# INSIGHTS PT 2019 EXCLUSIVE (UPDATED MODULE)

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# Economy

## 1. NGOs and regulation of their foreign funding

- The *Foreign Contribution (Regulation) Act, 2010* regulate the receipt and usage of foreign contribution by non-governmental organisations ("NGOs") in India.
- *Scope and objective of FCRA:*
  - o The intent of the Act is to prevent use of foreign contribution or foreign hospitality for any activity detrimental to the national interest.
  - o It is applicable to a natural person, body corporate, all other types of Indian entities (whether incorporated or not) as well as NRIs and overseas branches/subsidiaries of Indian companies and other entities formed or registered in India.
  - o It is implemented by the Ministry of Home Affairs, Government of India.
- *In order to achieve the above objective, the Act:*
  - o Prohibits acceptance and use of foreign contribution or foreign hospitality by persons such as a candidate for election, judge, journalist, columnist, newspaper publication, cartoonist and others.
  - o Regulates the inflow to and usage of foreign contribution by NGOs by prescribing a mechanism to accept, use and report usage of the same.
- *Definition:*
  - o It defines the term 'foreign contribution' to include currency, article other than gift for personal use and securities received from foreign source.
  - o Foreign hospitality refers to any offer from a foreign source to provide foreign travel, boarding, lodging, transportation or medical treatment cost.
- In order to be registered under the FCRA, an NGO must be in existence for at least three years and must have undertaken reasonable activity in its field for which the foreign contribution is proposed to be utilised. Further, it must have spent at least INR 1,000,000 over three years preceding the date of its application on its activities.
- *The Act imposes various conditions on the use of foreign funds and some of them are as follows:*
  - o All funds received by a NGO must be used only for the purpose for which they were received.
  - o Such funds must not be used in speculative activities identified under the Act.
  - o Except with the prior approval of the Authority, such funds must not be given or transferred to any entity not registered under the Act or having prior approval under the Act.
  - o Every asset purchased with such fund must be in the name of the NGO and not its office bearers or members.
- *Reporting requirement:*
  - o Every NGO registered or having prior approval under the Act must file an annual report with the Authority in the prescribed form.

## 2. Investor Education and Protection Fund (IEPF) Authority

- Set up under the **Ministry of Corporate Affairs**, Government of India as **a statutory body** under Companies Act 2013.
- It aims **to administer the Investor Education and Protection Fund with the objective of promoting Investor's Education, Awareness and Protection**.
- The Authority takes various initiatives like Investor Awareness Programmes and various other mediums like Print, Electronic, Social Media, and Community Radio etc.
- **Composition:** Secretary Ministry of Corporate Affairs is the Chairperson of the Authority. Joint Secretary Ministry of Corporate Affairs is the Chief Executive Officer of the Authority.

## 3. Ways and Means Advances (WMA)

- The **Reserve Bank of India (RBI)** in consultation with the government of India has set the limits for Ways and Means Advances (WMA) for the first half of the financial year 2019-20 (April 2019 to September 2019) at Rs 75000 crore.
- What is WMA?
  - o The Reserve Bank of India gives temporary loan facilities to the centre and state governments as a banker to government. This temporary loan facility is called Ways and Means Advances (WMA).
- The WMA for the Central Government:
  - o The WMA scheme for the Central Government was introduced on April 1, 1997, after putting an end to the four-decade old system of adhoc (temporary) Treasury Bills to finance the Central Government deficit.
  - o **The WMA scheme was designed to meet temporary mismatches in the receipts and payments of the government**. This facility can be availed by the government if it needs immediate cash from the RBI. The WMA is to be vacated after 90 days. **Interest rate for WMA is currently charged at the repo rate**. The limits for WMA are mutually decided by the RBI and the Government of India.
- Overdraft:
  - o When the WMA limit is crossed the government takes recourse to overdrafts, which are not allowed beyond 10 consecutive working days. The interest rate on overdrafts would be 2 percent more than the repo rate.
- WMA Scheme for State Governments:
  - o **Under the WMA scheme for the State Governments, there are two types of WMA – Special and Normal WMA**.
  - o **Special WMA** is extended against the collateral (mortgaging) of the government securities held by the State Government.
  - o After the exhaustion of the special WMA limit, the State Government is provided a **normal WMA**. The normal WMA limits are based on three-year average of actual revenue and capital expenditure of the state. The withdrawal above the WMA limit is considered an overdraft.

