** on this day
- As a part of as a part of yearlong Nagrik Kartavya Paalan Abhiyan, a portal **Kartavya.ugc.ac.in** portal was launched that hosts e-contents in important emerging areas like Artificial Intelligence, Cloud computing, Big data, Augmented Reality etc.

Drafting Committee: An Introduction

- The Drafting Committee had **seven members**:
- B.R. Ambedkar **(Chairman)**
- Alladi Krishnaswami Ayyar, N. Gopalaswami, K.M Munshi, Mohammad Saadulla, B.L. Mitter and D.P. Khaitan.
- With **B.N Rau** (as the Constitutional Advisor)

NATIONAL AYUSH GRID

Ministry of AYUSH to launch AYUSH Grid Project to connect all hospitals and laboratories.

About:

- **Ministry of AYUSH** and Ministry of **Electronics and Information Technology (MeitY)** have recently inked a pact to collaborate with each other for **digitization of the AYUSH sector.**

- It will be a nationwide IT grid connecting all hospitals and laboratories so that case histories and observations can be collated.

What is AYUSH Grid Project?

- It is the proposed IT backbone for the entire AYUSH sector covering the healthcare systems Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy.
- It will generate an evidence-based efficacy of the traditional systems.
- It aims to digitise AYUSH healthcare delivery at all levels.
- **Major components** of AYUSH GRID Project include: Health Services, Education, Research, Central Sector and Centrally Sponsored Schemes.

What are the Advantages of this Project?

- The project will help in streamlining governance and benefit all stakeholders of AYUSH.
- It will develop AYUSH in sync with the national and international policies and health care needs.
- It is expected to develop a network of people, knowledge and technology for resource generation.
- Thus, it will transform AYUSH sector as a sustainable and wholesome healthcare that can provide curative, preventive and promotive health care needs.

Way Ahead:

- AYUSH Grid will go a long way in creating a digital eco-system that would lead to all round development of the AYUSH sector. It will thus help in improving healthcare delivery at all levels including research, education, schemes and various health programs.

INDIA JUSTICE REPORT 2019 RELEASED

Recently, Tata Trusts in collaboration with others have released the India Justice Report 2019.

About:

- Tata Trusts in collaboration with other think tanks for the first time have prepared an India Justice Report 2019 by using Government data.

What is India Justice Report?

- It is a first-of-its-kind initiative that ranks individual Indian states in relation to their capacity to deliver access to justice.
- It measures the structural capacity of state-based instrumentalities of the justice system against their own declared mandates, with a view to pinpointing areas that lend themselves to immediate solutions.

States Performance:

- The report shows that none of 29 Indian states has scored above 60 per cent across the four key pillars of justice delivery system that are police, judiciary, prisons and legal aid.
- Among larger states, Maharashtra tops the list followed by Kerala and Tamil Nadu.
- The list of seven small states was topped by Goa, followed by Sikkim and Himachal Pradesh.

Major Highlights:

- Data highlights structural loopholes as each individual sub-system is starving for budgets, manpower and infrastructure.
- Almost 80 per cent of India's 1.25-billion populations is eligible for free legal aid, but only 15 million people have availed it since 1995.
- There are high vacancies in police, prisons and the judiciary.
- Currently, about 23 percent sanctioned judges' posts are vacant.
- Almost 22 per cent posts are vacant in the police and 33-38.5 per cent in prisons.
- Women accounts only 7 per cent of the Police, 10 per cent of prison staff and about 26.5 per cent of all judges in high courts and subordinate courts.
- Prisons are over-occupied at 114 per cent.
- Nearly 68 per cent are under trials awaiting investigation, inquiry or trial.
- In 19 states/UTs, prison occupancy exceeds 100 per cent.

What's need to be done?

The Justice system is affected by low budget allocations. To improve our justice delivery system there is an urgent need of:

- Updating criminal laws by simplifying existing rules and procedures or by repealing of outdated laws.
- Bringing reservation to increase women representation across the Justice system.
- Time bound filling of vacant post in judiciary, police and prison in a transparent way.
- Police, judiciary should be held accountable for their action.
- Adoption of ICT can speed up the investigation and fasten the justice delivery.
- Taking steps to empower states in order to fully utilized National Legal Service Authority budget.
- Increase in spending on the police, prisons and judiciary does not keep pace with overall increase in the state expenditure.
- Besides, in order to streamline the reform process, there is **need to implement** to **Supreme Court directives** for **Police reforms** (Prakash Singh Vs Union of India case) and **Malimath committee** report.

Conclusion:

- An effective justice system is crucial for maintaining rule of law and to upheld Constitutional values. Inability of the system in delivering timely and fair justice can lead to an increase in violence and lack of public faith in governance.

LOGO AND MOTTO INTRODUCED FOR LOKPAL

Recently, the Anti-corruption ombudsman Lokpal released its logo and motto.

About:

- An open competition was conducted last year on the government portal **mygov.in** and through the Lokpal registry mail, to invite entries for logo and motto/slogan to be used by the ombudsman authority.
- Individuals and organisations were invited to submit their logo design and after a selection process.

Why in News?

- Recently, the logo **design of Prashant Mishra** from Prayagraj, **Uttar Pradesh** was selected for adoption as logo of Lokpal.

What does it signify?

- **Logo:** The logo is in tricolor representing the national essence of Lokpal. It symbolizes various essence of Lokpal figuratively in shapes such as:
    - Ombudsman (Judges' bench),
    - People (three human figures),
    - Vigilance (Ashok chakra forming eye–pupil),
    - Law (shape of book in orange) and
    - Judicial (the tricolor two hands are placed below forming a unique balance)
- **Motto:** The motto of Lokpal **"Ma Gridhah Kasyasvidhanam"** means 'Do not be greedy for anyone's wealth'. It is **adopted from** sloka of 'Ishabasoupanishad' or **'Isha Upanishad'.**

Isha Upanishad

- The Isha Upanishad is **one of the shortest Upanishads**, embedded as the final chapter **(adhyāya)** of the **Shukla Yajurveda.**
- It is a key scripture of the Vedanta sub-schools, and an influential **Śruti** to diverse schools of Hinduism.
- It is the **40th chapter of Yajurveda.**
- The text discusses the Atman (Soul, Self) theory of Hinduism, and is **referenced by both** Dvaita (dualism) and Advaita (non-dualism) sub-schools of Vedanta.

What is Lokpal?

- Lokpal is a national anti-corruption ombudsman to look into complaints against public servants which are **defined under** the **Lokpal Act 2013.**

Composition	Selection Panel

9 members
- 1 chairperson
- 8 members
    - 50% judicial
    - 50% SC/ST/OBC, Minority, Women
	- Prime Minister
	- Lok Sabha Speaker
	- Leader of Opposition, Lok Sabha
	- Chief Justice of India (or any other Judge Nominated by him)
	- 1 Eminent Jurist

- **Jurisdiction:** The Lokpal has jurisdiction to inquire into allegations of corruption against:
    - Anyone **who is or has been Prime Minister.**
    - A Minister in the Union government or a Member of Parliament (MP)
- Officials of the Union Government under Groups A, B, C and D.
- Chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Union or State government.
- Any society or trust or body that receives foreign contribution above ₹ 10 lakh
- Besides, the Lokpal also have **power of superintendence and direction** over any central investigation agency **including CBI** for cases referred to them by the Lokpal.
- Shri Justice **Pinaki Chandra Ghose**, a former Judge of Supreme Court of India became the **First Chairperson** of the Lokpal.

Lokpal Jurisdiction over Prime Minister

- The jurisdiction of the Lokpal includes the Prime Minister **except on** allegations of corruption relating to:
- International relations, security, the **public order, atomic energy** and **space.**

Conditions:

- A Full Bench of the Lokpal and
- **At least two-thirds** of members approve an inquiry.
- It will be **held in-camera.**
- Subject to approval by Lokpal, the records of the inquiry will not be published or made available to anyone.
- The Lokpal also have jurisdiction over Ministers and MPs **but not in the matter of** anything **said in Parliament** or a **vote given** there.

INDIA UP ONE RANK IN UN DEVELOPMENT INDEX

*India ranks 129 in the recently released UNDP Human Development Index report, 2019.*

About:

- In the recently released HDI report, India has ranked 129 out of 189 countries i.e. improving by one slot from the 130th position last year.

Human Development Index (HDI):

The Human Development Index – or simply, HDI – is an index that is used to rank countries based on human development.

- It is ranked on a scale from 0 to 1.0, with 1.0 being the highest human development.
- The top nation on this list is Norway with a score of 0.953 with Niger having the lowest HDI of .354.
- **HDI for India Stood at 0.647:** It is calculated taking into consideration performance of countries on four broad parameters.
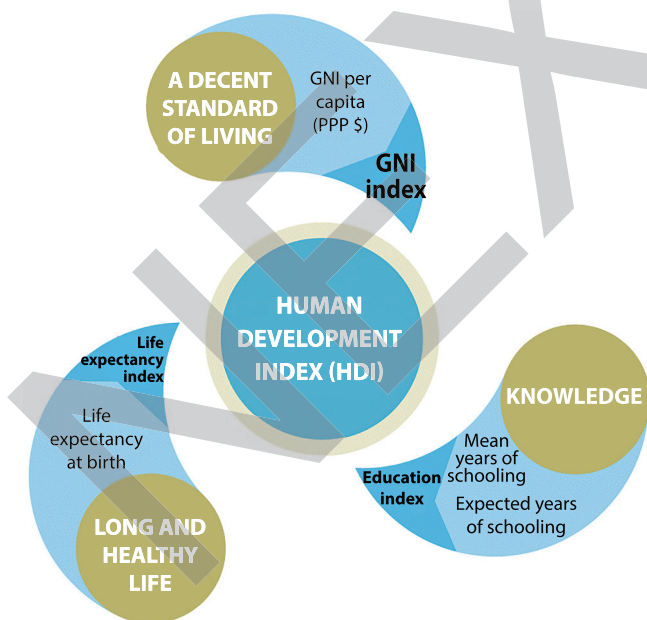
- Most countries that are "developed countries" have an HDI score of 0.8 or above (in the very high human development tier). These countries have stable governments, widespread education and healthcare, high life expectancies, and growing, powerful economies.

Highlights of Report:

- **Norway,** Switzerland, Ireland occupied the **top** three positions in that order on the global ranking.
- Among India's neighbours, **Sri Lanka (71)** and **China (85) are higher up the rank** scale while Bhutan (134), Afghanistan (170) and others were ranked lower on the list.
- **South Asia** was the **fastest growing region in human development progress** followed by East Asia and the Pacific.
- **Group-based inequalities persist**, especially affecting women and girls and **no place in the world has gender equality.**
- World is not on track to achieve gender equality by 2030 as per the UN's Sustainable Development Goals.
- The report forecasts that it may take 202 years to close the gender gap in economic opportunity — one of the three indicators of the **GII**.
- Prejudices and social beliefs have obstructed gender equality.
- Only 14% of women and 10% of men worldwide have no gender bias.
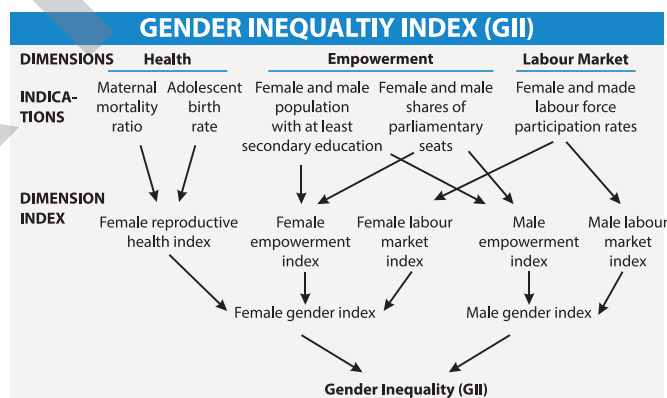
- The report also highlights that **new forms of inequalities will manifest in future** through **climate change** and technological transformation which have the potential to deepen existing social and economic fault lines.

Performance of India:

- India's HDI value increased by 50% (from 0.431 to 0.647), which places it above the average for other South Asian countries (0.642).
- For **inequality-adjusted HDI (IHDI),** India's position drops by one position to 130, losing nearly half the progress **(0.647 to 0.477)** made in the past 30 years **(The IHDI indicates percentage loss in HDI due to inequalities).**

- In the Gender Inequality Index (GII), India is at 122 out of 162 countries.
- Neighbours China (39), Sri Lanka (86), Bhutan (99), Myanmar (106) were placed above India.

MEASLES OUTBREAKS CONTINUE UNABATED: WHO

Recently, the World Health Organization (WHO) released an estimate report on Measles and Rubella outbreak.
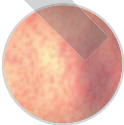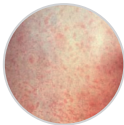
About:

- According to new estimates released by the World Health Organisation (WHO), children under the age of five accounted for most of the 1,40,000 people who died from measles in 2018.

What is Measles?

- Measles is a highly-contagious virus and spreads rapidly in unvaccinated children, causing symptoms from rash to blindness, pneumonia to death.
- The number of children killed last year by a preventable disease is proof that measles anywhere is a threat to children everywhere.

What is Rubella Disease?

- German Measles or Rubella virus is the primary cause of congenital rubella syndrome leading to abortions and children born with birth defects of heart, eye and brain.
- When children go unvaccinated in significant numbers, entire communities are at risk. Both measles and rubella can be prevented by a highly-effective Measles-Rubella (MR) vaccine.

MEASLES	GERMAN MEASLES (RUBELLA)
Measles is caused by a virus which specifically infects the respiratory system	German measles is caused by a virus, which invades the lymph nodes, skin and eyes
More severe and can be life threatening	Benign or milder disease, but pregnant woman should be cautious
Results in a red or reddish-brown rash	Include red spots with a white center known as Koplik spots, in oral cavity

What are the Reasons for Out Outbreak of Measles?

- **Vaccination:** According to UNICEF and WHO reports, **poor vaccination coverage** and large pockets of unvaccinated

children have resulted in devastating measles outbreaks in many parts of the world – including in countries that had high coverage rates or had previously eliminated the disease.

- Only 86% of children globally received the first dose of measles vaccine, and fewer than 70% received the second recommended dose (2018 estimates).
- This is lower than the 95% coverage needed to prevent outbreaks.
- As per WHO estimates measles cases more than doubled in 2018 compared to 2017.
- **Logistic Issues:** Conflict, security or a breakdown in services are making it hard to reach children in remote or hard-to-reach areas.
- **Lack of Awareness:** Parents are not vaccinating their children due to complacency, mistrust or misinformation about vaccines.

What are the Steps taken by Government?

- India, along with ten other WHO South East Asia Region member countries, have **resolved to eliminate** measles and control rubella/congenital rubella syndrome (CRS) **by 2020.**
- **Measles-rubella (MR) vaccination campaign:** Ministry of Health & Family Welfare has initiated the vaccination campaign in the age group of 9 months to less than 15 years in a phased manner across the nation.
- It is one of the world's largest measles-rubella campaign.
- The campaign aims to cover approximately 41 crore children in a phased manner.

Way Ahead:

- Vaccination against measles and rubella can directly contribute to the reduction of under-five child mortality. In the long run, it will help India to achieve SDG-3 i.e. Ensure healthy lives and promote wellbeing for all at all ages

MUMBAI CENTRAL IS INDIA'S FIRST EAT RIGHT STATION

Recently, FSSAI has accorded 'Eat Right Station' certification to Mumbai Central Terminus.

About:

- As a part of 'Eat Right India' movement, the Food Safety and Standards Authority of India (FSSAI) has recently conferred Mumbai Central Terminus with the 'Eat Right Station' certification with four stars rating.

What is 'Eat Right India' Movement?

Led by FSSAI, it is a collective effort to make both the demand and supply-side interventions through the engagement of key stakeholders.

- It is built on two broad pillars of 'Eat Healthy' and 'Eat Safe'.
- It aims to improve the health and well-being of people by ensuring they eat healthy.
- It also engages, excite and enable citizens to improve their health and well-being.
- On the **demand side**, it focuses on **social and behavioural change** among citizens and **nudging** citizens towards making the **right food choice.**
- On the **supply side**, it focuses on **nudging the food businesses** to reformulate their products, provide better nutritional information to consumers and make **investments in healthy food as responsible food businesses.**

Parameters of Certification:

- Food safety and hygiene
- Availability of healthy diet
- Food handling at preparation
- Transhipment and retail/serving point
- Food waste management
- Promotion of local and seasonal food
- Creating awareness on food safety and healthy diet.

Food Safety and Standards Authority of India (FSSAI)

- It was established **under Food Safety and Standards Act, 2006.**
- It is under the administrative control of **Ministry of Health & Family Welfare,** Government of India.
- It handles food related issues in various Ministries and Departments.
- It lays down science-based standards for articles of food and
- It regulates the manufacture, storage, distribution, sale and import **to ensure** availability of safe and wholesome food for human consumption.

ACCESSIBLE INDIA CAMPAIGN

The deadline of Accessible India campaign has been extended to March, 2020.

About:

- For Persons with Disabilities (PwDs) universal accessibility is critical for enabling them to gain access for equal opportunity and live independently and participate fully in all aspects of life in an inclusive society.
- In this regard, government of India **launched Accessible India campaign** in **2015**. It has been recently extended till 2020.

What is Accessible India Campaign?

- **Sugamya Bharat Abhiyan** or Accessible India Campaign is the nationwide flagship campaign of the Department of Empowerment of Persons with Disabilities (DEPwD), **Ministry of Social Justice and Empowerment.**
- It aims to make a **barrier free and conducive** environment for **Divyangjans** all over the country.
- The objective is **to enhance the accessibility** at **built environment**, transport system and Information & communication eco-System.
- It is based on the principles of the **Social Model of Disability.**

Other Initiatives for PwDs

United Nations Convention on the Rights of Persons with Disabilities (UNCRPD):

- It casts an obligation on all the signatory governments to take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to:
- Physical environment, transportation, information and communications etc.
- Other facilities and services open or provided to the public, both in urban and in rural areas.

India is a **signatory of it since 2007.**

PRINCIPLES IN THE CONVENTION

▶ Respect for dignity and individual autonomy
▶ Non-discrimination
▶ Participation and inclusion
▶ Respect for difference and diversity
▶ Accessibility
▶ Equality of opportunity
▶ Equality between men and women
▶ Respect for the evolving capacities of children with disabilities

Incheon Strategy:

- The Strategy comprises goals, targets and indicators, which build on UNCRPD.
- Access to public and social infrastructure
- **Access audits** for ensuring accessibility and transparency at all stages of planning process.
- Accessibility of urban, rural and remote areas **based on universal design.**

Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995

- It provides for non-discrimination in transport, road and in-built environment respectively.

Social Model of Disability

- It believes that disability is caused by the way society is organised, and not the person's limitations and impairments.

Way Ahead:

- The physical, social, structural and attitudinal barriers prevent People with Disabilities from participating equally in the socio-cultural and economic activities. A barrier-free environment not only facilitate equal participation in all the activities but also promotes an independent and dignified way of life.

ATAL BHUJAL YOJANA: IMPROVING THE GROUNDWATER TABLE IN THE COUNTRY

> *Recently, the World Bank has approved loan of Rs. 6000 crores for Atul Bhujal Yojana (ABHY).*

About:

- The scheme aims for sustainable management of ground water resources with community participation.

What is Atal Bhujal Yojana?

It is a **Central Sector Scheme** of the **Ministry of Jal Shakti** to improve ground water management through community participation.

- It is an initiative for ensuring long term sustainability of ground water resources in the country.
- The **funding pattern is 50:50** between Government of India and World Bank.
- Ministry of Jal Shakti is adopting a mix of 'top down' and 'bottom up' approaches in identified ground water stressed blocks in seven states.

Highlights of the Scheme:

- States will be provided funds for strengthening the institutions responsible for ground water governance,
- Taking steps to encourage community involvement for improving ground water management and foster behavioral changes that promote conservation and efficient use of water.

Targeted Area:

- **Seven states** viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh have been selected.
- They represent about 25 per cent of the total number of over-exploited, critical and semi-critical blocks in terms of groundwater in India
- **Groundwater Systems:** It covers two major types of groundwater systems found in India - alluvial and hard rock aquifers.
- The scheme has a total outlay of Rs.6000 crore and is to be **implemented over a period of 5 years (2020-21 to 2024-25).**

Atal Bhujal Yojana Launched

- Outlay of **Rs. 6000 Crore** to be implemented over a period of 5 years (2020-25)
- Aims to improve **ground water management** through community participation in **7 States**
- Will benefit nearly 8350 Gram Panchayats in 78 districts in these States
- Will promote participatory **Groundwater** management & contribute in farmer's income

How will it Benefit?

ATAL JAL is expected to result in:

- Source sustainability for **Jal Jeevan Mission** in the project area with active participation of local communities.
- Will contribute towards the goal of doubling the farmers' income.
- Promotion of participatory ground water management.
- Improved water use efficiency on a mass scale and improved cropping pattern;
- Promotion of efficient and equitable use of ground water resources
- Behavioural change at the community level.

Status of Ground Water in India

India is the largest user of groundwater in the world. It **uses an estimated 230 cubic kilometers** of groundwater per year - over a quarter of the global total.

Importance of Groundwater:

- More than **60% of irrigated agriculture and 85% of drinking water** supplies are dependent on groundwater.
- Groundwater acts a critical buffer against the variability of monsoon rains.
- 29% of groundwater blocks are semi-critical, critical, or overexploited, and the situation is deteriorating rapidly.
- It is estimated that over a quarter of the country's harvest will be at risk.