## 4. Permanent Establishment (PE) in India

- A Permanent Establishment in India is a **fixed place of business**, wholly or partly carried out by a **foreign enterprise** operating in India.
- Such fixed place of business can be a branch office, a place of management, a factory, a warehouse, a workshop etc. However, the definition of permanent establishment differs in each tax treaty.
- Governing provisions:
  - o **Taxation of non-residents in India** is **governed by the provisions of the Income-tax Act, 1961 ("the Act") and the provisions of the Double Taxation Avoidance Agreement(s) [DTAA(s)]** concluded by the Central Government.
  - o The business income of a non-resident can be taxed in India if it satisfies the requisite thresholds provided under the Act as well as the threshold provided in the applicable tax treaty, by a concept of Permanent Establishment (PE).
- **Relevance of PEs:**
  - o Usually, foreign companies get tax concession under Double Taxation Avoidance Treaties and they pay taxes in their home countries.
  - o But if they have PEs in India, they should pay taxes for the income they have created in India. **Thus, PE makes** a foreign companies' Indian income taxable in India.

## 5. National Bank for Agriculture & Rural Development (NABARD) and National Housing Bank

- The Reserve Bank of India (RBI) has sold its entire stakes in the **National Bank for Agriculture & Rural Development (NABARD) and National Housing Bank**.
- The decision to divest its entire stake was taken based on the recommendations of the **second Narasimham Committee**.
- The government now holds a **100 per cent stake in both NHB and NABARD**.
- **About NHB:**
  - NHB is an All India Financial Institution (AIFl), set up in **1988**, under the **National Housing Bank Act, 1987**.
  - It is an apex agency established to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support incidental to such institutions and for matters connected therewith.
- **NABARD:**
  - It is an **apex development and specialized bank established on 12 July 1982 by an act by the parliament of India**.
  - Its **main focus** is to uplift rural India by increasing the credit flow for elevation of agriculture & rural non farm sector.
  - It was established based on the **recommendations of the Committee set up by the Reserve Bank of India (RBI) under the chairmanship of Shri B. Shivaraman.**
  - It replaced the Agricultural Credit Department (ACD) and Rural Planning and Credit Cell (RPCC) of Reserve Bank of India, and Agricultural Refinance and Development Corporation (ARDC).
  - It has been accredited with "matters concerning policy, planning and operations in the field of credit for agriculture and other economic activities in rural areas in India".

## 6. Ombudsman Scheme for Non-Banking Financial Companies (NBFCs)

- The Reserve Bank of India (RBI) has extended the coverage of Ombudsman Scheme for Non-Banking Financial Companies (NBFCs), 2018 to eligible Non Deposit Taking Non Banking Financial Companies (NBFC- NDs).
- The coverage will be extended to Non Deposit Taking Non Banking Financial Companies having asset size of Rs 100 crore or above with customer interface.
- However, Non Banking Financial Company-Infrastructure Finance Company (NBFC-IFC), Core Investment Company (CIC), Infrastructure Debt Fund-Non-banking Financial Company (IDF-NBFC) and NBFCs under liquidation are excluded from the ambit of the Scheme.
- **Who will be the ombudsman?**
  - An officer at the RBI not below the rank of general manager will be appointed by the regulator as the ombudsman with territorial jurisdiction being specified by the central bank.
  - The tenure of each ombudsman cannot exceed three years and can be reduced by the regulator if needed.
- **Who can file the complaint?**
  - Any customer can file a complaint with the ombudsman on grounds like non-payment or inordinate delay in payment of interest, non-repayment of deposits, lack of transparency in loan agreement, non-compliance with RBI directives on fair practices code for NBFCs, levying of charges without sufficient notice to the customers and failure or delay in returning the securities documents despite repayment of dues among others.
  - Only written complaints or those in electronic format will be accepted.
- **Appeal:**

o The scheme also allows a person to appeal in case of dissatisfaction with any award by the ombudsman.
- **Compensation:**
  - o The ombudsman may also award compensation not exceeding one hundred thousand rupees to the complainant.
- **Report:**
  - o The ombudsman will be required to send a report to the RBI governor annually on 30 June containing general review of the activities of his office during the preceding financial year and other information required by the central bank.

## 7. World Bank Report on Remittances

- World Bank has released its **Migration and Development Brief**.
- **India is positioned as the world's top recipient of remittances** with its diaspora sending USD 79 billion back home in 2018.
- The remittances in 2018 grew by over 14 percent in India.
- India managed to retain its top spot in remittances with significant growth over the last three years.
- Natural disasters like Kerala floods likely boosted the financial help that migrants sent to their families.
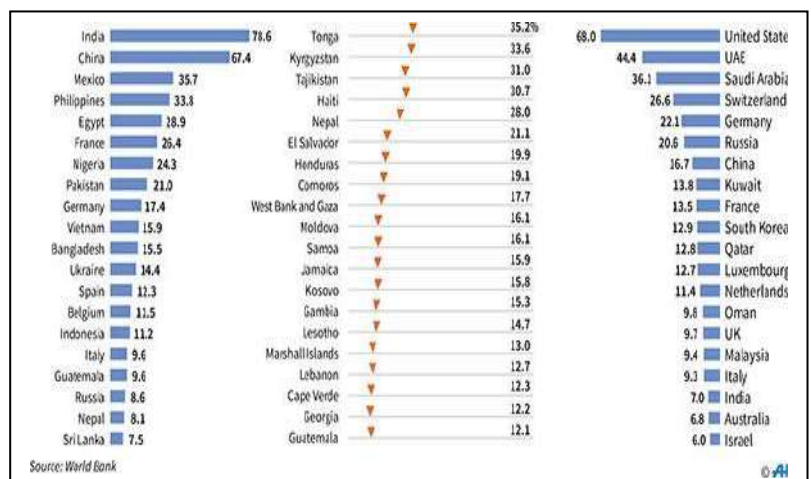


## 8. Non-core assets

- The Department of Investment and Public Asset Management (DIPAM) issued guidelines for monetisation of non-core assets of CPSEs.
- **Non-core assets** are assets that are either not essential or simply no longer used in a company's business operations.
- Non-core assets are often sold when a company needs to raise cash. Some businesses sell their non-core assets in order to pay down their debt.
- **Composition:** A non-core asset can be any kind of asset, including an entire subsidiary or a holding in another company. But often non-core assets are things such as real estate, commodities, natural resources, currencies or securities. A non-core asset might also be factory or property that is no longer being used.
- **Who decides?** Whether an asset is considered non- core is entirely relative to the company. An asset that is non-core for one company might be core for another.

## 9. Asian Development Outlook 2019

- Asian Development Bank (**ADB**) published Asian Development Outlook 2019.

## 10. Global Report on Food Crises 2019

- It is a report released jointly by the Food and Agriculture Organization (**FAO**), World Food Programme (**WFP**) and **EU**.

## 11. Global Food Policy Report- 2019

- International Food Policy Research Institute (**IFPRI**) released Global Food Policy Report- 2019.

- The report reviews the major food policy issues, developments, and decisions of 2018, and considers challenges and opportunities for 2019.
- This year's Report highlights the urgency of rural revitalization to address a growing crisis in rural areas.