Way Ahead:

- The implementation of the scheme is expected to have several positive outcomes like better understanding of the ground water regime, focused and integrated community-based approach for addressing issues related to ground water depletion etc.
- Scheme like Atal Bhujal Yojana will help in promotion of sustainable ground water management which will go a long way for the sustainability of agriculture, long-term food security, livelihoods, and economic growth.

Recommendation of the Commission on Price Policy for Kharif Crops

- The **Commission on Price Policy for Kharif Crops (2015-16):** It has recommended rationed water use in agriculture by fixing quantitative ceilings on per hectare use of both water and electricity.
- Also, if farmers are able to use water or electricity less than the ceilings fixed for them, they should be rewarded by cash incentives equivalent to unused units of water/power at the rates of their domestic resource costs.
- This will encourage farmers to use drip irrigation and other on-farm water management techniques to enhance production per drop of water.

GENDER GAP REPORT

Recently, the World Economic Forum has published the Global Gender Gap index 2020, which covered 153 economies.

About:

- The WEF's has recently released Gender Gap Index ranking countries according to calculated gender gap between women and men.
- It is mainly calculated in **four key areas:** health, education, economy, and politics.
- It basically measures **women's disadvantage compared to men** and is not a measure of equality of the gender gap.

Key Highlights:

- **Iceland** remained the **world's most gender-neutral country,** while Iraq, Pkistan and **Yemen** were ranked **worst.**
- **Sex ratios at birth** is abnormally **low in India (91 girls for every 100 boys)** and Pakistan (92/100).
- There is a sharp **deterioration** in the **economic opportunity in emerging roles** such as **cloud computing,** engineering, and data and **artificial intelligence,** leading to **under-representation of women** in these sectors.
- On **health and survival,** four large countries- **Pakistan, Vietnam,** and **China - fare badly** with **millions of women** not getting the same **access to health** as **men**.
- At the current rate of progress, the economic opportunity gap will take 257 years to bridge, compared to 202 last year.

India Specific Findings:

- **India** has **slipped four places** on the World Economic Forum's Global Gender Gap index to **112, behind** neighbors **China, Sri Lanka, Nepal, and Bangladesh.**
- This fall has been attributed mainly due to rising disparity in terms of women's health and participation in the economy.

- In fact, **India is the only country** among the 153 countries studied **where the economic gender gap is larger than the political one**.
- **Economic opportunities for women are extremely limited in India (35.4 percent),** for Pakistan it is 32.7 percent.
- India has very low women representation on company boards (13.8 percent), while it was even worse in China (9.7 percent).
- India **performed worst** in terms of **women's health and survival** and **economic participation.**
- **India ranks high** on the **political empowerment**, however, female political representation today is low as women make up **only 14.4% of Parliament** (122nd rank globally) and 23**%** of the cabinet (69th).
- India ranked **18th in political empowerment** and **4th in the number of years a female or a male ruled a state**.
- It performed poor in the **economic participation and opportunity and wage equality** for **similar work**.
- It is ranked **112th in educational attainment and performed worst in health and survival.**

On a Positive Note:

- India has closed **two-thirds of its overall gender gap. However,the condition of women** in a large section of India's society is **still precarious** and the **economic gender gap has significantly widened** since 2006.
- The wide Gender Gap in India is **due to** Religious and Historical Societal linkages. The process is much slower as compared to other countries because of attitudes prevailing in Indian societal culture.

Why Gender Equality is Necessary?

- Ending all discrimination against women and girls is not only a **basic human right**, but it's also crucial for a **sustainable future**; empowering women and girls will help in **economic growth and development**.
- It will help in bringing effective gender parity in labor market as often, women are systematically denied the same work rights as men. Thus,it will also help in curbing:
  - Sexual violence and exploitation,
  - Unequal division of unpaid care and domestic work
  - Discrimination in public office
- **Climate change** and **disasters** continue to have a disproportionate effect on women and children, as do conflict and migration.
- Hence, it is vital to give women equal rights land and property, sexual and reproductive health, and to technology and the internet.

What progress has been made so far?

- The time it will take to **close the gender gap narrowed to 99.5 years in 2019** (In 2018 it was 108 years.

- It means **parity** between men and women across health, education, work, and politics **will take more than a lifetime to achieve**.

- This year's improvement can largely be attributed to a significant increase in the number of women in politics.

- The **political gender gap** will now take **95 years to close, as against 107 years last year**.

- Worldwide, women now hold 25.2 percent of parliamentary lower-house seats and 21.2 percent of ministerial positions.

Way Ahead:

- Supporting gender parity is critical to ensuring strong, cohesive and resilient societies around the world, for that we will need to mobilize resources, focus leadership attention and commit to targets across the public and private sectors.

- Today there are more women in public office than ever before, but encouraging more women leaders will go a long way in achieving greater gender equality across all spectrums of society.

INTENSIFIED MISSION INDRADHANUSH 2.0

Recently, second phase of nationwide vaccination drive was launched to prevent eight diseases under Intensified Mission Indradhanush 2.0.

About:

- **Intensified Mission Indradhanush (IMI) 2.0** is aimed at **immunizing children under the age of 2 years and pregnant women** who have been left uncovered under the routine immunization programme against **12 vaccine preventable diseases**.

Immunization Programme in India:

- Immunization Programme in India was introduced in 1978 as 'Expanded Programme of Immunization' (EPI) by the Ministry of Health and Family Welfare.

- In 1985, the programme was modified as **'Universal Immunization Programme' (UIP).**

- Despite being operational for many years, **UIP has been able to fully immunize only 65% children** in the first year of their life.

- Through UIP, Government of India is providing vaccination free of cost against vaccine preventable diseases include diphtheria, pertussis, tetanus, polio, measles, severe form of childhood tuberculosis, hepatitis B, meningitis and pneumonia (Hemophilus influenza type B infections), Japanese encephalitis (JE) in JE endemic districts with introduction of newer vaccines such as rotavirus vaccine,

IPV, adult JE vaccine, pneumococcal conjugate vaccine (PCV) and measles-rubella (MR) vaccine in UIP/national immunization programme.

Mission Indradhanush:

- The Government of India launched "Mission Indradhanush" in December 2014.

- The ultimate goal of Mission Indradhanush is to ensure **full immunization with all available vaccines for children up to two years of age and pregnant women.**

- The Government has identified 201 high focus districts across 28 states in the country that have the highest number of partially immunized and unimmunized children.

Intensified Mission Indradhanush (IMI):

- To further intensify the immunization programme, the government launched the Intensified Mission Indradhanush (IMI) on October 8, 2017.

- Through this programme, Government of India aims to **reach each and every child up to two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme/UIP.**

- The focus of special drive was to improve immunisation coverage in select districts and cities to ensure full immunisation to more than 90% by December 2018.

- **Special attention was given to unserved/low coverage pockets** in sub-centre and urban slums with migratory population.

- The **focus was also on the urban settlements** and cities identified under National Urban Health Mission (NUHM).

Intensified Mission Indradhanush (IMI) 2.0:

- To boost the routine immunization coverage in the country, Government of India has introduced IMI 2.0 to ensure **reaching the unreached with all available vaccines and accelerate the coverage of children and pregnant women in the identified districts and blocks from December 2019-March 2020.**

- IMI 2.0 aims to achieve targets of full immunization coverage in 272 districts in 27 States and at block level (652 blocks) in Uttar Pradesh and Bihar among hard-to-reach and tribal populations.

- IMI covers vaccines for 12 life-threatening diseases including Diphtheria, Pertussis, Tetanus, Polio, Tuberculosis, Measles, Rubella, Hepatitis B, Meningitis, Rotavirus Diarrhoea at the national-level; Japanese encephalitis and pneumococcal pneumonia at the subnational level.

- Vaccines for Japanese encephalitis and hemophilus influenza are also being provided in selected areas.

Note: 2019 marks 25 years since first anti-polio campaign was launched. So a question can be asked in CSE 2020 regarding polio.

INDIA SKILL REPORT, 2019

Recently, Confederation of Indian Industry (CII) in association with Wheebox has released India Skills Report.

About:

- Wheebox, a Global Talent Assessment Company in collaboration with Confederation of Indian Industry (CII) has recently released India Skill report for 2019.
- It is an in-depth study of employability amongst the fresh candidates joining the workforce in India.

Major Findings:

- Of all students passing out this year, more than 48% are employable.
- **About 46.21 per cent students were found employable or ready to take up jobs in 2019**, compared to 47.38 per cent in 2018.
- Andhra Pradesh followed by West Bengal and Delhi are the top three states in terms of employability.
- **Engineers** continue to be **most employable with nearly 57% of the final year** engineering graduates employable.
- Among engineering, Electronics and Communication Engineering (ECE) & Information Technology (IT) have the highest employability rate.
- **Female employability increased to 46% while** male employability score has grown to 48% in current year.
- Mumbai followed by Hyderabad were ranked the top two employable cities.
- There has been **increasing presence of employable talent is in tier 2 and tier 3 cities** thus not limiting to metro cities.
- In sectors like- IT, financial services, manufacturing, transportation, packaging, and shipping, nearly, **40-50% of existing jobs would get automated** in future.
- **Job portals and Internal referrals** came up as the **top 2** most preferred sourcing channels of employers.
- **Key Jobs:** Areas for which companies would be hiring the most for are Artificial Intelligence, **Design** (most demanding), Analytics, Research and Development.

What needs to be done?

- **Education sector:** The educational Institutes should focus in **identifying the skill gaps** amongst the students and Students.
- It should explore options of developing their skills which would give them the direction towards their career.
- **Improved Purchasing power:** The vision of 5 trillion-dollar economy requires **increasing the per-capita income** of Indians which can happen only when people get employment, which consequently demands the skills and useful talent.
- Implementing innovative technologies to facilitate skill up-gradation, job creation, internships and workforce management on their platforms.

- Integration of universities and colleges with various emerging start-ups to create market specific skill courses.
- **Trade laws:** Promising laws and transparent regulation to attract the multi-national companies to increase their presence in India.

Way Forward:

- Increase in employability is good sign for the market. But India have a long way to go and entire ecosystem should focus on bridging the employability gaps, enhancing the talent pool thus taking measures from school level to professional level focusing on learning.
- There is need to skill the youth and at the same time creating employment for them. Only then India can transition its young population from becoming a liability to being demographic dividend for its economy.
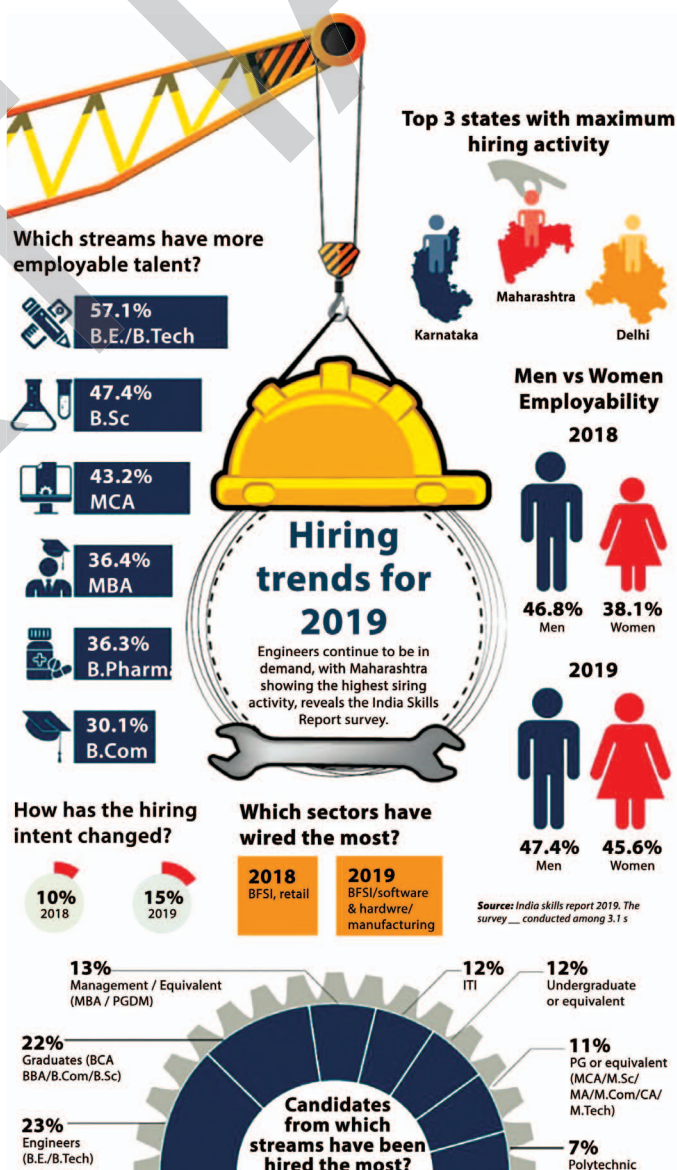
ADAPTATION FUND

Recently, the Adaptation Fund launched a New Grant Programme to Foster Innovation of Adaptation Practices in Vulnerable Countries.

About:

- Adaptation Fund has announced the launch of a new US$ 10 million pilot innovation programme during the UN Climate Change Conference (COP25) in Madrid.
- The new programme will foster innovation in adaptation in developing countries, and will target a broad range of potential finance recipients, including non-governmental organizations, community groups, young innovators and the private sector.
- Two of the Fund's accredited multilateral implementing entities, the United Nations Development Programme (UNDP) and UN Environment Programme (UNEP), will each receive US$ 5 million to administer and aggregate about 45 small grants (up to US$ 250,000 each).
- UNEP will also work in conjunction with the Climate Technology Centre and Network (CTCN), which is the operational arm of the UNFCCC Technology Mechanism.

Adaptation Fund:

- Adaptation Fund was set up in 2001 under the Kyoto Protocol of the UN Framework Convention on Climate Change.
- It finances projects and programmes in developing countries to adapt to the harmful effects of climate change.
- Since 2010, the Adaptation Fund has directed $532 million to 80 concrete adaptation projects in the most vulnerable communities of developing countries, serving 5.8 million direct beneficiaries.
- In 2018, the Fund raised $129 million in new pledges, a record-setting year.
- The Fund is financed in part by government and private donors, and also from a two percent share of proceeds of Certified Emission Reductions (CERs) issued under the Protocol's Clean Development Mechanism projects.

National Adaptation Fund for Climate Change (NAFCC):

- NAFCC is a Central Sector Scheme which was set up in the year 2015-16.
- The overall aim of NAFCC is to support concrete adaptation activities which mitigate the adverse effects of climate change. The activities under this scheme are implemented in a project mode.
- National Bank for Agriculture and Rural Development (NABARD) is the National Implementing Entity (NIE).

CLIMATE AMBITION ALLIANCE

Climate Ambition Alliance and leaders from vulnerable countries demanded a clear call to raise ambition in line with the IPCC special report on 1.5 degree global warming at the COP25 held in Madrid, Spain.

About:

- Climate Ambition Alliance (CAA) is a group of countries willing to enhance NDCs (Nationally Determined Contribution) to meet Paris goal.
- The Alliance, led by Chile, was launched at the Climate Action Summit (UNCAS) held at UN headquarters in New York, earlier this year.
- At COP25, 73 nations have signalled their intention to submit an enhanced climate action plan (or NDC).
- 66 Parties joined the Climate Ambition Alliance at UNCAS through commitments to going net zero.
- Chile and the United Kingdom will join efforts to mobilize additional actors to join the alliance on the road towards COP26 to be held in 2020 in Glasgow, UK.

Pan of Action:

- For Mitigation, the Alliance will focus on:
  - Submission of enhanced Nationally Determined Contributions
  - Reaching new commitments to achieve Net Zero by 2050
  - Implementation of measures to strengthen the protection of forests and oceans.
- For adaptation, the Alliance, will focus on strong actions to improve the management of water, resilience in infrastructure and the sustainability of cities.
- The Alliance will strengthen its work on adaptation and the involvement of the private sector.

Need for the Alliance:

- There is a need to urgently increase efforts to reduce emissions, as vulnerable communities face existential threat.

- The **IPCC Special Report** on the Impacts of Global Warming of 1.5°C states that both urgent and transformational adaptation action is needed to reduce climate-related risk.
- The scale of expected impacts is such that business as usual is no longer an option for any country, community, business or financial institution.

CATERPILLAR FUNGUS (KIRA JARI) IN HIMALAYAS

At an altitude of 5000 meters in the Himalayas is found a caterpillar-fungus that is worth more than its weight in gold.

About:
- Caterpillar fungus is a valuable medicinal resource and a highly sought after Non-Timber Forest Product (NTFP) found in alpine meadows of the Himalayas.
- It has become a popular medical supplement in the last fifteen years.
- Increasing demand for this fungus has transformed the agro-pastoral economies of the remote Himalayan regions.

About Caterpillar Fungus (CF):
- Caterpillar fungus (Ophiocordyceps Sinensis) is a **fungal parasite** of larvae (caterpillars) that belongs to the ghost moth.
- It is a hybrid of a fungus that kills and lives in caterpillars.
- It is endemic to the Tibetan Plateau, including the adjoining high Himalaya (3,200-4,500 metres above sea level).
- It is locally known as:
  - Kira Jari in India
  - Yartsagunbu in Tibet
  - Yarso Gumbub in Bhutan
  - Dong Chong Xia Cao in China
  - Yarsagumba (Winter insect summer grass) in Nepal
- In the Indian Himalayas, the species has been documented in the region from the alpine meadows of protected areas such as:
  - Great Himalayan National Park - Himachal Pradesh
  - Nanda Devi Biosphere Reserve - Uttarakhand
  - Askot Wildlife Sanctuary - Uttarakhand
  - Kanchendzonga Biosphere Reserve - Sikkim
  - Dehan-Debang Biosphere Reserve – Arunachal Pradesh

Use of Caterpillar Fungus:
- Used in traditional Tibetan and Chinese medicine as a tonic, as a therapeutic medicine for lung, liver and kidney problems.
- Recently, it has been widely traded as an aphrodisiac and a powerful tonic, often called the 'Himalayan Viagra'.

- Some reports state that caterpillar fungus possesses a range of more specific therapeutic properties including:
  - Action against asthma and bronchial inflammation
  - Cure of renal complaints, irregular menstruation
  - Stimulation of the immune system.

Trade Status and Policies for Caterpillar Fungus in India:
- **Indian Wildlife (Protection) Act, 1972:** Not Listed
- **CITES:** Not Listed
- **IUCN Redlist**
  - Not assessed in India, Bhutan and Nepal
  - Critically Endangered in China
  - Vulnerable - Globally

Ecological Threats:
- Every year thousands of villagers go in large numbers to the alpine slopes of the Himalayas along with their tents, fuel, food, other consumables as well as their domestic animals to collect Caterpillar Fungus.
  - This leads to over-grazing, and the chopping of trees for firewood with a negative impact on the entire ecosystem.
  - Degradable and non-degradable garbage disposal as well as open defecation in the vicinity of collectors' base camps create major environmental issues in affected areas.
- **There is a lack of awareness** regarding sustainable management practices to mitigate or reduce such anthropogenic pressures during the harvesting period that can destroy the ecosystem affecting many other threatened Himalayan wildlife species such as the
  - Snow Leopard (Panthera uncia)
  - Blue Sheep (Pseudois nayaur)
  - Ground-dwelling birds (Satyr Tragopan Tragopan satyra, Snow Partridge Lerwa lerwa etc.)
  - Rare and endangered alpine flora.
- The habitat of Caterpillar Fungus is also a vital source of water for people living at lower altitudes as many rivers originate from these areas.
  - The anthropogenic pollution and habitat destruction have a negative impact on the quality and availability of water in these rivers systems.
- Climate change has also been invoked as causing changes in caterpillar fungus abundance.
- **Social dimension:** The amount of money associated with its trade has already led to social discord in the peaceful Himalayan region.

What Needs to be Done?
- Framing of a policy to promote sustainable harvesting, equitable trade and conservation of Caterpillar Fungus requires in-depth knowledge and understanding of its trade dynamics and legal status in range States (Sikkim and Uttarakhand) in India.

- There is an immediate need to understand the impact of climate change and wild collection of Caterpillar Fungus on its habitat and population.
- Establishing regional marketing standards to define a trans-boundary trade mechanism for Caterpillar Fungus.
- An assessment of the international trade in Caterpillar Fungus could provide the basis for listing the species under the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) to help ensure its long-term management.
- There is a necessity to explore alternative livelihoods in tourism, local handloom enterprises, animal husbandry and sustainable collection and marketing of other NTFP species.

MADDEN JULIAN OSCILLATION (MJO)

A study has found that, Global Warming has altered a key weather system which may be stimulating cyclones in the Bay of Bengal.

About:

- The study state that, rapid warming of the Indo-Pacific Ocean could be the reason behind erratic rainfall patterns with heavy rains pummelling some parts of the world while others, including north India, experiencing decline.
- The study was led by the **Pune-based Indian Institute of Tropical Meteorology (IITM).**
- The study warned that warming of the ocean has altered the most dominant mode of weather fluctuation originating in the tropics known as the **Madden–Julian Oscillation (MJO).**

What is MJO?

- It is an oceanic-atmospheric phenomenon which affects weather activities across the globe.
- It brings major fluctuation in tropical weather on weekly to monthly timescales.
- MJO is a moving band of rain clouds that travels around the globe moving eastward over the tropics.