## 12. Prepaid payment instruments

- Prepaid payment instruments are those which *facilitate purchase of goods and services against the value stored on such instruments*. Value stored on them is paid by the holder using a medium (cash, debit card, credit card etc).
- These are generally issued in the form of smart cards, mobile wallets, paper vouchers, internet accounts/wallets.
- Prepaid payment instruments (PPIs) come with a pre-loaded value and in some cases a pre-defined purpose of payment.
- They facilitate the purchase of goods and services as well as inter-personal remittance transactions such as sending money to a friend or a family member.
- *These payment instruments are licensed and regulated by the Reserve Bank of India*. There are three types of PPIs—closed system PPIs, semi-closed system PPIs and open system PPIs.
- The most common example of a closed system PPI is a brand-specific gift card. Such cards, physical or otherwise, can be used only at specific locations, and cannot be used to transfer funds from one account to another.

## 13. Repo rate as the external benchmark for lending

- The repo rate is the key policy rate of the Reserve Bank of India (RBI).
- **Current scenario:**
  - The marginal cost of fund based lending rate (MCLR) is currently the benchmark for all loan rates. Banks typically add a spread to the MCLR while pricing loans for homes and automobiles.
- **Why repo?**
  - The RBI has mandated that the spread over the benchmark rate to be decided by banks at the inception of the loan should remain unchanged through the life of the loan. It should remain unchanged unless the borrower's credit assessment undergoes a substantial change and as agreed upon in the loan contract.
  - *If the lending rates are linked to the repo rate, any change in the repo rate will immediately impact the home and auto loan rates, since RBI has mandated the spread to remain fixed over the life of the loan*.
- **Benefits of setting Repo Rate as benchmark for lending:**
  - It will make the system more transparent since every borrower will know the fixed interest rate and the spread value decided by the bank.
  - It will help borrowers compare loans in a better way from different banks.
  - There shall be standardisation and ease of understanding for the borrowers. This would mean that same bank cannot adopt multiple benchmarks within a loan category.
- **What is Repo Rate?**
  - Repo stands for 'Repurchasing Option'. It refers to *the rate at which commercial banks borrow money from the RBI in case of shortage of funds*.
  - It is one of the main *tools of RBI to keep inflation under control*.
- **What is MCLR?**
  - The Marginal Cost of Funds based Lending Rate (MCLR) system was introduced by the Reserve Bank to provide loans on minimal rates as well as market rate fluctuation benefit to

customers. This system has modified the existing base rate system of providing home loans. In this system, banks have to set various benchmark rates for specific time periods starting from an overnight to one month, quarterly, semi-annually and annually.
  - o MCLR replaced the earlier base rate system to determine the lending rates for commercial banks. RBI implemented it on 1 April 2016 to determine rates of interests for loans.

## 14. Domestic systemically important bank

- RBI categorises IDBI Bank as Private Sector Bank; SBI, ICICI and HDFC remain Systemically Important Banks.
- **What is a domestic systemically important bank and why is it important?**
  - o *D-SIB means that the bank is too big to fail*. According to the RBI, some banks become systemically important due to their size, cross-jurisdictional activities, complexity and lack of substitute and interconnection. *Banks whose assets exceed 2% of GDP are considered part of this group*.
- **Significance:**
  - o Should such a bank fail, there would be significant disruption to the essential services they provide to the banking system and the overall economy.
  - o The too-big-to-fail tag also indicates that in case of distress, the government is expected to support these banks. Due to this perception, these banks enjoy certain advantages in funding.
  - o It also means that these banks have a different set of policy measures regarding systemic risks and moral hazard issues.
- **Classification:**
  - o RBI has to disclose names of banks designated as D-SIB. It classifies the banks under five buckets depending on order of importance.
  - o Based on the bucket in which a D-SIB is, an additional common equity requirement applies. Banks in bucket one need to maintain a 0.15% incremental tier-I capital from April 2018. Banks in bucket three have to maintain an additional 0.45%.
  - o All the banks under D-SIB are required to maintain higher share of risk-weighted assets as tier-I equity.

## 15. Usha Thorat panel on Offshore Rupee Markets

- The Reserve Bank of India (RBI) has constituted a panel under the former deputy governor Usha Thorat to examine issues related to offshore rupee markets and recommend policy measures to ensure the stability of the external value of the domestic currency.

## 16. White Label ATMs (WLAs)

- **Automated Teller Machines (ATMs) set up, owned and operated by non-bank entities are called "White Label ATMs" (WLAs).**
- They provide the banking services to the customers of banks in India, based on the cards (debit/credit/prepaid) issued by banks.
- **Key facts:**
  - o Non-bank entities shall commence setting up and operating WLAs only after it has been authorised to do so by the RBI under the **Payment and Settlement Systems Act, 2007.**

o   Taking over of ATMs operated by banks would not be permitted. Entities may ensure to draw a strategic plan for installation of such WLAs based on the criteria set during authorization. White Label *ATM* Operators (WLAO) may also indicate the value added services it proposes to offer at the WLA while seeking authorisation.



**Types of ATM**

- White Label ATM is owned and operated by a non-banking entity while cash is provided by sponsored bank.
- Brown Label ATM is owned by the bank but its operation and maintenance is outsourced to third entity.
- Green Label ATM is used for Agricultural transactions.
- Orange Label ATM is used for transacting shares.
- Yellow Label ATM is used for E-commerce.
- Pink Label ATM is used for women banking.

o   WLAO is permitted to have more than one Sponsor Bank. All the transactions of WLAs serviced by this Sponsor Bank would be settled through it.

o   Cash Management at the WLAs will be the responsibility of the Sponsor Bank, who may if required, make necessary arrangements with other banks for servicing cash requirements at various places.

o   WLAO may establish connectivity with any of the authorised ATM Network Operators/ Card Payment Network Operators and ensure that the settlement of all the transactions at the WLAs shall be done only in the books of the Sponsor Bank through the ATM Network Operators/ Card Payment Network Operators with whom the WLAO has established connectivity.

o   Maintenance and servicing of the WLAs shall be the sole responsibility of the WLAO.

- **In addition to cash dispensing, ATMs / WLAs may offer many other services / facilities to customers. Some of these services include:**
  - o   Account Information.
  - o   Cash Deposit (not permitted at WLAs).
  - o   Regular Bills Payment (not permitted at WLAs).
  - o   Purchase of Re-load Vouchers for Mobiles (not permitted at WLAs).
  - o   Mini / Short Statement Generation.
  - o   PIN change.
  - o   Request for Cheque Book.
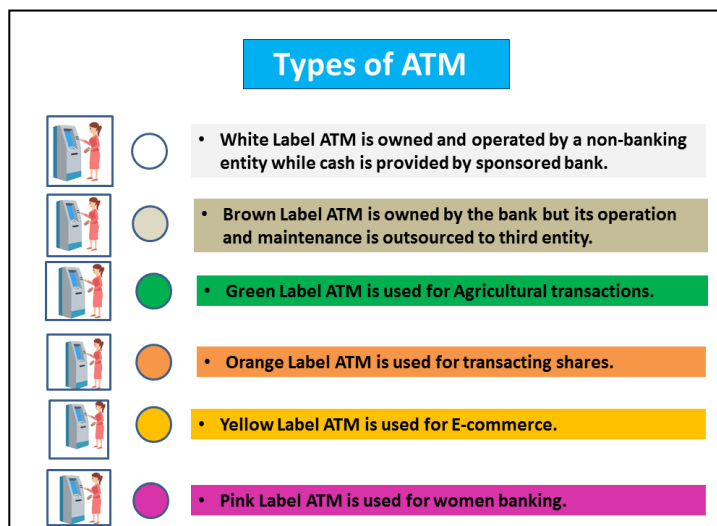
## 17. Indian Accounting Standards (Ind AS)

- The Reserve Bank of India (RBI) has deferred the implementation of new accounting rules, Indian Accounting Standards (Ind AS) for banks till further notice. This is the second extension provided by the RBI. Earlier in April 2018, RBI had postponed the implementation of Ind AS by the banks by one year.

- The new rules — based on the **IFRS9 standards** created in the aftermath of the financial crisis — were supposed to kick in at the start of the new fiscal year that starts on April 1, after being delayed last year.