Characteristics of MJO:

- They span 12,000–20,000 km across the tropical oceans mainly over the Indo-Pacific warm pool, which has ocean temperatures generally warmer than 28°C.
- MJO regulates tropical cyclones, monsoons, and the El Nino cycle and occasionally contributes to severe weather events over Asia, Australia, Africa, Europe and America.
- In its journey, it interacts with surface waters of the Indo-Pacific Ocean, the largest pool of warm water in the globe, and due to this the lifecycle of the MJO gets affected.

Madden-Julian Oscillation (MJO)

The structure of the Madden-Julian Oscillation (MJO), an eastward-moving equatorial atmospheric pattern characterized by adjacent regions of enhanced thunderstorms — caused by convection of moist air — and dry, sunny conditions. The MJO pattern takes about one to three months to circle the planet, and it may influence the frequency with which atmospheric rivers occur.
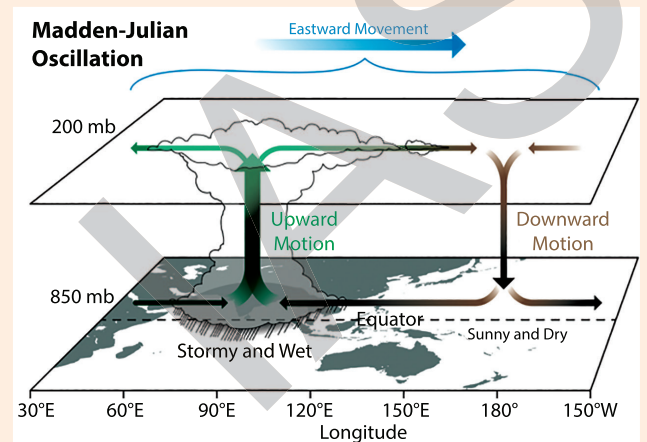
- Though the entire Indo-Pacific has warmed, the warmest waters are over the west Pacific, creating a temperature contrast that drives moisture from the Indian Ocean to the west Pacific Maritime Continent, enhancing the cloud formation there. As a result, the lifecycle of MJO has changed.
- This Indo-Pacific warm pool has been warming rapidly and expanding during the recent decades in response to increasing carbon emissions.
- The warm pool expanded double its size during 1981-2018 than during 1900-1980.
- **Residence time of MJO:**
  - The MJO clouds on average are spending only 15 days, instead of 19, over the Indian Ocean.
  - Over the west Pacific, it increased by five days (from an average 16 days to 23 days).
  - It is this change in the residence time of MJO clouds that has altered the weather patterns across the globe.
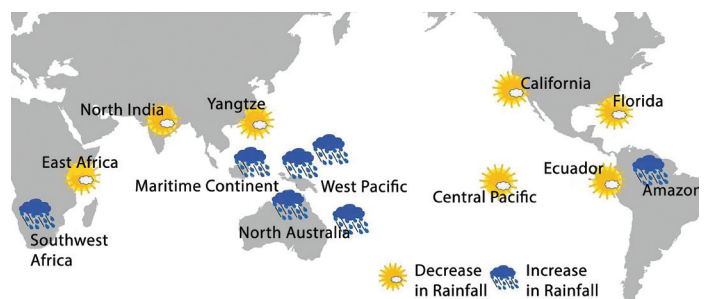
Impact on Monsoon Patterns:

- The **Indian Ocean Dipole (IOD), El Nino and MJO** are all oceanic and atmospheric phenomena, which affect weather on a large scale.
- IOD only pertains to the Indian Ocean, but the other two affect weather on a global scale, up to the mid-latitudes.
- IOD and El Nino remains over their respective positions, while MJO is a traversing phenomenon.
- The journey of MJO goes through eight phases.
  - When it is over the Indian Ocean during the Monsoon season, it brings good rainfall over the Indian subcontinent.
  - On the other hand, when it witnesses a longer cycle and stays over the Pacific Ocean, MJO brings bad news for the Indian Monsoon.
- When the MJO appears in the Indian Ocean during the monsoon months of June-September, it can increase rains over India.
- This year, India was poised to receive below normal monsoon rainfall in April but ended up with excessive rain partly due to the MJO.
- The change in the MJO could drift warmer surface water towards the Bay of Bengal and increase cyclones.

Way Forward:

- The MJOs haven't been as extensively studied as, say, the El Nino. This study shows that we need better observation of the Indian Ocean and improve forecasts that can warn us about a cyclone.
- Climate model simulations indicate that continued warming of the Indo-Pacific Ocean is highly likely, which may further intensify these changes in global rainfall patterns in the future.
- This means that we need to enhance our ocean observational arrays to monitor these changes accurately and update our climate models to skilfully predict the challenges presented by a warming world.

OLYMPICS OF GEOSCIENCES

India is set to host 36th International Geological Congress in March 2020.

About:

- The International Geological Congress (IGC) popularly described as the **'Olympics of Geosciences'** will be held in New Delhi.
- **Theme: 'Geosciences:** The Basic Science for a Sustainable Development'.

- IGCs are a prestigious global geoscientific events held once in four years.
  - India is the only Asian country to host the event twice.
  - In 1964, India had hosted it for the first time, which was the 22nd IGC.
- **Geological Survey of India (GSI)** is the nodal agency for organizing the event.
- The event is being funded by the
  - Ministry of Mines (MoM)
  - Ministry of Earth Sciences (MoES)
  - With support of the Indian National Science Academy (INSA) and the national Science Academies of Bangladesh, Pakistan, Nepal and Sri Lanka.
- The 36th IGC is expected to provide a platform for international cooperation in mining, mineral exploration and environmental management and related enterprises.
- It would also help in dealing with:
  - Problems of sustainability
  - Energy crisis
  - Water crisis
  - Climate change
  - Environmental issues
  - Resource management

Geological Survey of India (GSI):

- GSI is the one of the key national survey organisation of India, set up in 1851 primarily to find coal deposits for the Railways.
- It is headquartered at Kolkata
- GSI is an attached office to the **Ministry of Mines**.
- **Main function:** Creating and updating national geoscientific information and mineral resource assessment.

BIS WORKSHOP FOR PIPED WATER QUALITY STANDARDS

Recently, Bureau of Indian Standards (BIS) conducted workshops for state officials for enforcement of piped water quality standards.

About:

- The workshops were organised to sensitise state government officials about the requirement of BIS standards for drinking water.
- The state governments are ready to make BIS standards mandatory for piped drinking water to ensure safe and quality water to people.
- The centre is considering to make BIS standards on piped drinking water mandatory which is at present voluntary in nature.

Bureau of Indian Standards (BIS)
• BIS is the national standard body established under the BIS Act 2016 for harmonious development of the activities of standardisation, testing, marking and quality certification of goods.   • Under the BIS Act, there is a provision that standards formulated for any products can be made mandatory.

Highlights of the Test:

• The tests were conducted by BIS under the aegis of Consumer Affairs Ministry.

• Tap water samples in Mumbai were found to be compliant with BIS standards.

• Delhi, Kolkata, Chennai failed in about **10 out of 11 quality parameters** for drinking water.

• Samples from 17 other state capitals were not as per the specification 'Indian Standard (IS)-10500:2012' for drinking water.

Jal Jeevan Mission (JJM):

• Government of India has restructured and subsumed the ongoing National Rural Drinking Water Programme(NRDWP) into JJM.

• It aims to provide Functional Household Tap Connection (FHTC) to every rural household i.e., Har Ghar Nal Se Jal (HGNSJ) by 2024.

SEAD INITIATIVE

> *Recently, Bureau of Energy Efficiency (BEE) conducted an International Workshop on "Energy Efficient Cooling" in association with International Energy Agency (IEA) under SEAD initiative of Clean Energy Ministerial (CEM).*

About:

• The workshop was conducted as part of **'National Energy Conservation Week'** celebrated from 9th to 14th Dec. 2019.

• The objective of the Energy Conservation Week is to drive mass awareness about the importance of energy efficiency and conservation.

• National Energy Conservation Day is organized on 14th December every year by BEE.

What is SEAD?

• SEAD (Super-efficient Equipment and Appliance Deployment) Initiative is a voluntary **collaboration among** governments.

• It is about governments working to promote the manufacture, purchase, and use of energy-efficient appliances, lighting, and equipment worldwide.

• It is an initiative under the Clean Energy Ministerial (CEM) and International Partnership for Energy Efficiency Cooperation (IPEEC).

• If all SEAD governments were to adopt current policy best practices for product energy efficiency standards, 2,000 TWh of annual electricity could be saved in 2030, equal to the energy generated by 650 mid-sized power plants.

Bureau of Energy Efficiency (BEE):

• BEE, a statutory body under the Ministry of Power was set up under the provisions of the Energy Conservation Act, 2001.

• BEE assists in developing policies and strategieswith the primary objective of reducing energy intensity of the Indian economy.

Clean Energy Ministerial (CEM):

• CEM is a high-level global forum to promote cleam energy technology among participating governments and other stakeholders.

International Partnership for Energy Efficiency Cooperation (IPEEC)

• IPEEC is an autonomous partnership of nations founded in 2009 by the Group of 8 (G8) to promote collaboration on energy efficiency.

• Its membership now includes 17 of the Group of 20 (G20) economies, which represent over 80% of global energy use and over 80% of global greenhouse gas (GHG) emissions.

CANE TURTLE'S REPORTED FROM SOUTH INDIA

> *Recently, Cane turtle sightings have been reported from the forests of Karnataka, Kerala and Tamil Nadu.*

About:

• These are palm-sized turtles **endemic to** the evergreen forests of **Indian Western Ghats.**

• These are forest dwelling and restricted to areas with dense canopy and rocky terrain.

• They are **largely** nocturnal in habit

• They breed during monsoon, and **lay eggs in a nest that is deep beneath the soil.**

• Scared and shy, it adopts a land-based lifestyle among leaves.

• During the breeding season, the males blossoms their heads with colourful patches.

• When picked up, its first line of defence is not to bite but to defecate.

Why Cane Turtle is an Anomaly?

- **Unlike** most of the **turtles** and tortoises, cane turtles are **found away from the perennial water source.**

- It scuttles through the forest, **but it is not a tortoise.**

- Although the shape of its legs and webbed feet are reminiscent of its aquatic relatives, it **doesn't like water** and stays clear of streams.

- When scared, it dives under dry leaves as if it were plunging into a pond or brook.

Conservation Status:

- Being one of the rare species, Forest Cane Turtle is considered to be globally **endangered** by IUCN.

- The species has given the utmost **legal protection** under **Schedule-I of the Wildlife (Protection) Act, 1972.**

Tortoises vs Turtles:

- All tortoises are turtles in sense that they are reptiles having bodies encased in a bony shell—but **not all turtles are tortoises**.

- Tortoises are exclusively land creatures while

- Not all land turtles are tortoises. For example: box turtles and wood turtles.

VS

TURTLE
A turtle is a reptile from the Chelonian family. Turtles spend most of their life in the water.

May be herbivorous, carnivorous, or omnivorous. Most are omnivorous or carnivorous.

Carapace is typicaly more laterally compressed and streamlined.

Most have webbed feet.

TORTOISE
A tortoise is a reptile from the Chelonian family. Tortoises spend most of their life on land areas.

Carapace is usually more domeshaped.

Most are primarily herbivorous, but there are a few that are omnivorous.

Feet are short and sturdy with bent legs.

India Biodiversity Portal (IBP)

- The **India Biodiversity Portal (IBP)** is a website formed as "a repository of information designed to harness and disseminate collective intelligence on the biodiversity of the Indian subcontinent."

- India harbours 28 species of freshwater turtles and tortoises, with Northeast and North India considered as Turtle Biodiversity Hotspots.

- Over 17 species are Globally Threatened in the IUCN Red list and populations are under severe pressures of extinction due to a large number of human-made factors.

- The Indian species which are heavily susceptible to pet trade are: **the Indian Flapshell Turtle, Indian Star Tortoise and the Spotted Pond Turtle.**

DALLOL GEOTHERMAL FIELD

Recently, researchers have found an aquatic environment on the Earth with a complete absence of any forms of life.

About:

- The Dallol geothermal field is **a terrestrial hydrothermal system** located in the east-African country of Ethiopia.

- It is a boiling cauldron of **burning salts**, sulfuric acid and volcanic rock.

- It has a group of hot, saline, hyperacid ponds devoid of any form of microbial life.

- It **extends over a volcanic crater** full of salt, constantly releasing toxic gases with water boiling in the midst of the intense hydrothermal activity.

Why is Dallol Inhabitable?

- Dallol is **one of the most torrid (very hot and dry) environments on the planet** with daily temperatures in winter exceeding 45 degrees Celsius.

- Dallol is a **cinder cone volcano** in the **Danakil Depression** located near **Erta Ale volcano.**

- The landscape had **abundant hypersaline and hyperacid pools**, with pH – which is measured on a scale from 0 (very acidic) to 14 (very alkaline) – **even hitting the negative mark!**

- The place was even proposed as **a terrestrial analogue of early Mars.**

- It is also **one of the lowest land points on Earth.**
  - It lies **410 feet below the mean sea level.**
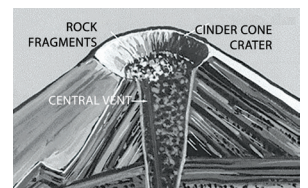
- The researchers found a great diversity of a type of primitive salt-loving microorganisms in the desert, and the saline canyons around the hydrothermal site **but not in the hyperacid and hypersaline pools, nor in the Black and Yellow lakes of Dallol which are **rich in magnesium**.

Cinder Cone Volcano

- Cinder cones are the **simplest type** of volcano.
- They are built from particles and blobs of congealed lava ejected from **a single vent.**
- As the **gas-charged lava is blown violently into the air,** it breaks into small fragments that solidify and fall as *cinders* around the vent to form **a circular or oval cone.**
- Most cinder cones have a **bowl-shaped crater at the summit** and rarely rise more than a thousand feet or so above their surroundings.
- Schematic representation of the internal structure of a typical cinder cone is shown below:

Way Ahead:

- Research on Dallol geothermal field will help in getting clue about the presence of liquid water on a planet.

LAST SUMATRAN RHINO DIES IN MALAYSIA

Recently, the Sumatran rhino was declared extinct in Malaysia.

About:

- Back in 2015, the last Sumatran rhino in the wild in Malaysia was declared extinct. With his death recently, Sumatran rhinoceros are now extinct in Malaysia.

What are Sumatran Rhino?

- These are **the smallest species of rhino which once roamed** all across Asia – **even in India.**
- It is now almost extinct with only around 80 rhinos alive, **primarily in Indonesia.**
- While **Indian and Javan** rhinoceros **possess a single horn**, African and Sumatran rhinoceros have two horns.

Why Rhinos are Poached?

- **Medicinal properties:** Rhinos are mainly **poached for their horns** which are ground up and **used for their alleged medical properties even though** they are made of keratin the same protein that makes up human hair and nails.
- **Palm cultivation:** Rise in the demand of palm oil has led to **habitat loss** as vast areas of rainforests in Indonesia and Malaysia were **cleared** for palm tree plantation.

Conservation Status

Habitat loss and poaching of rhinos has led to extreme isolation in Sumatran rhinos which is why they **rarely breed** and can become extinct in a matter of decades.

IUCN Status:

- **Critically endangered:** Sumatran, Black, and Javan rhinoceros.
- **Vulnerable:** The **Indian rhino**

TYPES OF RHINOS AND THEIR DISTRIBUTION
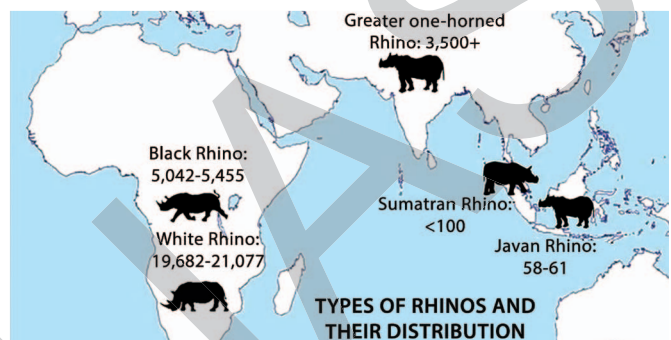
SUKAPAIKA: DEATH OF A RIVER

Recently, Sukapaika river was choked to death mainly due to embankments built over the years.

About:

- Sukapaika is one of the several **distributaries of the mighty Mahanadi** river in Odisha. It was the lifeline of over 0.5 million people.
- Over the years, lack of concern shown by government has led to its eventual death recently.

A LIFELINE FOR TWO STATES

The Odisha governemnt had moved the SC in December, 2016, for an order asking Chhattisgarh to stop construction of barrages upstream of Mahanadi. A look at the drainage area of the Mahanadi

TOTAL DRAINAGE AREA OF THE BASIN (KM²): 141,589

75,136   65,580   635 238 — MAHARASHTRA

JHARKHND

Source: National Institute of Hydrology, IIT Roorkee

- The Mahanadi originates in the Sihawa mountain in the Dhamtari district of Chhattisgarh and terminates in the Bay of Bengal.

Mahanadi ranks second to the Godavari among peninsular rivers in respect of water potential

851 km Total length of the river   494 km in Odisha   357 km lies in Chhattisgarh

What led to its Death?

- The problem has its roots in 1952, when the state government blocked the starting point of the Sukapaika with an embankment to save the villages around it from floods.

- Subsequently, in 1957, two major projects — Hirakud Dam in Sambalpur district and Naraj barrage at Cuttack — were built upstream on the Mahanadi, ostensibly to control floods in it.

- However, the embankment on the Sukapiaka was not removed. This left the distributary totally dependent on rainwater.

Mahanadi River

- It originates in Chhattisgarh
- It is the **6th largest river** in India.
- It flows through the States of Chhattisgarh and Odisha and originates in Chhattisgarh.
- It covers more length in Odisha than in Chhattisgarh.

Major Tributaries:

- **Left:** Seonath, Ib, Hasdeo
- **Right:** Ong, parry river, Jonk

Recently, Chhattisgarh planned to build barrages and weirs (small dams) across the Mahanadi to extract more water leading to its confrontation with Odisha government.

MINISTRY OF ENVIRONMENT LAUNCHED COUNTRY'S FIRST INTERACTIVE ONLINE REPOSITORY, INDAIR

Recently, National Environmental Engineering Research Institute (NEERI) launched the country's first interactive online repository, IndAIR.

About:

- Indian Air quality Studies Interactive Repository or IndAIR is an interactive and user-friendly **web-based repository on air pollution** in India.
- It contains research articles, reports, thesis, statutes and legal cases on air pollution in India by Indian scientific community.
- It has been **developed by CSIR-NEERI** in collaboration with MoEF&CC, CPCB BARC, and other research institutions.
- It is a **first of its kind** comprehensive effort in the world.

What are the Major Objectives?

- IndAIR aims to promote science as a tool for air pollution mitigation and making its understanding easy for the larger audience.
- **Major objectives:**
  - **Inventory:** To inventorise surviving Indian research and analysis on air pollution, its causes and effects.
  - **Insights:** To provide insights into reasons for air pollution and efforts being made to deal with such issues in the past.
  - **Accessible:** To present these studies in an easily accessible web format for the media, researchers and academics.

- **Awareness:** To raise an awareness among the public and policymakers about the issues regarding air quality.
- It is expected that this will not only act as a useful platform for the scientific community but also to share their work and ideas.

MYSTERIOUS DEATH OF MIGRATORY BIRDS IN SAMBHAR WETLAND

Recently, over 17,000 birds were found dead at the Sambhar Lake in Rajasthan.

About:

- A mass death of thousands of migratory birds occurred around Sambhar Lake.
- According to **Indian Veterinary Research Institute (IVRI)** report, the deaths were due to **avian botulism**, a disease caused by a bacterium that affects nerves.

What is Avian Botulism?

- **Bacterial illness:** Avian botulism is a serious neuromuscular illness of birds caused by a toxin that is produced by the bacterium **Clostridium botulinum**.
- **Paralysis:** It paralyses the leg and then the wings, resulting in eventual death of the bird.
- **First time in India:** Although the toxin has been recognised as a major cause of mortality in wild birds since the 1900s, the disease has been reported for the first time in India.

Why is this Bacterium a Cause of Concern?

- **Toxin:** Botulinum is a **natural toxin** produced by the bacterium Clostridium botulinum.
- **Abundance:** The spores of this bacterium are abundant in anaerobic (absence of oxygen) habitats such as soils, and aquatic sediments of wetlands and lakes.
- **Human prone:** The bacterium can affect both humans and animals but the type of the toxin varies — botulinum C in birds and A, B and E in humans.
  - Humans can become sick typically by eating improperly canned or stored foods or eating infected fish, birds or maggots.
- **Resistant:** They are resistant to temperature changes and remains dormant in the soil over the years.
  - It mainly manifests in warm and low level of water and does not grow in acidic conditions.
  - It gets activated under favorable conditions such as-areas with large amounts of decaying plant or animal materials.
  - They are readily found in the gills and digestive tracts of healthy fish living in these lakes.

- Researchers have found only insectivorous and omnivorous birds affected and not herbivores, suggesting, birds' death might have been triggered mainly by eating of infected fish, birds or maggots.

Sambhar Lake

- Sambhar lake of Rajasthan is the largest inland saltwater lake.
- It was designated as a **Ramsar site** in the year 1990.
- It is surrounded on all sides by the **Aravalli hills.**
- It is mainly drained by water from four seasonal rivers viz. Mendha, Rupangarh, Kharian and Khandel.
- It is the most important wintering area for **flamingoes** in India outside the Rann of Kachchh.
- The brine of this lake is unique, as it has **got low potassium** content.