- **What is it?**
  - o   Ind AS or Indian Accounting Standards **govern the accounting and recording of financial transactions** as well as the presentation of statements such as



**WHAT IS IND AS...**

- These are new set of accounting standards notified and issued by Central Government through Companies (Indian Accounting Standards) Rules 2015
- These are applicable only for specified class or classes of companies
- These standards are Prepared from International Financial Reporting Standards (IFRS) & International Accounting Standards (IAS) as Converged Indian Accounting Standards (Ind AS)

IND AS 101 to 115
Converged from
IFRS 1 to 15

IND AS 1 to 41
Converged from IAS
1 to 41

profit and loss account and balance sheet of a company.
   o Ind AS has been evolved as *a compromise formula that tries to harmonise Indian accounting rules with the IFRS*.
- **Facts for Prelims:**
   o *The implementation of IndAS for public sector banks requires an amendment to the Banking Regulation Act*. The schedule in BR Act relating to financial statement disclosures needs to be changed to the IndAS format.
   o *Section 29 of the BR Act* deals with the accounts and balance sheets of public sector banks. Private sector banks are covered by the Companies Act, which is based on the new accounting standards.

## 18. Fiscal Council to enforce fiscal rules

- Stressing on the need to have uniform rules for fiscal consolidation of States and Centre, 15th Finance Commission's Chairman NK Singh has called for institutional mechanism like a **'Fiscal Council' to enforce fiscal rules and keep a check on Centre's fiscal consolidation.**
- In India, two expert committees have advocated the institution of such a council in recent years.
- *In 2017, the N.K. Singh committee on the review of fiscal rules* set up by the finance ministry suggested the creation of an independent fiscal council that would provide forecasts and advise the government on whether conditions exist for deviation from the mandated fiscal rules.
- *In 2018, the D.K. Srivastava committee on fiscal statistics* established by the National Statistical Commission (NSC) also suggested the establishment of a fiscal council.
- *These recommendations follow similar recommendations from the 13th and 14th finance commissions*, which also advocated the establishment of independent fiscal agencies to review the government's adherence to fiscal rules, and to provide independent assessments of budget proposals.

## 19. Interest rate derivatives

- The Reserve Bank of India (RBI) has allowed non-residents to participate in the rupee interest rate derivatives market. This decision was taken with a view to deepening the rupee interest rate swap (IRS) market.
- With this decision, non-residents of India can undertake rupee interest rate derivative transactions on recognised stock exchanges, electronic trading platforms and over the counter markets (OTCs).
- **What is an Interest-Rate Derivative?**
   o An interest-rate derivative is a financial instrument with a value that increases and decreases based on movements in interest rates.
   o Interest-rate derivatives are often used as hedges by institutional investors, banks, companies and individuals to protect themselves against changes in market interest rates, but they can also be used to increase or refine the holder's risk profile.
- **What is an Interest Rate Swap?**
   o An interest rate swap is a forward contract in which one stream of future interest payments is exchanged for another based on a specified principal amount.
   o Interest rate swaps usually involve the exchange of a fixed interest rate for a floating rate, or vice versa, to reduce or increase exposure to fluctuations in interest rates or to obtain a marginally lower interest rate than would have been possible without the swap.

## 20. Country-by-country (CbC) reports

- *India and the US can now exchange country-by-country (CbC) reports* filed by the ultimate parent corporations based in either of the countries.
- **Significance and impact:**

- o This will reduce the compliance burden on their subsidiaries operating out of these countries.
  - o The agreement would enable both the countries to exchange CbC reports filed by the ultimate parent entities of international groups in the respective jurisdictions, pertaining to the financial years commencing on or after January 1, 2016.
- **Provisions wrt CbC reports:**
  - o *The Income Tax Act requires Indian subsidiaries of multinational companies to provide details of key financial statements from other jurisdictions where they operate*. This provides the IT department with better operational view of such companies, primarily with regards to revenue and income tax paid.
  - o *The provision was a part of the base erosion and profit shifting action plan*, and later incorporated in IT Act also.
- **BEPS Action 13 report:**
  - o The BEPS Action 13 report (Transfer Pricing Documentation and Country-by-Country Reporting) provides a template for multinational enterprises (MNEs) to report annually and for each tax jurisdiction in which they do business the information set out therein. This report is called the *Country-by-Country (CbC) Report*.