Historical Background:

- The lake is traditionally said to have been created in the 6th century by the goddess Shakambari, a form of Durga, who was the consort of Shiva (one of the three supreme gods of Hinduism).
- The first record of salt production from the lake dates back to 1500 years ago.

Way Ahead:

- Sambhar is a wetland of international importance, thus there is an urgent need to eradicate the factors causing such outbreak. Since the bacteria spores remains dormant in the soil over the years, an active prevention mechanism to avoid such disaster in future is the need of hour.

CABINET APPROVED MOU WITH BANGLADESH ON WATER WITHDRAWAL FROM FENI RIVER

Recently, Union Cabinet approved an MoU with Bangladesh on the withdrawal of water from Feni River by India.

About:

- According to the Memorandum of Understanding (MoU), India will withdraw **1.82 cusecs** (cubic feet per second) of water **for a drinking water supply scheme for Sabroom town in Tripura.**
- Earlier this year, India and Bangladesh had also agreed on to collect data and prepare water-sharing agreements for seven rivers — **Manu, Muhuri, Khowai, Gumti, Dharla, Dudhkumar,** and **Feni.**

Why is it a Disputed River?

- As on date, **there is no water sharing agreement** on Feni river between India and Bangladesh.

- Although, the dispute over river water sharing was first taken up between India and Pakistan (before the independence of Bangladesh) way back in 1958.
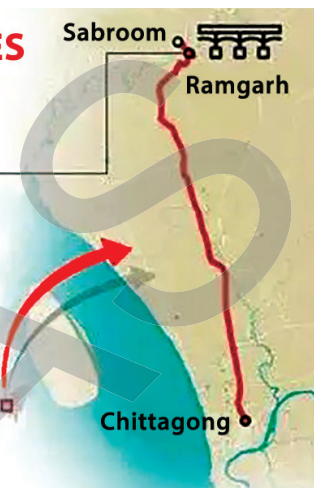
Feni River

- Feni is a trans-boundary river that originates in the **South Tripura** district.
- It passes through Sabroom town on the Indian side, and meets the Bay of Bengal after it flows into Bangladesh.
- It is also joined by Muhuri River or Little Feni near its mouth in Bangladesh.

Other projects on the Feni River:

- Indian has decided to build a bridge over the Feni River at the Tripura-Bangladesh border.
- It will connect the existing NH8 Agartala-Sabroom on Indian side to Chittagong port in Bangladesh.
- The bridge will also act as the only land link between India's eastern states and its western states other than through Assam.

SWACHH NIRMAL TAT ABHIYAAN: INTENSIVE BEACH CLEANING DRIVE

Recently, Ministry of Environment, Forest and Climate Change (MoEF&CC) has launched a week-long intensive Beach Cleaning Drive- Swachh Nirmal Tat Abhiyaan.

What is Swachh – Nirmal Tat Abhiyaan?

- **About:** It is a week-long intensive Beach Cleaning Drive in 50 identified beaches of India.
  - It will include participation from school/college students of Eco-clubs, district administration, institutions, volunteers, local communities and other stakeholders.

- **Aim:** Clean beaches and create awareness amongst citizens about the importance of coastal ecosystems.
  - It also aims to save marine creatures from plastic waste, industrial effluents and other harmful substances.
- **Waste Processing:** It will also deploy Beach sand cleaning machines and the collected waste will be processed as per extant Waste Management Rules, 2016.
- **Implementation Agency:** Environment Education Division and Society of Integrated Coastal Management (SICOM) under the aegis of Ministry of Environment will implement the drive.
- **Location:** The identified beaches are in **10 coastal States/Union Territories (UTs)** namely Gujarat, Daman & Diu, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Puducherry, Andhra Pradesh, and Odisha.

INDIA GETS GREEN CLIMATE FUND TO BOOST CLIMATE RESILIENCE

> *Recently, India gets USD 43 million from Green Climate Fund (GCF) to boost climate resilience in 3 coastal states.*

About:

- In a move to boost climate resilience in coastal states, India has recently started a bunch of projects **in partnership** with the **United Nations Development Programme (UNDP).**
- The project is **funded by** the **Green Climate Fund,** established within the framework of the United Nations Framework Convention on Climate Change (UNFCCC).

How will it Work?

- The project will build climate-resilient livelihoods for nearly 1.7 million people in **Andhra Pradesh, Maharashtra and Odisha.**
- It is expected to **sequester** nearly 3.5 million tonnes of carbon dioxide through restored ecosystems over the next 30 years.
- It will **work with coastal communities** in restoring ecosystems and promoting climate-resilient livelihood options, such as the sustainable farming of mud crabs.
- It will help in **protecting and restoring India's natural ecosystems** such as mangroves and seagrass, which are essential for **buffering against storm surges.**
- It will build a local knowledge of climate change and the associated risks via **training and public education** programmes.
- Thus, the project aligns well with the priorities of the National Action Plan on Climate Change, the State Action Plans, and the nationally determined contributions under the Paris Agreement.

Why is Climate Resilience so Important?

- According to United Nation (UN), India's coastline is expected to be among the most affected by climate change.
- With a coastline of nearly 7516.6 km (out of which nearly **6100 km is mainland** while islands' coastline consists of 1197 km) coastal resilience for India becomes more important.
- Coastal areas have high socioeconomic and naturalistic value leading to its exposure to both land and sea factors.
- Sea level rise can cause flooding, coastal erosion and the loss of low-lying coastal systems.
- Risks from storm surges and landward intrusion of saltwater endangers the coastal ecosystems.
- Factors like urbanization, overfishing, and poorly planned coastal development have further exacerbated the occurrence of extreme weather events.
- Expected rises in water temperatures and ocean acidification leads to **restructuring of coastal ecosystems** influencing ocean circulation and biogeochemical cycling.
- Climate resilience thus becomes more crucial for India as, nearly 250 million people **(14 percent of the country's population)** live within 50 kilometres of coastal areas.

Green Climate Fund (GCF)

- **When:** At the United Nation Climate Change conference held at **Cancun** in 2010, developed country committed to a goal of mobilizing jointly USD **100 billion per year by 2020** to address the needs of developing countries.
- **Why:** The **GCF was established** at this conference through **Cancun Agreement** to function as a designated entity to operationalise this financial mechanism.
- Its main goal is to address the needs of developing countries in general and Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States in particular.
- **Major objectives:**
  - To catalyze a flow of climate finance to invest in low-emission and climate-resilient development especially in developing countries.
  - To support the efforts of **developing countries** to respond to the challenge of climate change.
  - To help developing countries limit or reduce their Green House Gas (GHG) emissions and adapt to climate change.
- The Fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change,
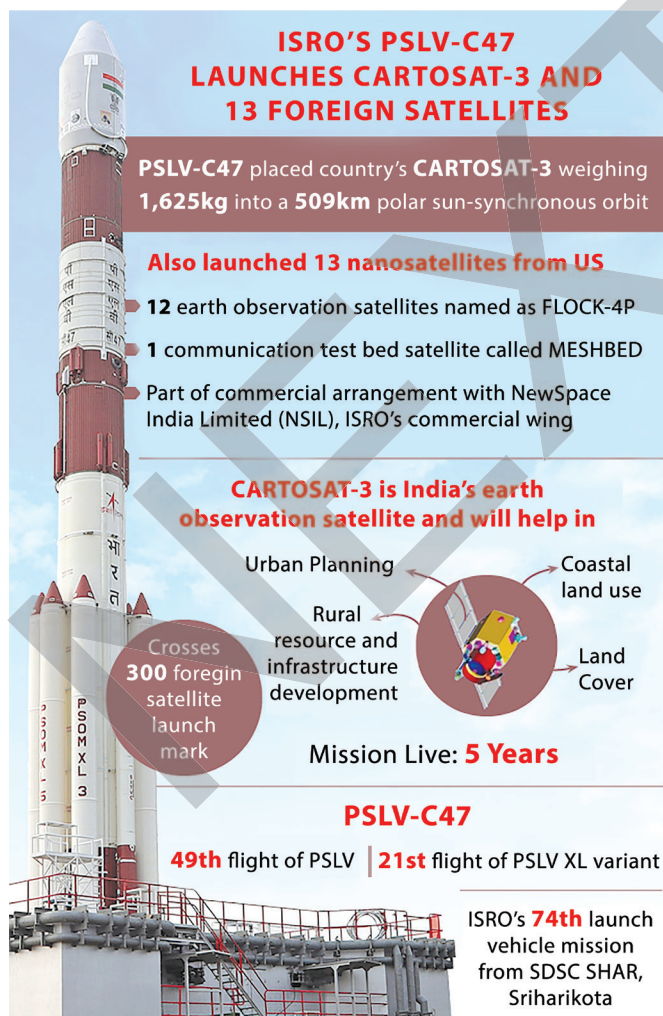
Note: **NABARD** is the National Implementing Entity (NIE) for GCF in India.

CARTOSAT-3, PSLV C47

Recently, India's space agency Indian Space Research Organization (ISRO) has successfully launched Cartosat-3 into sun-synchronous orbit through PSLV-C47.

About:

- The rocket **Polar Satellite Launch Vehicle-XL variant (PSLV-XL)** has launched from Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota along with other 13 commercial nanosatellites of United States. This is the **21st flight of PSLV in 'XL' configuration (with 6 solid strap-on motors)**.
- These satellites were launched under commercial arrangement with **New Space India Limited (NSIL), the commercial arm of Indian Space Research Organisation (ISRO).**

ISRO'S PSLV-C47 LAUNCHES CARTOSAT-3 AND 13 FOREIGN SATELLITES

PSLV-C47 placed country's **CARTOSAT-3** weighing **1,625kg** into a **509km** polar sun-synchronous orbit

Also launched 13 nanosatellites from US

- **12** earth observation satellites named as FLOCK-4P
- **1** communication test bed satellite called MESHBED
- Part of commercial arrangement with NewSpace India Limited (NSIL), ISRO's commercial wing

CARTOSAT-3 is India's earth observation satellite and will help in

Urban Planning
Rural resource and infrastructure development
Coastal land use
Land Cover

Crosses **300** foregin satellite launch mark

Mission Live: **5 Years**

PSLV-C47

49th flight of PSLV | **21st** flight of PSLV XL variant

ISRO's **74th** launch vehicle mission from SDSC SHAR, Sriharikota

About Cartosat-3:

- CartoSAT-3 is the eighth in a series of indigenous Earth observation satellites built by ISRO. It is a **third generation agile advanced satellite** having **high resolution imaging capability**.
- The satellite will be placed in an **orbit of 509 km** at an **inclination of 97.5 degrees**.

What is PSLV?

- PSLV (Polar Satellite Launch Vehicle) is an indigenously-developed expendable launch system of the ISRO.
- It comes in the category of medium-lift launchers with a reach up to various orbits, including the Geo Synchronous Transfer Orbit, Lower Earth Orbit, and Polar Sun Synchronous Orbit.
- All the operations of PSLV are controlled from the Satish Dhawan Space Center, Sriharikota.

Purpose:

- Assets like Cartosat-3 are essentially tasked by civilian or military operators to **provide insights that help support decision-making** to achieve certain objectives.
- The satellite will also serve in large-scale urban planning, rural resources and infrastructure development, monitoring of coastal land use and land cover, etc.

Way Ahead:

- **India needs a cloud and computing strategy** for agile decision-making; ultimately, satellites are just one among tens of data and intelligence sources, including good-old human intelligence, cyber intelligence.
- In its **annual report of 2017-18,** ISRO laid out a very clear strategy of developing India's Earth observation (EO) capabilities that is based on capturing different themes of land, water, cartography, ocean, atmosphere, and meteorology.
- New missions such as the **Geo Imaging Satellite (GISAT),** which will enable real-time imaging, alongside the established Resourcesat, Radar Imaging Satellite (RISAT), Cartosat, Oceansat and the Indian National Satellite System (INSAT) constellation make India's fleet of EO satellites one of the most comprehensive remote-sensing data sets in the world.

DENGUE VIRUS

Recently, a case related to sexually-transmitted dengue got confirmed in Spain.

About:

- For European Centre for Disease Prevention and Control this is the first-ever case of same-sex transmission of dengue in Europe, but not the first-ever sexually transmitted case.

- In fact, non-vector borne cases of such diseases are often seen in non-endemic areas - most commonly involving a person who had recently travelled to an endemic area.

- In 2011, a similar case had shown up in South Korea where a man had acquired the disease from his infected partner.

- Researchers say that **it is possible to acquire dengue from non-vector modes (without a mosquito bite), though the chances are really slim**. The possible transmission routes include needle sticks, accidents in the lab, blood transfusion, bone marrow transplant, organ transplants and through a mother to child either through breastfeeding or during pregnancy. Dengue could **also spread through the mucocutaneous route -** through sexual contact.

About Dengue:

- It is a fast-spreading disease most common in depressed areas and poor communities in **tropical and subtropical countries** such as southeast Asia, Africa, Australia, the Caribbean and South and Central America.

- Dengue is a **vector-borne disease that normally spreads through the bite of the female Aedes aegypti mosquito,** which transmitted its virus. Though it is prevalent in more than 128 countries of the world, the disease mostly affects tropical and subtropical areas.

- **The dengue virus is categorized under Flaviviridae, the same family of viruses that cause Hepatitis**. Dengue comes with high fever, severe headaches, and vomiting. In extreme cases, dengue can cause fatality to the patient—this is known as **dengue hemorrhagic fever.** The dengue hemorrhagic fever was first recognized in the 50s in Southeast Asia, specifically Thailand and the Philippines.

- Earlier this year, researchers announced that dengue will spread across the globe within the next 60 years and shall threaten 60% of the human population by 2080.

Indian Scenario:

- India has seen more than 67,000 cases of dengue this year till October 2019.

- There is **no vaccine available for dengue so far** and the treatment is mostly supportive - for the management of symptoms.

- This new mode of transmission on top of that has just raised more concerns for the high-risk countries.

- A vaccine was recently developed for dengue called **Dengvaxia**. However, this is only effective to those who already survived dengue. The vaccine is said to develop immunity against the four strains of dengue virus.
  - ◆ However, it does not work and can also be counterproductive if given to a person who has not had dengue before.

NASA SHOWCASED ITS FIRST ALL-ELECTRIC EXPERIMENTAL AIRCRAFT, THE X-57 'MAXWELL'

Recently, NASA has showcased an early version of its first all-electric experimental aircraft, the X-57 'Maxwell'.

About:

- The Maxwell will be the agency's first crewed X-plane to be developed in two decades, which will be flying to the skies by 2020.

- **Inspiration:** Adapted from a Italian-made Tecnam P2006T twin-engine propeller plane, the X-57 has been under development since 2015 and remains at least a year away from its first test flight.

- While private companies have been developing all-electric planes and hover-craft for years, NASA's X-57 venture is aimed at designing and proving technology according to standards that commercial manufacturers can adapt for government certification.

- It also includes standards for airworthiness and safety, as well as for energy efficiency and noise.

- **Li ion Batteries:** It is powered by specially designed lithium ion batteries and lighter-weight wings fitted with a total of 14 electric engines are attached with it- that will ultimately propel the plane into the sky.

- Because electric motor systems are more compact with fewer moving parts than internal-combustion engines, they are simpler to maintain and weigh much less, requiring less energy to fly. They also are quieter that conventional engines.

- The lift propellers will be activated for take-off and landings, but retract during the flight's cruise phase.

- Earlier, NASA has also developed bullet-shaped Bell X-1 that first broke the sound barrier and the X-15 rocket plane flown by Neil Armstrong.

Challenges:

- One challenge is improving **battery technology** to store more energy to extend the plane's range, with faster re-charging.

- Due to current battery limitations, the Maxwell's design is envisioned for use in short-haul flights as an air-taxi or commuter plane for a small number of passengers.

WORLD'S FIRST FULLY ELECTRIC COMMERCIAL AIRCRAFT

Recently, the world's first fully electric commercial aircraft took flight in Canada.

About:

- The "ePlane" operated by Harbour Air, North America's largest seaplane operator, and magniX, a company that builds propulsion systems for electric aircraft.
- This 6-passenger DHC-2 de Havilland Beaver seaplane, with a 750-horsepower propulsion system producing zero emissions.
- The company aims to build the world's first all-electric commercial fleet by 2022.
- Earlier, Airbus developed the world's first fully-electric, four-engine aerobatic aircraft in 2010, and this was followed by the development of the aircraft E-Fan that crossed the English Channel in 2015.

Contribution of Air Transport in Environmental Pollution:

- According to the **International Air Transport Association (IATA), air transport contributes up to 2 per cent of global manmade carbon dioxide emissions.** In 2017, civil aviation emitted about 859 million tonnes of carbon dioxide into the atmosphere.
- **Existing technologies cannot help the aviation industry make significant reductions in emissions** — and this is where electric and hybrid-electric systems come in. But the technology is still some distance away from being used in long-distance air travel.
- Aircraft propellers or airscrews are traditionally rotated with the help of an engine. The propeller lifts the aircraft forward, using up fuel in the process, and emitting carbon dioxide and other gases into the atmosphere.

ROTAVAC 5D

Recently, Bharat Biotech launches new variant of rotavirus vaccine, Rotavac 5D for viral diarrhoea.

About:

- **Hyderabad - based Bharat Biotech** International launched a new variant of its rotavirus vaccine, Rotavac 5D.
- It is a smaller dosage form of its earlier oral immunisation shot that **can be stored at a relatively higher temperature.**
- For vaccines, it is important that they are stored at the right temperature as exposure to temperatures outside the specified range may result in reduced vaccine potency or increased risk of vaccine-preventable diseases. In the worst case, the vaccines can even cause diseases it is supposed to immunize against.

What is Rotavirus?

- **Rotavirus is a leading cause of diarrhoea** in children less than 5 years of age. It spreads easily among infants and young children.
- The virus can cause **severe watery diarrhea, vomiting, fever, and abdominal pain.**
- Children who get rotavirus disease can become **dehydrated and may need to be hospitalized**.
- Globally, rotavirus causes approximately 200,000 deaths and about 2 million hospitalizations annually, mostly in low-income countries.
- The government aims to end morbidity and mortality in children due to diarrhoea by 2022.

Rotavac:

- Rotavac is available in 2.5 ml vial per dose and has to be stored at -20 degree Celsius.
- It was made part of the Indian immunization program in 2016 after it received regulatory approval in 2014.

Rotavac 5D:

- Available in a 0.5 ml dosage, **Rotavac 5D can be stored at 2-8 degree Celsius for up to 24 months**, and can be administered in five drops.
- Rotavac 5D is also **stable at 37 degrees Celsius for seven days.**
- It will **not be part of the Indian immunization** scheme as the Indian government has stated that it has enough storage at -20 degree Celsius and does not need vaccines at a relatively higher temperature as of now.
- It will be priced about 25% higher than Rotavac.
- In India, the company plans to target private hospitals for supply of the vaccines, as well as export to countries in Africa and Asia.

NASA AND ESA PLANNING TO HIT ASTEROID DIDYMOS

Recently, ESA has approved the budget for Mission HERA.

About:

- Back in 2013, European Space Agency (ESA) and NASA proposed to launch **a joint European/U.S. Asteroid Impact and Deflection Assessment mission, or AIDA**.
- It aims to intercept **near-earth twin-asteroid system or Didymos** in 2022.

- The project will study the effectiveness of an impact to ward off an impending asteroid threat.

- The European Space Agency (ESA) has recently approved the budget of **"Hera", the European component of the mission** to measure the impact crater produced by the DART collision and study the change in the asteroid's orbital trajectory.

What is Asteroid Didymos?

- Didymos is a **binary asteroid,** meaning it's two space rocks.

- The bigger one is about 2,625 feet (800 meters) across and is **orbited by a tiny moon**, informally dubbed **Didymoon**, which is only 160 meters wide.

Why we need a Planetary Defence Mechanism?

- **High in Quantity:** There are around **25,000 near-Earth objects (NEOs)** that orbit the Sun on a trajectory that brings them close to our planet's orbit.

- **Close in Proximity:** Certain near-earth potentially hazardous objects (140 metres or more in size), come within 0.05 AU* to Earth.

- **Huge in Size:** According to NASA, there are about 900 near-Earth objects measuring more than 1 km.

- **Devastating in collision:** Collision with an asteroid of the size of Didymoon (160 m wide) has the potential to cause an **explosion bigger than the largest nuclear weapon**.

- The **AIDA** mission is so far the most drastic measure of all times to deflect asteroids, if they threaten to impact the Earth.

Why AIDA is aiming for Didymos?

- The twin-asteroid system Didymos is a binary near-Earth asteroid. According to NASA, the secondary body or "moonlet" poses the most **likely significant threat to Earth**. So, Didymos makes a suitable target for NASA and ESA's mission.

- Didymoon will also become the **first object in the Solar System** to have its orbit shifted by human effort in a measurable way.

DIDYMOS BINARY ASTEROID SYSTEM
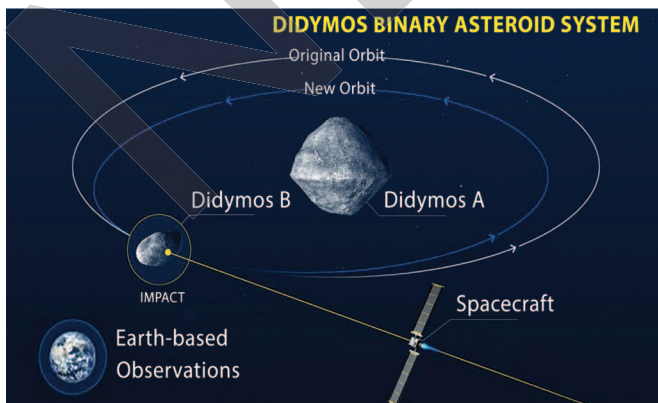
Hera Mission

It is an ESA mission that will be **humankind's first probe** to engage with a binary asteroid system or Didymos.

- It is part of international double-spacecraft collaboration with NASA.

- It will be follow-up survey mission for DART mission of NASA.

- It is due to launch in 2024 and will arrive at the Didymos system in 2027.

- It will measure the impact crater produced by the DART collision and study the change in the asteroid's orbital trajectory.

DART Mission:

- The **Double Asteroid Redirection Test (DART)** mission is a planetary defense-driven test of NASA.

- Its main objective is to develop technologies for preventing an impact of Earth by a hazardous asteroid.

- It will also be the first mankind demonstration to change the motion of an asteroid in space.

- It will be using **Kinetic Impact Technique that** involves sending one or more large, high-speed spacecraft into the path of an approaching near-earth object.

- It will be launched on a **SpaceX Falcon 9** rocket in 2021.

Note: 1 Astronomical Unit (AU) = 150 million kilometres (or the distance between Earth and the Sun).

FASTAGS

Recently, the Ministry of Road Transport and Highways extended the earlier deadline for buying FASTags from 1st December to 15th December.

About:

- It is a **prepaid radio-frequency identification-enabled tag** that facilitates automatic deduction of toll charges.

- The new system will now do away away with a stop-over of vehicles and cash transactions at toll plazas. Projected as the **'Aadhaar' card for vehicles**, the FASTag electronic toll collection programme is being implemented by the **Indian Highways Management Company Limited (IHMCL), a company incorporated by the National Highways Authority of India (NHAI), and the National Payments Corporation of India in coordination with Toll Plaza Concessionaires**, tag issuing agencies and banks.

- **The tags sold by banks are not "bank-neutral"**. A **FASTag** bought from one bank can be recharged through that particular bank only and not through other banks. However, tags sold/distributed by NHAI are bank-neutral as one can use any bank account to recharge/top up the value in the tag.

HOW IT WORKS

FASTag is a pan India inter-operable ETC system rolled out by Governemnt of India for National Highways under the National Electronic Toll Collection programme	Simple to use and reloadable tag employing radio-frequency identification technology, enabling automatic deduction of toll charges so that there is smooth passage through toll plaza without stopping for cash transaction	Tag is affixed on vehicle's windscreen after the tag account is active and is operational at many toll plazas across national and State highways in the country. It is linked to a prepaid account from which the applicable toll amount is deducted.
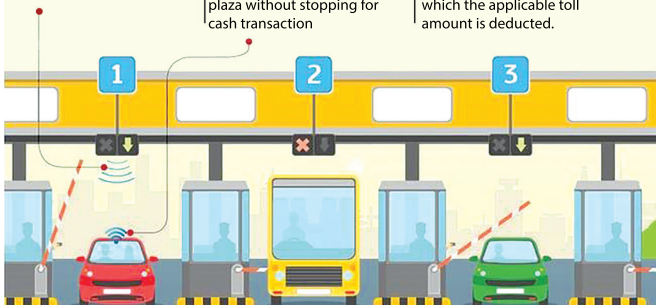
- Under a new **"One Nation One FASTag"** scheme, the NHAI is trying to get states on board so that one tag can be used seamlessly across highways, irrespective of whether it is the state or the Centre that owns/manages it.
- Recently as part of a pilot, **Karnataka, Andhra Pradesh and Haryana signed MoUs with the Centre to accept FASTags in state highways also**.
- FASTag has a **validity of five years.**

About Radio-Frequency Identification

- RFID is the use of **radio waves to read and capture information stored on a tag attached to an object.**
- A tag can be read from up to several feet away and does not need to be within direct line-of-sight of the reader to be tracked. It is applied for tracking items or as a pass.

Significance:

- A joint study in 2014-15 by the **Transport Corporation of India and the Indian Institute of Management-Calcutta** estimated the cost of delay on Indian roads at $6.6 billion per year. The cost of additional fuel consumption due to delays was also put at $14.7 billion per year.
- The National Electronic Toll Collection (NETC) programme will not only **promote digital payments but also ensure seamless traffic movement on highways.**

Way Ahead:

- The Central government also plans to enable the use of FASTag for a range of other facilities such as **fuel payments and parking charges**. Several States have already signed memoranda of understanding to join the system.
- On October 14, 2019, the IHMCL and GST Network signed a memorandum of understanding for integrating FASTag with the e-way Bill system. The arrangement has been made for a more efficient **'track-and-trace'** mechanism involving goods vehicles. It will also check revenue leakage at toll plazas.

- Suppliers and transporters will also be able to keep track of their vehicles through SMS alerts generated at each tag reader-enabled toll plaza.

INTERNATIONAL ASTRONOMICAL UNION GAVE INDIAN NAMES TO A STAR AND A PLANET

IAU has named a white yellow star as 'Bhibha' and a planet as 'Santamasa'.

About:

- Once a star and few of its characteristics are found, they are listed in a catalogue such as Henry Draper Catalogue (HD) and assigned telephone-number-like designations.
- The white yellow star (HD 86081) in Sextans constellation will be called 'Bhibha' and the planet (86081b) will be known as 'Santamasa'.

Bhibha

- **Location:** It is located in the constellation of **Sextans**.
- It is so far away that light from it takes 310.93 years to reach Earth and hence it is visible only with a telescope.
- **Temperature:** It is as hot as the sun, with a surface temperature of about 6,000 degrees Kelvin.
- **Size:** It is 1.55 times bigger, 1.21 times massive, and 1.75 times brighter.

Santamasa

It is estimated to have a mass of 1.5 times that of Jupiter, going around the central star in a nearly circular orbit just in 2.1375 days. Revolving so near the host star, the planet is expected to be very hot.

International Astronomical Union (IAU)

- **Founded:** 1919.
- **Mission:** To promote and safeguard the science of astronomy in all its aspects, including research, communication, education and development, through international cooperation.
- **About:** It is a worldwide society of professional astronomers and is considered the authority for assigning names to celestial objects, whether they are planets or moons or other types of worlds, as well as surface features on them. The IAU also provides definitions for different types of objects, such as "what is a planet vs. a dwarf planet."
- **Works:** The IAU also works to promote research, education and public outreach activities in astronomy for the public.
- **Headquarters:** The IAU is based in Paris, France.

- **Scientist:** The star has been named in honour of a pioneering Indian woman scientist **Bibha Choudhury**, who discovered subatomic particle, pi-meson.
  - 'Bhibha' also means "a bright beam of light" in Bengali.
  - The planet has been named 'Santamasa' to reflect the cloudy nature of its atmosphere. 'Santamasa' is the Sanskrit term for 'clouded'.
- Some of the other names approved by the IAU for other stars and planets from other countries.
- Significantly, this year Nobel Prize in Physics has been partly awarded to the discovery of an exoplanet orbiting a solar-type star.

INDIA ADOPTED THE NEW DEFINITION OF KILOGRAM

The prototype of one kilogram (NPK-57) is available and placed at the National Physical Laboratory, New Delhi.

About:

- It has been regulated under the Legal Metrology (National Standards) Rules, 2011.
- The new definition of kilogram has come into effect from May, 2019.
- The previous definition of kilogram was based on the mass of the international prototype 'kilogram' which is an artefact, however, the new definition is based on **physical constant of nature.**
- The change in the definition of kilogram will not have any implication in daily life in weighing of pharma and precious metals.
- The kilogram has been defined since 1889 by a shiny piece of platinum-iridium held in Paris. All modern mass measurements are traceable back to it - from micrograms of pharmaceutical medicines to kilos of apples and pears and tonnes of steel or cement.
- The new definition of kg involves accurate weighing machines called **'Kibble balance'**, which uses Planck's Constant to measure the mass of an object using a precisely measured electromagnetic force.

What are S.I. Units?

- The International System of Units (SI), commonly known as the metric system, is the international standard for measurement. The International Treaty of the Meter was signed in Paris on May 20, 1875 by seventeen countries, including the United States.
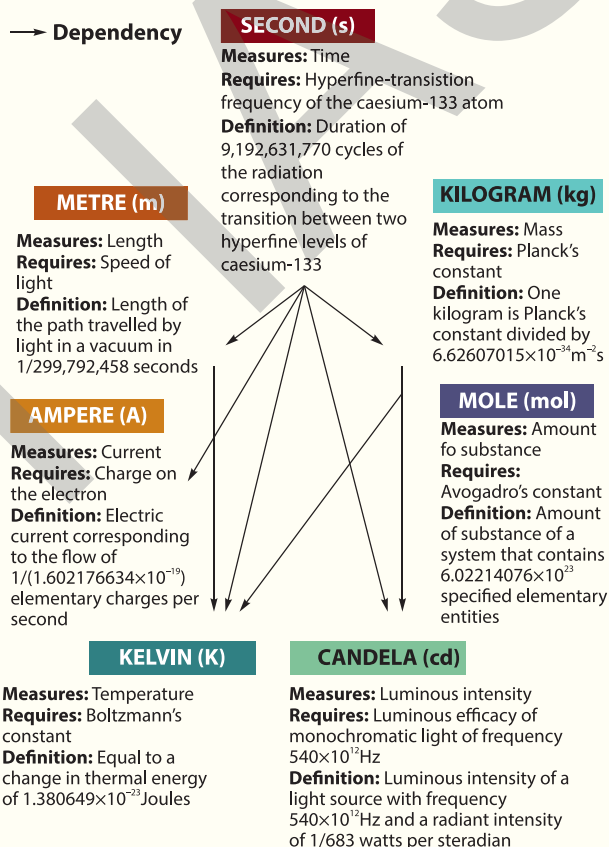- The SI is made up of **7 base units** that define the 22 derived units with special names and symbols.

Purpose:

- The purpose of system units is to enable worldwide coherence of measurements.
- The SI plays an essential role in international commerce and is commonly used in scientific and technological research and development.

ALL CHANGE
Under the revised SI system, every unit will be defined in relation to a constant, whose value will become fixed. Many of the units will be defined in relation to each other: for example, definition of the kilogram requires Planck's constant, and definitions of the second and metre.

→ **Dependency**

SECOND (s)
Measures: Time
Requires: Hyperfine-transistion frequency of the caesium-133 atom
Definition: Duration of 9,192,631,770 cycles of the radiation corresponding to the transition between two hyperfine levels of caesium-133

METRE (m)
Measures: Length
Requires: Speed of light
Definition: Length of the path travelled by light in a vacuum in 1/299,792,458 seconds

KILOGRAM (kg)
Measures: Mass
Requires: Planck's constant
Definition: One kilogram is Planck's constant divided by $6.62607015 \times 10^{-34} m^{-2} s$

AMPERE (A)
Measures: Current
Requires: Charge on the electron
Definition: Electric current corresponding to the flow of $1/(1.602176634 \times 10^{-19})$ elementary charges per second

MOLE (mol)
Measures: Amount fo substance
Requires: Avogadro's constant
Definition: Amount of substance of a system that contains $6.02214076 \times 10^{23}$ specified elementary entities

KELVIN (K)
Measures: Temperature
Requires: Boltzmann's constant
Definition: Equal to a change in thermal energy of 1.380649×10^{-23} Joules

CANDELA (cd)
Measures: Luminous intensity
Requires: Luminous efficacy of monochromatic light of frequency 540×10^{12} Hz
Definition: Luminous intensity of a light source with frequency 540×10^{12} Hz and a radiant intensity of 1/683 watts per steradian

Background:

- Earlier India adopted a global resolution to redefine four of the seven base units- kilogramme, kelvin, mole and ampere, a move expected to have far-reaching effects, including changes in textbooks.
- A resolution to redefine four of the seven base units was passed by representatives of 60 countries at **the General Conference on Weights and Measures (CGPM) of the International Bureau of Weights and Measures (BIPM), Paris.**
- Over 100 countries have adopted the metric system of measurements, also known as the International System of Units (SI), which has been in practice since 1889.

Impact:

- The new SI System will be helpful in bringing in accuracy while dealing with international trade, biotechnology, high-tech manufacturing and human health and safety.

US CONGRESS CONSENTED TO DESIGNATE INDIA'S NAVIC AS ITS "ALLIED" NAVIGATIONAL SATELLITE

The US Congress has consented to designate India's NAVIC as its "allied" navigational satellite in an effort to develop a prototype program for multi-global navigation satellite system receiver.

About:

- **National Defense Authorization Act (NDAA) 2020:** The designation of India's NAVIC as an "allied system" comes under NDAA 2020.
  - **Galileo** of the European Union and **QZSS** of Japan are also part of the same program.
- **Non Allies:** It designates Russia's **GLONASS** and Chinese **Beidou** as a **"non-allied system"**.
  - It means that the US satellite navigation system will not co-operate or exchange data with these two satellite navigation systems.
- **Objective:** U.S. will out a program to prototype an M-code based, multi-global navigation satellite system receiver, which would be capable of receiving covered signals to increase the resilience and capability of military position, navigation, and timing equipment against threats to the **Global Positioning System**.
- Such a system would deter the likelihood of an attack on the worldwide Global Positioning System by reducing the benefits of

Indian Regional Navigation Satellite System (IRNSS): NavIC

- **NavIC (Navigation in Indian Constellation)** is the Indian system **of eight satellites** that is aimed at telling business and individual users where they are, or how their products and services are moving.
- **Range:** It is designed to provide accurate position information service to users in India as well as the region extending up to **1500 km** from its boundary, which is its primary service area.
- **Services:** IRNSS will provide two types of services, namely, **Standard Positioning Service (SPS)** which is provided to all the users and **Restricted Service (RS)**, which is an encrypted service provided only to the authorized users.

- **Applications:** Some applications of IRNSS are
  - Terrestrial, Aerial and Marine Navigation
  - Disaster Management
  - Vehicle tracking and fleet management
  - Integration with mobile phones
  - Precise Timing
  - Mapping and Geodetic data capture
  - Terrestrial navigation aid for hikers and travelers
  - Visual and voice navigation for drivers

INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM

IRNSS (NavIC) is designed to provide accurate real-time positioning and timing services to users in India as well as region extending up to 1,500 km from its boundary.

NAVIGATION CONSTELLATION CONSISTS OF SEVEN SATELLITES

3 in geostationary earth orbit (GEO) and
4 in geosysnchronous orbit (GSO) inclined at 29 degrees to equator

**Each sat has three rubidium atomic clocks, which provide accurate locational data**

IT WILL PROVIDE TWO TYPES OF SERVICES

1 **Standard positioning Service** | Meant for all users.

2 **Restricted Service** | Encrypted service provided only to authorised users (military and security agencies)

Applications of IRNSS are: Terrestrial, aerial and marine navigation; disaster management; vehicle tracking and fleet management; precise timing mapping and geodetic data capture; and travellers; visual and voice navigation for drivers.

While **American GPS** has **24 satellites** in orbit, the number of sats visible to ground receiver is limited. In **IRNSS, four satellites** are always in geosynchronous orbits, hence always visible to a receiver in a region **1,500 km** around India.

Geostationary Earth Orbit

Geosynchronous Orbit
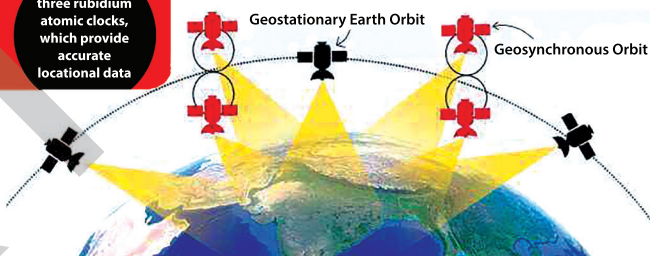
UNION MINISTER FOR ANIMAL HUSBANDRY ANNOUNCED 'SEXED SEMEN' FOR CATTLE AT CHEAP PRICES

At 14th Progressive Dairy Farmers Association (PDFA) International Dairy and Agri Expo 2019, Union Minister for Animal Husbandry, Dairying and Fisheries announced provision of 'sexed semen' for cattle at cheap prices

About:

- **Technology:** Sexed semen is specially processed semen of bulls from which 'Y' chromosomes in sperm cells — which lead to the birth of a male calf — are either removed through a 'sorting' process or killed. Semen which has only 'X' chromosomes can ensure that a female calf is born.
  - The reproduction system of cattle is similar to humans for example; Cows carry XX chromosomes while bull semen carries both X and Y. If the egg fertilizes with an 'X' chromosome, a female calf is born and if with 'Y', a male is born.

- **Techniques:** There are two techniques to produce sexed semen:
  - One is the 'sorting process' in which 'X' and 'Y' chromosomes are separated. 'X' are retained and 'Y' discarded.
  - The other is in which 'Y' chromosomes are altogether killed.
  - Both technologies are pioneered by the United States-based companies and use an instrument called 'Flow Cytometer'. Cows are impregnated using sexed semen through the artificial insemination process with the consumption of one straw per cow.

Why is the Technology Required?

- Considered a financial burden, male calves are either killed or abandoned on the roads by farmers as they do not give milk. This had led to an increasing number of cattle roaming the streets, which has caused fatal road accidents as well.

What are the Advantages of the Technology?

- The principal benefit of sexed semen is to produce a calf of a specific sex.
- By using sexed semen, **selection intensity can be increased** by choosing genetically superior dams of replacements which accelerate the rate of genetic gain in dairy herds.

Can Sexed Semen be used for Indigenous Cattle and Buffaloes?

- Cross-breeding can be done but it is not highly recommended.
- Sexed semen units are currently more focused on foreign breeds like **Holstein Friesians (HF)** and cross-bred bulls and sexed semen is mostly used on HF or cross-bred cows only.
- It can be produced for indigenous cow breeds like Sahiwal, Gir and also buffaloes like Murrah but in Punjab, majority farmers own foreign cross-bred cattle and the problem of abandoning or killing male calf lies with cross-bred not indigenous cattle.

PAKISTAN FIRST TO LAUNCH WHO APPROVED TYPHOID VACCINE

Pakistan becomes first country in the world to launch new WHO-approved Typhoid Conjugate Vaccine (TCV).

About:

- **Vaccine: Typhoid Conjugate Vaccine (TCV)** is a one-dose vaccine, injected intramuscularly, that is lower in cost and has higher efficacy. It is expected to provide long lasting immunity in adults, children and infants older than 9 months of age.
- **Bacteria:** It is developed to curb the menace of **Salmonella Typhi bacteria**, which has become a so-called "superbug".

- According to experts, death rates among those infected by the "superbug" could rise dramatically to as much as 20%.
- This vaccine has been approved by the World Health Organisation (WHO) in 2018.
- Pakistan spends a meagre amount of its national resources on public health and a majority of its population remains vulnerable to contagious diseases such as typhoid.
- The new vaccines have been provided by **GAVI**, the Vaccine Alliance, to the Pakistani government free of cost.
- Earlier, in India Bharat Biotech limited has also developed Typbar Typhoid Conjugate Vaccine, which is the world's first typhoid vaccine that can be given to infants older than six months. And apart from that it confers long-term protection against typhoid fever.

GAVI – The Global Alliance for Vaccines and Immunizations

- **Universal:** The GAVI Alliance (formerly the Global Alliance for Vaccines and Immunisation) is a global health partnership of public and private sector organizations dedicated to **"immunisation for all"**.
- GAVI's strategy supports its mission to save children's lives and protect people's health by increasing access to immunisation in poor countries. It contributes to achieving the **United Nations' Millennium Development Goals** by focusing on performance, outcomes and results.
- GAVI vaccine alliance is backed by several global organisation, including the Bill & Melinda Gates Foundation, the WHO, the World Bank and the UNICEF, which arranges bulk buys to lower vaccine costs for poor countries.

About Typhoid:

- Typhoid is a **highly contagious** disease that spreads quickly when people live in crowded neighborhoods with **weak water and sanitation** infrastructure. It is caused by the bacteria **Salmonella typhi**.
- The infection is often passed on through contaminated food and drinking water, and disproportionally impacts children and low-resource communities in Asia and sub-Saharan Africa.
- The **Global Burden of Disease** study estimates that, in 2017, there were nearly 11 million typhoid cases and more than 116 000 typhoid deaths worldwide.

Impact:

- Children are disproportionately affected by typhoid and its associated complications, and it has been believed that typhoid conjugate vaccine offers a very good solution to protect children from falling ill and from drug-resistant typhoid.

Way Ahead:

- This typhoid conjugate should prevent disease in the near-term while governments work on more integrated prevention and treatment that also include its other implications.

- **Liberia and Zimbabwe** are also preparing to introduce the typhoid conjugate vaccine next year with Gavi support, and several other countries are considering use of the vaccine as they review data on the incidence of typhoid in their countries.

NASA'S UNDERWATER ROBOT TO SEARCH FOR ALIEN OCEAN LIFE

Recently, NASA has displayed an underwater robot in Antarctica.

About:

- With an aim to search for life in ocean worlds beyond earth, National Aeronautics and Space Administration (NASA) has recently send a robotic probe below the ice of Antarctica.

- In a series of tests, the operators will put it through its paces, testing its endurance in anticipation of a future mission to an icy ocean world, likely Europa.

What is BRUIE Robot?

- BRUIE or **Buoyant Rover for Under-Ice Exploration**, is a robot being developed by NASA.

- It aims for underwater exploration in extra-terrestrial and icy waters. It can dive deep beneath sea ice to explore ocean depths, which are normally hidden from view.

- It uses buoyancy to remain anchored against the ice and resist water currents.

- It can survive under the ice for months at a time.

- It can remotely navigate using wireless communication

- At times, BRUIE robot is expected to take images and collect data from the region where water and ice meet, i.e. the **"ice-water interface."**

Europa Clipper Orbiter

- It is an interplanetary mission development by NASA to conduct a detailed survey of Jupiter's moon Europa.

- It is scheduled for launch in 2025.

- It aims to determine whether the icy moon could harbor conditions suitable for life.

- It will lay the groundwork for a future mission that could search for life beneath the ice.

Why Ice-Water Interface?

- Ice-water interface are areas, where the ice sheet meets water. Life is often living at these interfaces, both at the sea bottom and the ice-water interface at the top.

- The moons of planets such as **Jupiter's moon Europa** and **Saturn's** moon are believed to have liquid water oceans beneath thick crusts of ice.

- Thus, they may be the most promising locations in our solar system to search for evidence of extra-terrestrial life.

ISRO BEGINS PREPARATIONS FOR SETTING UP THIRD ROCKET LAUNCHPAD

Recently, Government has proposed to set up new rocket launching pad near Kulasekarapattinam in the state of Tamil Nadu.

About:

- ISRO has recently started working on development of new launchpad (second spaceport) at **Kulasekarapattinam** in the Tuticorin district of Tamil Nadu.

- **Present situation:** The Indian Space Research Organization (ISRO) has two launch pads at Sriharikota in Andhra Pradesh.

- **Reason:** As a result of the increase in the number of satellites launches from India, both for domestic and international customers, the demand for additional launch pads has arisen.

Why was Kulasekarapattinam Selected?

- ISRO's second spaceport will be around **2,300 acres** in size, smaller than the first port in Sriharikota, Andhra Pradesh, which is 145 square kilometres in area and 27 kilometres in coastal length.

- **Proximity to seashore**
  - Kulasekarapattinam's proximity to the seashore makes it ideal for "straight southward" launches.
  - Straight trajectory will allow rockets to carry heavier payloads.
  - Being close to equator, it is ideal for putting satellites in the polar orbit.

- **Safety:** In case of a command failure of rocket, if the rocket falls on land, it can cause massive destruction, compared to when it falls into sea or desert, or a place with no habitation.

- **Proximity to equator**
  - Like the Sriharikota spaceport in the Satish Dhawan Space Centre, Thoothukudi was selected as a spaceport due to its nearness to the equator.
  - Proximity to the Equator saves substantial fuel.
  - It reduces the distance to the South Pole and ensures access to a vast, unpopulated area below the flight path.

- **Logistical ease**
  - ISRO has its Liquid Propulsion Systems Centre (LPSC) at Mahendragiri in Tirunelveli district, where it assembles the second and fourth stage engines for the PSLV.

◆ Instead of transporting the second and fourth stages to Sriharikota from Mahendragiri, it would be easier to shift them to Kulasekarapattinam, which is just around 100 km away.

• A new Spaceport at Kulasekarapattinam is expected to provide advantage to ISRO's for its upcoming Small Satellite Launch Vehicle (SSLV) programme.

Spaceports of ISRO

• **Spaceport** is a site for launching spacecraft. At present, ISRO has **only one** spaceport **Satish Dhawan Space Centre (SDSC)**, the, is located in Sriharikota, about 100 km north of Chennai, in the state of **Andhra Pradesh**.

• The organisation launches its PSLV and GSLV rockets from here. It was setup in 1971 and currently has **two** active launchpads.

Why Spaceports close to equator in the east coast are chosen?

• Earth's rotation provides a speed boost to rockets launched in the eastward direction.

• In the event of a failure, debris from an explosion would fall into the Bay of Bengal instead of onto land, potentially damaging property or taking lives.

What are Small Satellite Launch Vehicles (SSLV)?

• The indigenously developed Small Satellite Launch Vehicle (SSLV) is a smaller counterpart of the PSLV, designed to launch small-satellites more frequently.

• **Distance:** It will transfer satellites into the low-earth orbit less than 2,000 km above the earth's surface.

• **Weight:** It can carry upto 500 kg to the low earth orbit within days by a smaller team.

• **Price:** It will help in drastically reducing the price as compared to PSLV.

Why is Kulasekarapattinam Historically Important?

• Kulasekarapattinam was an ancient port dating to **the 1st centuries AD** and was contemporary to the existence of **Kollam, Cheran Port, another Pandyan port.**

• Kulasekarapattinam the name is derived from **pandyan ruler** Maravarman Kulasekara Pandyan I.

• It served Pandyas in their trade with Ceylon(modern day Sri Lanka) and in pearl fisheries in the Gulf of Mannar facing the Tirunelveli Coast.

• It is also **referred to in Marco Polo's travel diaries** dating to 1250 AD.

• It is **famous for** ancient marvelous **Temple Dharmasvardhni.**

• Kulasekarapattinam lost its significance once Tuticorin became a big port.

ISRO LAUNCHES SPY SATELLITE RISAT-2BR1

Recently, India has placed a radar imaging spy satellite, RISAT-2BR1 in lower earth orbit.

About:

• On the **50th** mission of the Polar Satellite Launch Vehicle (PSLV), ISRO has launched the RISAT-2BRI along with 9 customer satellites on board including one self-designed **Duchifat 3 satellite** built by students from Israel.

What is RISAT-2BR1?

• **Background:** On the backdrop of Mumbai terror attacks of **2008**, India felt the desperate need of its own reconnaissance satellites. In this direction, ISRO launched a series of Radar Imaging Satellites (RISAT) for earth observation mainly for security purposes.

• RISAT-2BR1 is **4th in this series** that can also help in agriculture, mining, forestry and coastal management, soil monitoring, disaster management support besides, round the clock border surveillance.

• **Features:**
  ◆ It has a mission life of **five** years.
  ◆ It has a powerful **0.35 m resolution** that will cover a swathe of 5 to 10 km.
  ◆ It can take pictures of the earth during day and night and also under cloudy conditions.
  ◆ It can also provide an all-weather surveillance using synthetic aperture radars (SAR)*.

• These satellites have been launched under commercial arrangement with **NewSpace India Limited (NSIL)**, the commercial arm of Indian Space Research Organisation (ISRO).

New Space India Limited (NSIL)

- NSIL is a **wholly owned Government of India undertaking/** Central Public Sector Enterprise (CPSE).
- It is under the administrative control of Department of Space (DOS).
- It aims to commercially exploit the research and development work of ISRO.
- NSIL was set up **to meet the ever-increasing demands of Indian space programme** and to commercially exploit the emerging global space market.
- Its **major roles and functions** include:
  - **Manufacture** of Small Satellite Launch Vehicle (SSLV) in collaboration with Private Sector.
  - Productionisation of Polar Satellite Launch Vehicle (PSLV) through Indian Industry.
  - Transfer of technology developed by ISRO Centres and constituent units of DOS.
  - Marketing spin-off technologies and products/services, both in India and abroad.

Synthetic Aperture Radar (SAR)

- Synthetic Aperture Radar imaging, is a technique that allows satellites to remotely map the reflectivity of objects or environments with high spatial resolution, through the emission and reception of electromagnetic (EM) signals.
- It is particularly well suited for remote sensing.
- It is mainly used to provide useful information about the Earth's atmosphere, land and ocean.

US ARMY FUNDS CONSTRUCTION OF RARE EARTH PROCESSING FACILITIES

The U.S. Army plans to fund construction of rare earth processing facilities to secure domestic supply of the minerals used to make military weapons and electronics.

About:

- This will be the first financial investment by the US military into commercial-scale Rare Earths production since the Manhattan Project to build the first atomic bomb during World War II.
- **Trigger:** The decision comes after China threatened to stop exporting Rare Earth materials to the US amid the ongoing trade war between the countries.
  - **China controls the lion's share of mineable rare-earth deposits**. On average, **the country has accounted for more than 90%** of the global production and supply of these metals during the past decade.
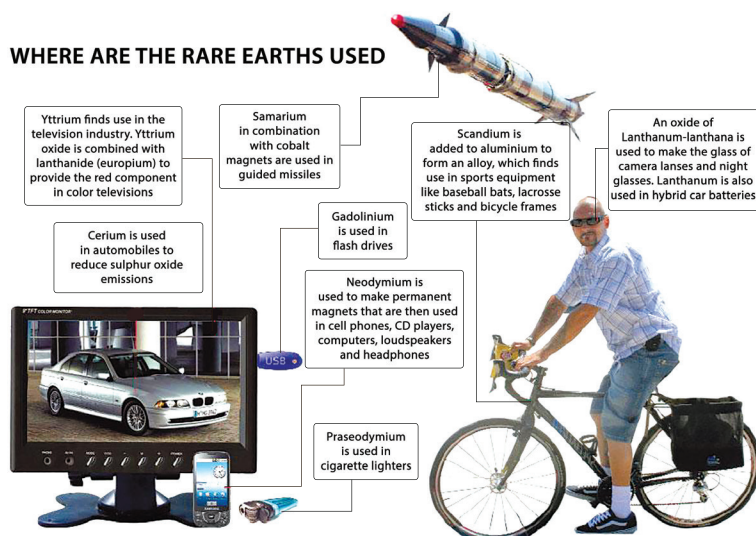 - The US relies on China for 80% of its rare-earth imports.

Rare Earth Metals:

- Rare Earth Elements are a set of 17 chemical elements in the periodic table — the 15 lanthanides, plus scandium and yttrium, which tend to occur in the same ore deposits as the lanthanides, and have similar chemical properties.
- The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).
- Despite their classification, most of these elements are **not really "rare"**. One of the Rare Earths, promethium, is radioactive.

What is the Significance of the Rare Earth Elements?

- The rare earth metals have unique magnetic, luminescent, and electrochemical properties; these elements help make many technologies perform with reduced weight, emissions, and energy consumption, and give them greater efficiency, performance, miniaturization, speed, durability, and thermal stability.
- These elements are important in technologies of consumer electronics, computers and networks, communications, clean energy, advanced transportation, healthcare, environmental mitigation, and national defense, among others.
- **Scandium** is used in televisions and fluorescent lamps, and **yttrium** is used in drugs to treat rheumatoid arthritis and cancer.
- Rare Earth elements are used in space shuttle components, jet engine turbines, and drones. Cerium, the most abundant Rare Earth element, is essential to NASA's Space Shuttle Programme.
- According to the **Rare Earth Technology Alliance (RETA),** the estimated size of the Rare Earth sector is between $10 billion and $15 billion. About 100,000-110,000 tonnes of Rare Earth elements are produced annually around the world.

WHERE ARE THE RARE EARTHS USED

Yttrium finds use in the television industry. Yttrium oxide is combined with lanthanide (europium) to provide the red component in color televisions

Samarium in combination with cobalt magnets are used in guided missiles

Scandium is added to aluminium to form an alloy, which finds use in sports equipment like baseball bats, lacrosse sticks and bicycle frames

An oxide of Lanthanum-lanthana is used to make the glass of camera lanses and night glasses. Lanthanum is also used in hybrid car batteries

Cerium is used in automobiles to reduce sulphur oxide emissions

Gadolinium is used in flash drives

Neodymium is used to make permanent magnets that are then used in cell phones, CD players, computers and headphones

Praseodymium is used in cigarette lighters

MAHARASHTRA GOVERNMENT FIASCO

The recent tussle of government formation in Maharashtra have highlighted many crucial aspects which are important from examination perspective.

Ethical Issues:

- Ethics in politics has to do with the results and consequences of decisions and policies. Politics increasingly is oriented towards outcomes and results. Political ethics is rarely absent but often it is worked out in a rather underdeveloped fashion.
- In short, political ethics is a challenge that requires serious attention, debate and dialogue within societies and between cultures.
  - The political process has to harvest inputs and commitments from diverse stakeholders before setting the direction.
  - Politicians are supposed to make decisions based on what's best for the people they serve. But they often have outside interests that could reasonably be expected to sway their decision-making.
  - Introducing ethical analysis discreetly into the discussion of government rulings, laws and regulations, highlighting the processes involved, and evaluating them regularly can elevate the quality, legitimacy and accountability of public policymaking and improve its effectiveness.

- Our political culture needs to be such that it incorporates ethical standards for all the persons involved in the election process. As of now, it seems that our political culture is hitting a new normal where certain unethical practices in elections are not witnessing registration of protests by even citizens, the biggest stakeholder of a democracy. They need to be active part of polity in order to upheld rule of law, liberty, equality etc.
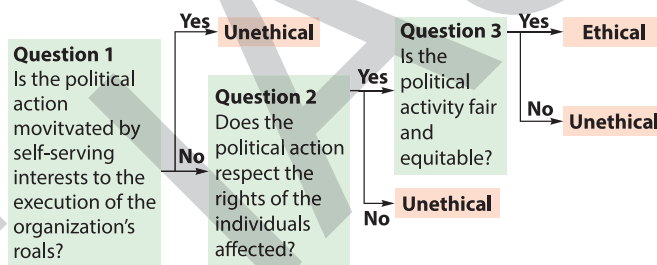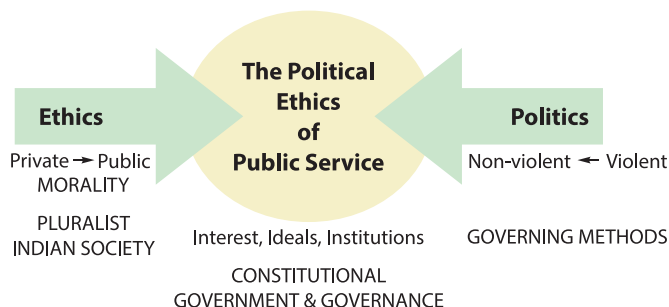

Other Issues involved:

- One of such event was the Supreme Court's order to the chief minister of Maharashtra to face a live telecasted floor test the very next day - as against the 14 days granted by the Governor.
- The court observed that in a situation wherein, if the floor test is delayed, there is a possibility of horse-trading, thus, it becomes incumbent upon the court to act to protect democratic values.

What is Floor Test?

- A floor test is a motion through which the government of the day seeks to know whether it still enjoys the confidence of legislature. If asked by Governor, an appointed CM has to prove majority on the floor of the Legislative Assembly of the state.
- The CM moves a **vote of confidence** and win a majority among those **present and voting**.
- If the confidence motion fails to pass, the chief minister has to resign.
- If there is **more than one person staking claim** to form the government and the majority is not clear:
  - The **governor may call** for a **special session** to see who has the majority.
  - **Such voting** procedure is **oversighted by the Pro-tem Speaker** appointed by the Governor. There are **three modes** by which such voting can be conducted:
    - **Voice vote:** In a voice vote, the legislators respond orally.
    - **Division vote:** In case of a division vote, voting is done using electronic gadgets, slips or in a ballot box.

- **Ballot vote:** Ballot box is usually a secret vote - just like how people vote during state or parliamentary elections.

The Political Ethics of Public Service

Ethics — Private → Public MORALITY — PLURALIST INDIAN SOCIETY

Interest, Ideals, Institutions CONSTITUTIONAL GOVERNMENT & GOVERNANCE

Politics — Non-violent ← Violent — GOVERNING METHODS

What is the Role of Governor in Government Process?

- The Constitution envisages that the **Governor act on the aid and advice** of the **Council of Ministers, except** in those situations in which he is, by or under the Constitution, **required to act in his discretion (Article 163)**.

Appointing Chief Minister:

- In identifying a candidate who, in governor's opinion, is in a position to command a majority, the Governor **has to make his own decision**, subject, of course, to democratic norms:

- The **Governor** may invite **the leader of the largest single party first**.

- If it is clear that the largest single party has **no potential ally or enough independent members to ensure a majority,** he may also invite the leader of the largest pre-poll combination or alliance.

- If there is **no combination or alliance,** he may **invite leaders one by one** in the order of their **size in the new Assembly**.

- However, as per democratic norms, in such cases, the **appointee has to prove his or her majority** within a specified time (generally 14 days) on the floor of the House. During this process, a post-poll combination may emerge, and if any one of them agrees to form a government.

- The Governor may insist on **letters of support from those outside the leader's party who are willing to join or extend support to him**.

What are the Different Checks on the Role of Governor under Article 163?

Sarkaria Commission:

- It was formed to examine the **inter-State relations** and suggest changes. The Commission's report suggested following recommendations for Governors:

- Governor should **look for a party or combination that commands the widest support in the Assembly**.

- His task is to see that a government is formed, and not to try to form a government which will pursue policies which he approves.

- A person, who has been appointed Chief Minister without a clear majority, should seek a vote of confidence in the Assembly within 30 days.

Supreme Court judgements:

- Over the years, several important judgements have been passed aimed at bringing transparency and accountability in the role of governor in state administration.

- **S.R. Bommai vs. Union of India case (1994):** In this landmark judgement, the Supreme court declared that:

- For testing the strength of a ministry floor test is a best method.

- Even though this verdict was in the context of the imposition of President's rule in different States, the principle holds good for any situation in which Governors have to decide on the appointment of a Chief Minister or continuance of a regime based on its numerical strength in the House.

- **Rameshwar Prasad (2005):** The court ruled that there **was nothing wrong in installing a post-poll combination**, and that the Governor could not decline the formation of a government on the ground that it was being done through unethical means.

Pro-tem Speaker:

- Pro-tem Speaker is a temporary speaker appointed for a limited period of time to conduct the works in Lok Sabha or in state legislatures.

- He **presides over the first meeting** of lower House of Parliament after the general elections.

- He also **presides** over the **sitting** in which the **Speaker and Deputy Speaker are elected** if it is a newly constituted House.

- In case there is a tie, he can cast his vote.

- He **administers the oath of office to new members** of the house.

- Conventionally, the senior-most member of the house is selected for the post, who then carries on the activities until the permanent speaker is chosen.

Way Forward:

Free, fair and transparent elections are the hallmark of democracy. This ensures that people have faith in democracy. For making election ethical, all role players including voters, organizers as well as political parties will have to take their duties and responsibility transparently.

■ ■ ■ ■

PAIKA BIDROHA MEMORIAL

Recently, President of India layed foundation stone to Paika Bidroha memorial in Odissa.

About:

- President has laid the foundation stone to the memorial being built in memory of the Paika rebellion, a 200 year old armed revolt against the British East India Company in Odisha.
- The memorial will be built at the **foothills of Barunei** in Khurda district.

What was Paika Rebellion?

- Considered as the 1st war of Independence by many historians, Paika rebellion was a war against the exploitive policies of British that led Paikas to **lose their traditional position** in the society.
- After the second Anglo-Maratha War (1803) marathas ceded most of their territory in Odisha to the British East India Company. It was followed by **British revenue policies** that made Paikas to cede their traditional land rights.
- An armed revolt was led by **Buxi Jagabandhu** against the east Indian company in **1817.** The other **important leaders** of the revolt are **Bidyadhar Mohapatra and Bhramarabar Ray.**
- The Paikas were **supported by** the rajas of nearby regions and zamindars, village heads and ordinary peasants.
- Although initially the Company struggled to suppress the rebellion initially, they managed to suppress the revolt after the surrender of Jagabandhu in 1825. Many of the Paik leaders were hung and the rebellion lost its fire by 1830.

Who were Paikas?

- Paikas were essentially the peasant militias of the Gajapati rulers of Odisha.
- They **rendered military service** to the king during times of war while taking up cultivation during times of peace.

JNANPITH AWARDS 2019

Poet Akkitham won the award

About:

- Malayali poet Akkitham Achuthan Namboothiri, popularly known as Akkitham won the award.

Jnanpith Award:

- The Jnanpith Award is India's highest literary honour
- It was Instituted in **1961.**
- First winner of Jnanpith award was Malyalam **writer G.S. Kurup.**
- It is given to Indian litterateurs who write in one of 22 Indian languages listed in Schedule VIII of Indian Constitution.
- The winners receive a cash prize of 11 lakh rupees, a citation and a bronze replica of **Goddess Saraswati.**

SANTHALI USED FOR THE FIRST TIME IN RAJYA SABHA

Santhali language made its debut in Rajya Sabha when Sarojni Hembram of the Biju Janata Dal from Odisha used it.

About:

- Santali or Santhali is a language in the Munda subfamily of Austroasiatic languages, related to Ho and Mundari.
- Nearly 6 million native speakers in India, mostly in the states of Jharkhand, Assam, Bihar, Odisha, Tripura, and West Bengal.
- It is also spoken in Bangladesh, Bhutan, and Nepal. Total world population estimated at over 6 million.
- It was added to the Eighth Schedule to the Indian Constitution by The Constitution (Ninety-second Amendment) Act, 2003, along with Bodo, Dogri and Maithili.
- During the British rule, it was written in Latin script. In 1925, Raghunath Murmu created the Ol Chiki script for the Santhali language. Nowadays, Santali is often written in the Devanagari script or Bengali script.

Santhal Tribe:

- Santhal are the third largest and one of the oldest tribes in India, They are spread across Assam, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal.
- They are also well-versed in the art of hunting and sericulture.

Santhal Rebellion:

- The Santhal rebellion, commonly known as Santhal Hool, was a native rebellion in present-day Jharkhand, against both the British colonial authority and zamindari system by the Santhal people.
- The rebellion was led by the four Murmu Brothers - Sidhu, Kanhu, Chand and Bhairav.

10 MISCELLANEOUS

PARTIAL CREDIT GUARANTEE SCHEME

The Union Cabinet has approved a partial credit guarantee scheme for public sector banks (PSBs) to purchase high-rated pooled assets from NBFCs and housing finance companies.

About:
- A credit guarantee scheme provides **third-party credit risk mitigation** to lenders through the absorption of a portion of the lender's losses on the loans in case of default, typically in return for a fee.
- The Union Government had issued the PCG Scheme in the Union Budget this year to provide a **one-time partial credit guarantee to PSBs**.
- Under the scheme **Public Sector Banks** can purchase securities **(minimum rating of 'AA')** of financially-sound non-banking finance companies.
- It aims to address **temporary asset liability mismatches** of otherwise solvent NBFCs/HFCs without having to resort to distress sale of their assets for meeting their commitments.
- The government will provide a **one-time, six months**' partial credit guarantee to public sector banks for first loss of up to 10%.

POLITICAL PARTIES REGISTRATION

Election Commission is set to implement Political Parties Registration Tracking Management System.

About:
- Election Commission will implement a "Political Parties Registration Tracking Management System (PPRTMS)" through an online portal.
- The portal will facilitate tracking of status of application online. The applicant will get the status of his or her application of party registration through SMS and email.

How Political Parties are Registered in India?
- The Registration of Political Parties is governed by the provisions of **section 29A** of the **Representation of the People Act, 1951.**
- A party seeking registration has to submit an application to the Commission within a period of 30 days following the date of its formation in prescribed format as per Section 29A of the Representation of the People Act, 1951.

CONSTITUTIONAL AND LEGAL PROVISION OF ELECTION IN INDIA

Article 324 (1) Constitution of India	ECI controls and directs the preparation of Electoral Roll for all elections
Article 325 Constitution of India	One general Electoral Roll for every territorial Constituency, no discrimination on grounds of religion, race, cast & sex
Article 326 Constitution of India	Registration of person as voter in any election having 18 years of age and not disqualified under the Constitution
Article 327 Constitution of India	Enacted two Acts for all the matters related to election Representation of people act, 1950

RPA, 1951

It was brought in 1951 with an objective to provide for:
- Conduct of elections to the Houses of Parliament and to the House or Houses of the Legislature of each State.
- Qualifications and disqualifications for membership of those Houses.
- Corrupt and illegal practices.
- Other offences at or in connection with such elections.
- Decision of doubts and disputes arising out of or in connection with such elections.

HORNBILL FESTIVAL HAS BECOME SYMBOL OF NAGA AND NORTH EAST

Recently, Hornbill Festival celebrated in Nagaland

About:
- Hornbill festival or also known as the 'Festival of Festivals' is a celebration held every year in Nagaland, Northeast India.
- The Festival is **named after** the **Great Indian hornbill**, the globally respected bird that is also displayed in folklore in most of the state's tribes.
- It takes place between 1st and 10th of December every year in Kohima.
- It is held at Naga Heritage Village, Kisama which is about 12 kms from Kohima.
- The aim of the festival is to **revive and protect** the rich culture of Nagaland and displays its extravaganza and traditions.
- At the Hornbill Festival we get a glimpse of the Indian spirit of happy peaceful coexistence of the multiplicities.

Great Indian Hornbill

- The great hornbill (Buceros bicornis) also known as the great Indian hornbill or **great pied hornbill**, is one of the larger members of the hornbill family.
- It is a scheduled species under the 1972 Wildlife Protection Act.
- **IUCN status:** Vulnerable. It is also listed in **Appendix I** of CITES.
- They are hunted for their beaks, which are used to make the traditional **headgear** of the **Nyishi tribe men.**
- They are also hunted for their **oil**—believed to relieve pain — and for their meat.

Conclusion:

Tribal festivities like Hornbill Festival not only offers unique opportunity to the different tribes of the State to interact with each other but also exhibit their cultural heritage and diversity all amalgamating into the true spirit of **"Ek Bharat, Shrestha Bharat".**

ANTIMICROBIAL RESISTANCE

In November, the world observed Antibiotic Awareness Week.

About:

- AMR refers to when micro-organisms – bacteria, fungi, viruses, and parasites – evolve resistance to antimicrobial substances, like antibiotics.
- Those micro-organisms that develop resistance to antibiotics are called **'Superbugs'**.

Reasons for AMR:

- **Lack of regulation and oversight** of use of antibiotics.
- **Lack of awareness** in best practices that leads to excessive or inappropriate use.
- **Misuse:** The use of antibiotics not as medicines but as growth promoters in animals.
- **Over-the-counter or internet sales** that make antimicrobial drugs readily availability common availability of counterfeit or poor-quality antimicrobial.
- **Unethical commercial practices** to promote the sale of antibiotics in large quantities.

Impact of AMR:

- Many infectious diseases have ceased to respond to antibiotics as they are now ineffective.
- Complex surgeries such as organ transplantation might become difficult to undertake because of untreatable infectious complications that may result post-surgery.

- Availability of a new antibiotic takes 10-12 years and an investment of $1 billion. Once it comes into the market, its indiscriminate use swiftly results in resistance, rendering it useless.

Measure to Combat AMR:

- Inter-country development agencies (WHO, FAO, and World Organisation for Animal Health) developed a **Global Action Plan (GAP) on AMR.**
- India developed its **National Action Plan on AMR (NAP) in 2017**.
  - ◆ It is based on the One Health approach, which means that human health, animal health and the environment sectors have equal responsibilities and strategic actions in combating AMR.
- In 2012, India's medical societies adopted the **Chennai Declaration**, a set of national recommendations to promote antibiotic stewardship.
- Food Safety and Standards Authority of India (FSSAI) released "Antibiotic Residues limits" in food from animal origin.
- Ban on the manufacture, sale and use of **Colistin** in the poultry industry.
  - ◆ Colistin is considered the last-resort medicine to treat a person with life-threatening infection.

'POWER OF SIBERIA' PIPELINE

Recently, the 'Power of Siberia' pipeline, the first cross-border gas pipeline was inaugurated by Russia and China.

About:

- The new pipeline is an emblem of closer energy integration in Eurasia, with Russia and China as the key partners.
- Under the contract, Russia will deliver 1 trillion cubic meters of natural gas to China over the next 30 years.

What is the 'Power of Siberia'?

- It is built by Russian energy giant Gazprom PJSC.
- The pipeline runs about 3,000 km from the new Chayanda and Kovykta gas fields in the coldest part of Siberia to Blagoveshchensk, near the Chinese border.

Why is this Link Important to Russia?

- Russia has been a primary gas supplier to Europe, but the Power of Siberia is the first cross-border gas pipeline between Russia and China, adding a prominent eastern dimension to Moscow's energy blueprint.
- The Power of Siberia provides a hedge against deteriorating relations with Europe.
- China is the world's biggest energy consumer and importer.

- Russia expects huge growth in China's energy needs and it will require more pipeline and LNG capacity, benefiting both Gazprom and Novatek PJSC, which is developing LNG on the Yamal peninsula in the Kara Sea.

SIPRI REPORT

According to Stockholm International Peace Research Institute (SIPRI) report, worldwide arms sales rose by nearly 5% in 2018.

About:

- Sales of arms and military services by the sector's largest 100 companies (excluding those in China) totalled $420 billion in 2018, marking an increase of 5% compared with the previous year.
- 80 of the 100 top arms producers in 2018 were based in the USA, Europe and Russia.
- Top 4 ranking for arms productions:
  - USA – 59%
  - Russia 8.6%
  - United Kingdom – 8.4%
  - France – 5.5%

About SIPRI:

- SIPRI is an independent international institute based in Stockholm.
- It was established in 1966 and is regularly ranked among the most respected think tanks worldwide.
- It is dedicated to research into conflict, armaments, arms control and disarmament.
- It provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

ROHTANG PASS

World's longest mountain tunnel under Rohtang Pass named after Atal Bihari Vajpayee (ABV).

About:

- The strategic Rohtang Tunnel, which will connect Manali in Himachal Pradesh with Leh, Ladakh, and Jammu Kashmir, will be known as Atal Tunnel.
- The reason to name it after ABV as a tribute is because the historic decision to construct the strategic tunnel below the Rohtang Pass was taken in 2000 when Vajpayee was the prime minister.

Rohtang Tunnel:

- The 8.8-km-long tunnel will be the world's longest above an altitude of 3,000 metres.
- The tunnel will reduce the distance between Manali and Leh by 46 km.
- The tunnel will provide all-weather connectivity to remote border areas of Himachal Pradesh and Ladakh (Lahaul and Spiti Valley) which otherwise remain cut off from the rest of the country for about six months during winters.
- The project is being **implemented by** the Border Roads Organisation (BRO).

Rohtang Pass:

- Rohtang Pass (or Rohtam Pass) is a high mountain pass at an elevation of 3,978 m above sea level.
- It is located on the eastern Pir Panjal Range of the Himalayas around 51 km from Manali.
- It connects the Kullu Valley with the Lahaul and Spiti Valleys of Himachal Pradesh.
- It holds strategic importance for India as it is the gateway to Keylong in the landlocked Lahaul Valley from Manali in the Kullu district of Himachal Pradesh.
- The pass is on the watershed between the water basins of the Chenab River and the Beas River.
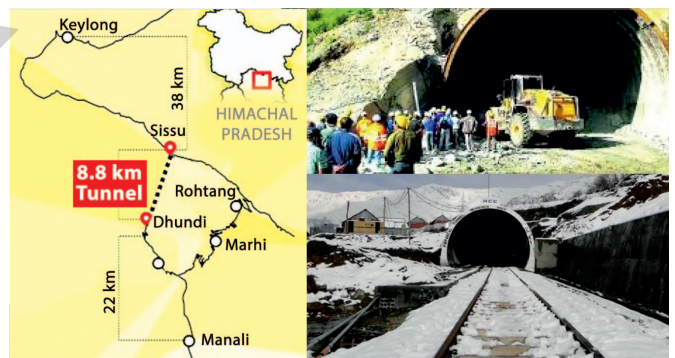
➤ The Centre wants to construct three more tunnels along the **Manali-Leh Highway** to make road **access to remote areas** possible during **winter** months too.

➤ The **defence ministry** has proposed a **11.25 km** tunnel below Baralacha pass, **14.78 km** tunnel below Lachulung-la and **7.32 km** tunnel below Taglang-la.

➤ These tunnels will **shorten the distance** between **Manali** and **Ladakh** and also make the highway an all-weather one.

➤ **Rohtang, Baralacha, Lachulung-la and Taglang-la** are the **high mountain** passes on the Manali-Leh highway and **remain inaccessible** in **winter** due to heavy snowfall.

Multiple Choice Questions

1. With reference to "All India household Consumer Expenditure Survey", consider the following statements:

1. This decennial survey is conducted by the National Sample Survey Office (NSSO).

2. It collects information regarding the expenditure on consumption patterns of goods and services by rural and urban households.

3. Its findings are used for changing the base year for gross domestic product.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 2 only   (d) 1 and 3 only

2. With reference to "Bureau of Energy Efficiency", consider the following statements:

1. It is a statutory body under the Ministry of Power.

2. Its primary objective is to reduce the energy intensity of Indian economy.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

3. Recently, government has launched the "Partial Credit Guarantee Scheme" to

(a) Provide liquidity to the cooperative banks

(b) Address the high NPA's issue of public sector banks

(c) Address temporary asset liability mismatches of NBFCs and housing finance companies

(d) Address the asset liability mismatches of commercial bank

4. With reference to "SEAD initiative", consider the following statements:

1. It is a voluntary collaboration among various N on-G overnment O rganisations (NGOs).

2. Its aim is to promote manufacture, purchase and use of energy-efficient appliances and equipment worldwide.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

5. Consider the following pairs of Exercises and Participating Countries:

Exercise		Participating Countries
1. Hand-in-Hand	—	India and China
2. SURYA KIRAN	—	India and Bhutan
3. INDRA	—	India and Nepal

Which of the pairs given above is/are correctly matched?

(a) 1 only   (b) 1 and 2 only

(c) 3 only   (d) 1, 2 and 3

6. Which of the following is not a member of the "QUAD group"?

(a) China   (b) Australia

(c) Japan   (d) United States

7. With reference to "Milan 2020", consider the following statements:

1. Since its inception, for the first time it will be conducted at Andaman and Nicobar Command (ANC).

2. It will witness participation of countries from South Asia and Southeast Asia region including China.

3. It is aimed to pursue cooperation initiatives with friendly foreign countries in the Indian Ocean Region.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

8. With reference to "Jal Jeevan Mission", consider the following statements:

1. It is funded by the World Bank.

2. It aims to provide Functional Household Tap Connection (FHTC) to every household by 2022.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

9. Consider the following statements:

1. Share of India's services sector in global services exports is around 40 per cent.

2. The Service Export Promotion Council is an apex trade body that facilitates service export from India.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

10 Which of the following would be the direct implications if Centre fails to meet its GST distribution obligations to the states?

1. Hinder service delivery

2. Strengthen Cooperative anarchy

3. Inflation

4. Boost centre's credibility

Which of the statements given above is/are correct?

(a) 1 and 4 only   (b) 1, 2 and 3 only

(c) 3 and 4 only   (d) 1, 2, 3 and 4

11. With reference to "Environment Protection Act", consider the following statements:

1. It defines "environment pollution".

2. The Central Pollution Control Board is empowered to enforce this act.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

12. With reference to "International Geological Congress (IGC)", consider the following statements:

1. It is a global geoscientific event that is held annually.

2. India is the only Asian country that hosted this event twice.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

13. With reference to "Geological Survey of India (GSI)", consider the following statements:

1. It is an attached office to the Ministry of Earth Sciences.

2. It was set up primarily to find coal deposits for the Railways.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

14. Which of the following technologies can be used to control and measure air pollution?

1. LiDAR   2. Photocatalytic paints

3. Smog Tower   4. Wireless Sensor Network

5. Oxy furnace

Choose the correct answer using the code given below:

(a) 1, 2, 3 and 5 only   (b) 2, 3, 4 and 5 only

(c) 1, 3 and 4 only   (d) 1, 2, 3, 4 and 5

15. With reference to "Madden-Julian Oscillation (MJO)", consider the following statements:

1. It is an eastward-moving equatorial atmospheric pattern characterized by adjacent regions of enhanced thunderstorms

2. It regulates tropical cyclones, monsoons and the El Nino cycle.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

16. With reference to "Bharat Bond Exchange Traded Fund", consider the following statements:

1. It would be the first corporate Bond ETF in the country.

2. They can be bought and sold only through the stock exchanges.

3. It would be a basket of bonds issued by Central Public Sector Enterprises or any other Government organization.

4. It will increase the participation of retail investors.

Which of the statements given above is/are correct?

(a) 1, 2 and 3 only   (b) 2, 3 and 4 only

(c) 1 and 3 only   (d) 1, 2, 3 and 4

17. With reference to "Climate Ambition Alliance (CAA)", consider the following statements:

1. It is a group of countries willing to enhance Nationally Determined Contribution to meet Paris goal.

2. It is led by India and was formalized during the Earth Summit in 2018.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

18. With reference to "Small Finance Banks", consider the following statements:

1. The concept of small finance banks was first recommended by Raghu Ram Rajan committee.

2. They can issue both debit cards and credit cards.

3. Payments banks can convert into a small finance bank after 5 years of business.

4. They are required to adhere to all CRR, SLR norms as notified by RBI.

Which of the statements given above is/are correct?

(a) 1, 2 and 4 only   (b) 2, 3 and 4 only

(c) 1 and 3 only   (d) 1, 2, 3 and 4e

19. Consider the following statements about "Santhal rebellion":

1. It was a resistance movement in present day Jharkhand against British colonial authority. .

2. It was led by Sidhu and Kanhu.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

20. Consider the following statements about "Santhali language":

1. It was added to the Eighth Schedule of Indian Constitution by the Ninety-second Constitutional Amendment Act.

2. Due to its rich culture, the status of classical language is granted to it.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

21. This third largest tribe of India is spread across Assam, Bihar and Chhattisgarh and are well-versed in the art of hunting and sericulture. Anove statement refers to which of the following tribe?:

(a) Santhal   (b) Bhill

(c) Munda   (d) Orans

22. The Hornbill festival is celebrated every year in which of the following state?

(a) Nagaland   (b) Mizoram

(c) Tripura   (d) Manipur

23. With reference to "Great Indian Hornbill", consider the following statements:

1. They are hunted for their oil, meat and beak.

2. They have been listed as "Near Threatened" by the International Union for Conservation of Nature (IUCN).

3. It is the state bird of Nagaland.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

24. With reference to "Purchasing Managers' Index (PMI)", consider the following statements:

1. It is compiled by the Economist Intelligence Unit.

2. This sentiment index measures the business activity of only the manufacturing sector.

3. A PMI greater than 50 indicates an expansion in business activity.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 and 3 only

(c) 1 and 2 only   (d) 3 only

25. With reference to "Code for Responsible Lending", consider the following statements:

1. It was launched by the Reserve Bank od India (RBI).

2. It is focused on highlighting and advancing 'responsible lending' practices in microfinance.

3. It has proposed to limit the loan size to Rs 1 lakh per micro borrower irrespective of the profile of lenders.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 and 3 only

(c) 1 and 2 only   (d) 1, 2 and 3

26. In context of "National Statistical Office (NSO)", consider the following statements:

1. It is formed after merging the Central Statistical Office (CSO) and National Sample Survey Office (NSSO).
2. It conducts an Annual Survey of Industries (ASI).

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

27. Micro-credit programmes in the field of Industry, Service and Business (ISB) are run primarily by:

(a) Reserve Bank of India (RBI)
(b) National Bank for Agriculture and Rural Development (NABARD)
(c) Small industrial Development Bank of India (SIDBI)
(d) Insurance Regulatory and Development Authority of India (IRDA)

28. With reference to "Infrastructure Investment Trusts (InvITs)", consider the following statements:

1. Through InvITs, retail domestic savings will be invested in the infrastructure sector.
2. It is regulated by the Securities and Exchange Board of India (SEBI).

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

29. With reference to "India Skill report 2019", consider the following statements:

1. It is jointly published by NITI Aayog and Ministry of Skill Development And Entrepreneurship.
2. It measures the unemployment rate in the country across all states.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

30. Consider the following statements:

1. Prithvi is India's first ballistic missile developed under the Integrated Guided Missile Development Program (IGMDP).
2. Prithvi-II is a two-stage nuclear capable surface-to-surface missile.
3. Naval version of the Prithvi is referred to as "NAMICA".

Which of the statements given above is/are correct?

(a) 1 only (b) 2 and 3 only
(c) 3 only (d) 1, 2 and 3

31. Global Climate Risk Index (CRI) is released by which of the following?

(a) Greenpeace
(b) Intergovernmental Panel on Climate Change (IPCC)
(c) United Nations Environment Programme (UNEP)
(d) Germanwatch

32. In context of "International Financial Services Centers (IFSCs)", consider the following statements:

1. Gujarat's GIFT City has been developed as India's first IFSC.
2. It deals with flows of finance, financial products and services across borders.
3. The Central Government can approve more than one IFSCs in a Special Economic Zone.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 only
(c) 1 and 3 only (d) 1, 2 and 3

33. With reference to "Economic census", consider the following statements:

1. It is a complete count of all establishments engaged in agricultural and non-agricultural economic activities within the geographical boundary of India.
2. Its findings are used for preparing the National Business Register.
3. It is conducted quinquennially by the Ministry of Statistics and Programme Implementation.

Which of the statements given above is/are correct?

(a) 1 and 3 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3

34. Consider the following statements about "National Pharmaceutical Pricing Authority (NPPA)":

1. It is an independent body of experts under the Ministry of Health and Family Welfare.
2. It monitors the prices of decontrolled drugs and formulations.
3. It enforces the provisions of Drugs Prices Control Order (DPCO) for regulating medicine prices.

Which of the statements given above is/are correct?

(a) 1 and 2 only (b) 2 only
(c) 2 and 3 only (d) 3 only

35. With reference to "National List of Essential Medicines (NLEM)", consider the following statements:

1. This list of medicines is prepared by the Ministry of Chemicals and Fertilizers to satisfy the priority health care needs of the population.
2. National Pharmaceutical Pricing Authority consider NLEM to revise the list of medicines that should come under government price control

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

36. With reference to "GST Council", consider the following statements:

1. It is a statutory body.
2. It is chaired by the Prime Minister.

Which of the statements given above is/are correct?

(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

37. Which of the following are the main sources of Blue Energy?

1. Salinity gradient 2. Ocean Thermal Energy Conversion
3. Offshore winds 4. Tidal range

Select the correct answer using the code given below:

(a) 1, 3 and 4 only (b) 2, 3 and 4 only
(c) 1 and 3 only (d) 1, 2, 3 and 4

38. 'Eat Right India' movement is launched by which of the following?

(a) Akshaya Patra Foundation
(b) Ministry of Youth Affairs and Sports
(c) Ministry of Health and Family Welfare
(d) Food Safety and Standards Authority of India (FSSAI)

39. With reference to "GST compensation cess", consider the following statements:
   1. It was introduced as relief for States for the loss of revenues arising from the implementation of GST.
   2. It is levied on five products considered to be 'sin' or luxury goods.
   3. It is paid every two months by the Centre to the states.

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 and 3 only
   (c) 1 and 3 only   (d) 1, 2 and 3

40. With the reference of "International Solar Alliance (ISA)", consider the following statements:
   1. Its membership is open to all United Nations members.
   2. It is the first treaty based international intergovernmental organization headquartered in India.
   3. It is perceived as a key for achieving the objectives of Sustainable Development Goals and Paris Agreement on Climate Change.
   4. Funding from ISA is exempted to be treated as a foreign source of funding for Indian NGOs under the Foreign Contribution Regulation Act.

   Which of the statements given above is/are correct?
   (a) 1 and 4 only   (b) 1, 2 and 3 only
   (c) 2, 3 and 4 only (d) 1, 2, 3 and 4

41. With reference to "World Trade Organization", consider the following statements:
   1. It was established through the Marrakesh Agreement as the successor of the General Agreement on Tariffs and Trade.
   2. It covers trade in goods, services and intellectual property.
   3. The Appellate Body of the World Trade Organization (WTOAB) is the highest authority of its dispute settlement mechanism.

   Which of the statements given above is/are correct?
   (a) 3 only   (b) 2 only
   (c) 1 and 3 only   (d) 1, 2 and 3

42. Consider the following statements:
   1. Ocean regulates the climate by exchanging energy and water with the atmosphere.
   2. Oceans are the largest active carbon sink on Earth.
   3. Ocean acidification is primarily caused by uptake of carbon monoxide from the atmosphere.

   Which of the statements given above is/are correct?
   (a) 1 and 2 only   (b) 2 and 3 only
   (c) 1 and 3 only   (d) 1, 2 and 3

43. Recently, Haryana Police has adopt a unique barcoding based "Trakea software" for which of the following purpose?
   (a) Forensic evidence management
   (b) Reducing corruption
   (c) Women safety and security
   (d) Tracking the stolen items

44. Which of the following index is/are released by the United Nations Development Programme (UNDP)?
   1. Human Development Index
   2. Gender Inequality Index
   3. Multidimensional Poverty Index

   Select the correct option using the code given below:

   (a) 1 and 2 only   (b) 2 only
   (c) 1 and 3 only   (d) 1, 2 and 3

45. With reference to "25th Conference of the Parties to the UN Framework Convention on Climate Change (COP25)", consider the following statements:
   1. It was held in Santiago, Chile.
   2. During COP 25, the UN climate finance facility was created to reimburse the loss of land, culture and human lives.

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

46. With reference to 'Because the Ocean Initiative', consider the following statements:
   1. It was launched at COP21 in Paris.
   2. It aims to encourage UNFCCC Parties to consider submitting NDCs that support implementation of Sustainable Development Goal (SDG) 14.

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

47. With reference to "Government Instant Messaging System (GIMS)", consider the following statements:
   1. This messaging app for centre and state government employees offers end-to-end encryption.
   2. It is designed and developed by the National Informatics Centre (NIC).

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d Neither 1 nor 2

48. With reference to "Pegasus", consider the following statements:
   1. It is a ransomware.
   2. It has been developed by the Israeli cyberarms firm NSO Group

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

49. With reference to "StrandHogg", consider the following statements:
   1. It is a bug that can affect the Android operating system.
   2. Currently, there is no effective block or even detection method against it.

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

50. With reference to "Global Diplomacy Index 2019", consider the following statements:
   1. It is released by Lowy Institute.
   2. As per this index, India has the world's largest diplomatic network.

   Which of the statements given above is/are correct?
   (a) 1 only   (b) 2 only
   (c) Both 1 and 2   (d) Neither 1 nor 2

51. With reference to "Gulf Cooperation Council (GCC)", consider the following statements:
   1. It is a regional intergovernmental political and economic union consisting of all Arab states of the Persian Gulf.

2.   Recently, Qatar has left the GCC.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

52. With reference to "Indian Ocean Rim Association", consider the following statements:

1.   It focuses on Blue Economy and Women's Economic Empowerment.

2.   China has recently been added as a member of the IORA .

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

53. With reference to "East Asia Summit", consider the following statements:

1.   It proposed Indo-Pacific Oceans Initiative to make efforts to create a safe and stable maritime domain.

2.   Both India and China are members of this organisation.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

54. With reference to "Shanghai Cooperation Organisation", consider the following statements:

1.   It is a China led Eurasian political, economic, and security alliance.

2.   India joined SCO as a full member during the Astana summit.

3.   Its Regional Anti-Terrorist Structure (RATS) organ promotes cooperation among member against terrorism, separatism and extremism.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 only

(c) 1 and 3 only   (d) 1, 2 and 3

55. With reference to "BRICS", consider the following statements:

1.   South Africa was inducted in this group in 2010.

2.   The five BRICS countries are also members of G-20.

3.   BRICS states operate the New Development Bank (NDB).

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 only

(c) 1 and 3 only   (d) 1, 2 and 3

56. With reference to "World Malaria Report 2019", consider the following statements:

1.   It is released by the Médecins Sans Frontières or Doctors Without Borders.

2.   As per its findings, Sub-Saharan Africa and India accounts for 85% of the global malaria burden.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

57. With reference to "Malaria", consider the following statements:

1.   It is caused by Plasmodium parasites

2.   RTS,S/AS01 is the world's first malaria vaccine.

3.   It is a notifiable disease in India.

4.   Bihar bears the highest burden of malaria in India.

Which of the statements given above is/are correct?

(a) 1, 2 and 4 only   (b) 2, 3 and 4 only

(c) 1, 2 and 3 only   (d) 1, 2, 3 and 4

58. With reference to "Social Security Code Bill 2019", consider the following statements:

1.   It will offer flexibility to the government to lower the Employees' Provident Fund Organisation's monthly share by employers.

2.   It proposes making Aadhaar mandatory for availing benefits under various social security schemes.

3.   It seeks to establish a social security fund to offer unorganized sector workers medical, pension and disability benefits.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

59. Malimath Committee and Madhava Menon Committee were constituted to recommend:

(a) New Education policy

(b) Increase in Motor Vehicle Tax

(c) Reformation of Indian criminal justice system

(d) Framework of transferring RBI excess reserves to government

60. The Emissions Gap Report is published by which of the following?

(a) Climate action network (b) Greenpeace

(c) Earthwatch   (d) UNEP

61. With reference to the Global Climate Action Summit 2019, consider the following statements:

1.   It convinced governments and international organizations to collaborate in order to achieve their N ationally D etermined C ontributions (NDCs) by 2020.

2.   It aims for net zero emissions by 2050.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

62. Which of the following is India's Intended Nationally Determined Contribution (INDC) to United Nations Framework Convention on Climate Change (UNFCCC):

1.   To achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030.

2.   Creating additional carbon sink of 2.5 to 3 billion tons of CO_2 equivalent by enhanced forest cover by 2030.

3.   100% carbon-free electricity supply by 2050.

Which of the statements given above is/are correct?

(a) 1 and 3 only   (b) 2 only

(c) 1 and 2 only   (d) 1, 2 and 3

63. With reference to "National Registry of Sexual offenders", consider the following statements:

1.   It contains names, photographs, fingerprints, DNA samples, PAN and Aadhaar numbers of convicted sex offenders.

2.   National Crime Records Bureau maintains this database.

3.   It is available to law enforcement agencies for investigation and employee verification.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

64. With reference to "Protection of Plant Varieties and Farmers' Rights Act", consider the following statements:

1. It confers Intellectual Property Rights to plant breeders who have bred or developed plant varieties.
2. Only small and marginal farmers involved in subsistence farming are eligible to claim rights under this act.
3. A farmer can save, use, sow, re-sow, exchange, share or sell his farm produce including seed of a variety protected under this act.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

65. With reference to "Hydrogen fuel-cell vehicles", consider the following statements:

1. It uses hydrogen as a fuel and emits only water vapour.
2. They are less energy efficient than traditional combustion technologies.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

66. With reference to "Anti-defection law", consider the following statements:

1. 10th schedule of Indian constitution deals with it.
2. The decision of the Presiding Officer in case of defection is final and is not subject to judicial review.
3. It specifies a time-period for the Presiding Officer to decide on a disqualification plea.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

67. Consider the following statements:

1. Measles and Rubella are highly-contagious bacterial diseases.
2. They are preventable through vaccination.
3. India has resolved to eliminate measles and control rubella by 2020.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 2 only   (d) 3 only

68. Consider the following statements:

1. Paris Club is a group of countries, which support each other's bids for permanent seats on the United Nations Security Council.
2. Uniting for Consensus (UfC) is an informal group of creditor nations that focus on dealing with borrower nations that face difficulty in paying back their loans.
3. G4 nations or the Coffee Club is formed to oppose the possible expansion of permanent seats in the United Nations Security Council.

Which of the statements given above is/are not correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 2 only   (d) 1, 2, 3 and 4

69. Which of the following parameters are used for calculating Human Development Index?

1. Life expectancy for health   2. School attendance
3. Gross National Income per capita for standard of living

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 1 and 3 only

(c) 2 and 3 only   (d) 3 only

70. With reference to Bharatiya Poshan Krishi Kosh (BPKK), consider the following statements:

1. It aims to promote and reinforce healthy dietary practices both at the individual and community level.
2. It is a repository of diverse crops across 128 agro-climatic zones for better nutritional outcomes.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

71. Industrial Relations Code Bill seeks to replace which of the following labour laws?

1. The Industrial Disputes Act, 1947
2. The Trade Unions Act, 1926
3. The Industrial Employment (Standing Orders) Act, 1946.

Select the correct answer using the code given below:

(a) 1 and 2 only   (b) 2 and 3 only

(c) 3 only   (d) 1, 2 and 3

72. With reference to Ude Desh ka Aam Naagrik (UDAN) 4th phase, consider the following statements:

1. it is launched by Ministry of Civil Aviation.
2. The operation of helicopter and sea plane would be allowed under this 4th phase.
3. International UDAN was launched under the 4th phase.

Which of the statements given above is/are correct?

(a) 1 only   (b) 1 and 2 only

(c) 2 and 3 only   (d) 1, 2 and 3

73. With reference to Development Banks, consider the following statements:

1. They can provide short-term credit only.
2. Development Such banks often lend at low and stable rates of interest.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

74. Talcher fertilizer unit, often seen in the news, is located in which of the following state?

(a) Jharkhand   (b) Maharashtra

(c) Madhya Pradesh   (d) Odisha

75. With reference to Nirvik, consider the following statements:

1. It is an export credit insurence scheme to ease the lending process and enhance loan availability to exporters.
2. It is launched by Ministry of Finance.
3. Under this scheme insurance cover percentage has been enhanced to 90% from the present 60% for both Principal and Interest.

Which of the statements given above is/are correct?

(a) 1 only   (b) 1 and 2 only

(c) 1 and 3 only   (d) 2 and 3 only

76. With reference to Public Finance Management System (PFMS) portal, consider the following statements:

1. It is an online platform developed and implemented by the office of the Controller General of Accounts (CGA).
2. It is administered by the Department of Expenditure under the Union Ministry of Finance.
3. It is used to make direct payments to beneficiaries of government schemes.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

77. With reference to India's Gold Reserve as part of foreign reserve, consider the following statements:

1. According to the World Gold Council, India has the 10th largest gold reserves in the world.

2. India has 69 per cent of the share held in gold in total foreign reserves.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

78. India Justice Report, 2019, recently seen in the news, is published by which of the following?

(a) Ministry of Law and Justice

(b) Tata trusts in collaboration with other think tanks

(c) Interpol

(d) Centre for Health and Social Justice

79. With reference to Constitution Day of India, consider the following statements:

1. It is celebrated every year on November 26 to mark the day on which the Constitution of India was adopted.

2. Earlier, this day was commemorated as National Law Day.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

80. With reference to Lokpal, consider the following statements:

1. The motto of Lokpal is "Ma Gridhah Kasyasvidhanam" which means 'Do not be greedy for anyone's wealth'.

2. It is taken from the Taittiriya upanishad.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

81. With reference to Isha Upanishad, consider the following statements:

1. It is one of the shortest Upanishads, embedded as the final chapter **(adhyāya)** of the Shukla Atharvaveda.

2. The text discusses the Atman and theory of Hinduism.

3. It is referenced by both Dvaita (dualism) and Advaita (non-dualism) sub-schools of Vedanta.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

82. The Constitution (One Hundred and Twenty-Sixth Amendment) Bill was passed recently, it is related to which of the following?

(a) Extend the reservation for SCs and STs under article 334.

(b) Change the provision of Citizenship under article 5 to 11.

(c) Amend article 370 and schedule 1 of the constitution.

(d) Extend the number the judges in the Supreme Court.

83. With reference to Adaptation Fund, consider the following statements:

1. It was set up in 2015 under the Paris Agreement.

2. It finances projects and programmes in developing countries to adapt to the harmful effects of climate change.

3. The Fund is financed in part by government and private donors, and also from share of proceeds of Certified Emission Reductions (CERs).

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 1 and 3 only

(c) 2 and 3 only   (d) 1, 2 and 3

84. With reference to National Adaptation Fund for Climate Change (NAFCC), consider the following statements:

1. NAFCC is a Central Sector Scheme which was set up in the year 2015-16.

2. NABARD is the National Implementing Entity (NIE).

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

85. With reference to caterpillar-fungus, consider the following statements:

1. It is a valuable medicinal resource and a highly sought after Non-Timber Forest Product (NTFP).

2. It is found in shola grasslands of western ghats.

3. It is a hybrid of a fungus that kills and lives in caterpillars.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 1 and 3 only

(c) 2 and 3 only   (d) 1, 2 and 3

86. With reference to AGRIDEX, consider the following statements:

1. It is a agri-futures index launched by BSE.

2. It will track and replicate the performance of all the commodities.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

87. With reference to National Investment and Infrastructure Fund (NIIF), consider the following statements:

1. It is India's first sovereign wealth fund.

2. It was set up as an alternative investment fund (AIF) with a planned corpus of Rs. 40,000 crores

3. The Indian government has 49 per cent stake in NIIF with the rest held by foreign and domestic investors.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only

(c) 1 and 3 only   (d) 1, 2 and 3

88. Climate Change Performance Index (CCPI), is released by which of the following?

1. Germanwatch   2. New Climate Institute

3. Climate Action Network (CAN)

Select the correct option using the code given below:

(a) 1 and 2 only   (b) 2 only

(c) 3 only   (d) 1, 2 and 3

89. With reference to National Aquifer Mapping and Management Programme (NAQUIM), consider the following statements:

1. It is a flagship programme of the Ministry of Earth sciences.

2. The vision of the NAQUIM is to identify and map aquifers at the micro level and to quantify the available groundwater resources.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only

(c) Both 1 and 2   (d) Neither 1 nor 2

90. With reference to electoral bond, consider the following statements:

1. Only citizens and corporates incorporated in India can purchase electoral bonds.

2. The electoral bonds are available for purchase for 10 days after election dates are announced by the Election Commission.

3. Only parties which have secured at least 1% of the votes polled in the most recent General elections or Assembly elections is eligible to receive electoral bonds.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 1 and 3 only
(c) 2 and 3 only   (d) 1, 2and 3

91. With reference to Pro-tem speaker, consider the following statements:

1. He presides over the first meeting of lower House of Parliament after the general elections.
2. In case there is a tie, he can cast his vote.
3. The senior-most member of the house is selected for the post as mentioned in the Representation of People's Act, 1956.

Which of the statements given above is/are correct?

(a) 1 only   (b) 1 and 2 only
(c) 2 and 3 only   (d) 1, 2 and 3

92. With reference to Office of Profit, consider the following statements:

1. It is mentioned under Article 102 of the constitution of India.
2. Constitution defines what is constituted as office of profit with respect to MPs.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only
(c) Both 1 and 2   (d) Neither 1 nor 2

93. With reference to SAANS campaign, consider the following statements:

1. It is launched by Central Pollution Control Board (CPCB).
2. It aims to create awareness about the respiratory problems caused due to pollution and how to handle them.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only
(c) Both 1 and 2   (d) Neither 1 nor 2

94. With reference to CARTOSAT-3, consider the following statements:

1. It is launched in Geo-synchronous orbit by ISRO.
2. It is launched using PSLV-C47.
3. It is an indigenous Earth observation satellite.

Which of the statements given above is/are correct?

(a) 1 only   (b) 1 and 2 only
(c) 2 and 3 only   (d) 1, 2 and 3

95. With reference to Dengue virus, consider the following statements:

1. It can be sexually-transmitted.
2. There is no vaccine for Dengue Virus.
3. It spreads through the bite of the female Aedes aegypti mosquito.

Which of the statements given above is/are correct?

(a) 1 and 2 only   (b) 2 and 3 only
(c) 1 and 3 only   (d) 1, 2 and 3

96. Rotavirus is a leading cause of which of the following disease?

(a) Diarrhoea   (b) Pneumonia
(c) Diphtheria   (d) Kala-Azar

97. Gender Gap Index is published by which of the following?

(a) World Bank   (b) World Economic Forum (WEF)
(c) United Nations Development Programme (UNDP)
(d) Amnesty International

98. With reference to Atal Bhujal Yojana (Atal Jal), consider the following statements:

1. It is implemented in all the village panchayats in all 28 states.
2. 50% of the funding of the programme will be provided by the World Bank.

Which of the statements given above is/are correct?

(a) 1 only   (b) 2 only
(c) Both 1 and 2   (d) Neither 1 nor 2

99. BRUIE, recently seen in the news, refers to which of the following?

(a) NASA's under water Robot
(b) JAXA's rover to land on an asteroid
(c) A new missile system developed by DRDO
(d) A new species of snake found in eastern Himalayas

100. X-57 Maxwell, recently seen in the news, refers to which of the following?

(a) An asteroid recently identified by NASA
(b) An exoplanet
(c) An all-electric aircraft developed by NASA
(d) A new element recently added to the list of known elements.

■■■■

ANSWER KEY

1. (b)	2. (c)	3. (c)	4. (b)	5. (a)	6. (a)	7. (b)	8. (d)	9. (b)
10 (b)	11. (a)	12. (b)	13. (b)	14. (d)	15. (c)	16. (d)	17. (a)	18. (d)
19. (c)	20. (a)	21. (a)	22. (a)	23. (a)	24. (d)	25. (b)	26. (c)	27. (c)
28. (c)	29. (d)	30. (a)	31. (d)	32. (a)	33. (b)	34. (c)	35. (b)	36. (d)
37. (d)	38. (d)	39. (d)	40. (c)	41. (d)	42. (a)	43. (a)	44. (d)	45. (d)
46. (c)	47. (c)	48. (b)	49. (c)	50. (a)	51. (d)	52. (a)	53. (c)	54. (d)
55. (d)	56. (b)	57. (c)	58. (b)	59. (c)	60. (d)	61. (c)	62. (c)	63. (d)
64. (d)	65. (a)	66. (a)	67. (b)	68. (d)	69. (b)	70. (c)	71. (d)	72. (b)
73. (b)	74. (d)	75. (c)	76. (d)	77. (a)	78. (b)	79. (c)	80. (a)	81. (b)
82. (a)	83. (c)	84. (c)	85. (b)	86. (d)	87. (d)	88. (d)	89. (b)	90. (b)
91. (b)	92. (a)	93. (d)	94. (c)	95. (c)	96. (a)	97. (b)	98. (b)	99. (a)
100. (c)								

Subjective Questions

GS Paper 1

Q.1 What is Nehru-Liaquat Pact of 1950? Have participating nations lived up to the commitments made in the Act? Comment **10**

Q.2 Account for the geographical distribution of groundwater resources of India. What are main reasons behind declining Groundwater reserves in India? **10**

Q.3 What is 'Because the Ocean Declaration'? Explain the two-way relationship between climate change and ocean. **15**

Q.4 What is Madden–Julian Oscillation (MJO)? Discuss its impact on the on Monsoon. **10**

GS Paper 2

Q.5 What is difference between National Population Register(NPR) and National Register of Citizens (NRC)? Critically analyse the need of updating National Register of Citizens in India? **15**

Q.6 Citizenship Amendment Act, 2019 has its own merits and demerits as well as consequences in international relations for India. Discuss. **15**

Q.7 The approach followed in the Swachh Bharat Mission (SBM) can act as guiding light for success of many government schemes. Discuss by highlighting the Multi-Faceted approach of the SBM. **15**

Q.8 Government's Electoral Bonds Scheme aims to limit the use of cash in political funding but has several drawbacks which may lead to more harm than good. Critically Analyse. **15**

Q.9 In the light of vagueness around Office of Profit and doubts about its efficacy to serve the intended purpose, the provision of Office of Profit should to be abolished in India. Critically Analyse. **15**

Q.10 Prevention of brutal crime against women in India cannot be done by enactment of Ad-hoc laws under popular pressure but requires long term systemic reforms. Comment. **15**

Q.11 Anti-defection law restricts a legislator's conscience and impedes the oversight function of the legislature. Critically Examine **10**

GS Paper 3

Q.12 The road transport sector in India accounts for the largest share in the movement of both passengers and freight, but exhibit many constraints which require multiple interventions. Discuss **10**

Q.13 Inland Water Transport provides supplementary mode of transport which has many advantages over other modes of transport, but requires urgent resolution of problems plaguing it. Comment. **15**

Q.14 In order to achieve sustainable energy security, India's energy sector shall be driven by energy efficient technologies along with renewable and hybrid energy. Comment. **10**

Q.15 Problem before Indian Economy is not only rising rate of unemployment but also the declining Labour Force Participation Rate. Discuss. **15**

Q.16 What are the different laws concerned with data protection in India? Is there a need for a new robust and efficient data protection law in India? **10**

Q.17 What is difference between the Fuel Cell Electric Vehicles (FCEV) and conventional Battery-Electricity Vehicle. Assess the viability of Fuel Cell Electric Vehicles as a future transport vehicle? **10**

Q.18 What is Fly-Ash? Discuss its potential usages with particular emphasis on agriculture. **10**

Q.19 Discuss the need and provisions of Agriculture Export Policy, 2018. Are the objectives of the Agriculture Export Policy, 2018 attainable? **15**

GS Paper 4

Q.20 "In recent years, our political culture is hitting a new normal where certain unethical practices in elections are not witnessing registration of protests by even citizens". In the context of the given statement, discuss the role of citizens to ensure ethical political culture in country like India. **10**

■■■■

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