## 21. Voluntary Retention Route for Foreign Portfolio Investors

- It is a new channel of investment available to FPIs to encourage them to invest in debt markets in India over and above their investments through the regular route.
- The objective is to **attract long-term and stable FPI investments** into debt markets while providing FPIs with operational flexibility to manage their investments.
- **When was this route proposed?**
  - o This new investment route was proposed by the central bank in October 2018 at a time the rupee was weakening against the dollar very sharply.
- **How are they different from the regular FPI investments?**
  - o Investments through VRR will be free of the macro-prudential and other regulatory prescriptions applicable to FPI investments in debt markets, provided FPIs voluntarily commit to retain a required minimum percentage of their investments in India for a period of their choice. But the minimum retention period shall be three years, or as decided by RBI.
- **How much money can an FPI invest through this route?**
  - o Investments under this route as of now shall be capped at Rs 40,000 crore for VRR-GOVT and 35,000 crore per annum for VRR-COPR. But the limit could be changed from time to time based on macro-prudential considerations and assessment of investment demand. There will be separate limits for investment in government securities and investment in corporate debt.
- **Are there any other facilities for investors through VRR?**
  - o FPIs investing through this route will be eligible to participate in repos for their cash management, provided that the amount borrowed or lent under repo were not to exceed 10 per cent of the investment under VRR.
  - o They will also be eligible to participate in any currency or interest rate derivative instrument, OTC or exchange-traded instrument to manage their interest rate risk or currency risk.

## 22. Special Economic Zones Act, 2005

- The Union Cabinet has approved promulgation of an *Ordinance to amend the definition of "person", as defined in sub-section (v) of section 2 of the Special Economic Zones Act, 2005*:
  - o *To include a trust.*

- o *To enable the setting up of a unit in a Special Economic Zone by a trust.*
- o *To provide flexibility to the Central Government to include in this definition of a person, any entity that the Central Government may notify from time to time.*
- *What are SEZs?*
  - o Special Economic Zones (SEZs) are *geographically delineated 'enclaves' in which regulations and practices related to business and trade differ from the rest of the country and therefore all the units therein enjoy special privileges.*
  - o The basic idea of SEZs emerges from the fact that, while it might be very difficult to dramatically improve infrastructure and business environment of the overall economy 'overnight', SEZs can be built in a much shorter time, and they can work as efficient enclaves to solve these problems.
  - o *The SEZ Act, 2005*, provides the legal framework for establishment of SEZs and also for units operating in such zones.
- For further reference on SEZs Act: http://commerce.gov.in/writereaddata/aboutus/actspdfs/SEZ%20Act,%202005.pdf.

## 23. Disinvestment

- Disinvestment, or divestment, refers to the act of a business or government selling or liquidating an asset or subsidiary or the process of dilution of a government's stake in a PSU (Public Sector Undertaking).
- **Disinvestment policy in India- salient features of the Policy:**
  - o Public Sector Undertakings are the wealth of the Nation and to ensure this wealth rests in the hands of the people, promote public ownership of CPSEs.
  - o While pursuing disinvestment through minority stake sale in listed CPSEs, the Government will retain majority shareholding, i.e. at least 51 per cent of the shareholding and management control of the Public Sector Undertakings
  - o Strategic disinvestment by way of sale of substantial portion of Government shareholding in identified CPSEs upto 50 per cent or more, along with transfer of management control.
- Department of Investment and Public Asset Management (**DIPAM**) promote people's ownership of Central Public Sector Enterprises to share in their prosperity through disinvestment.

# Environment

## 1. UN Global Assessment of Environmental Laws

- United Nations (UN) has released in its first ever global assessment of environmental laws.
- **Key findings:**
    - The **world fares poorly on implementation of environmental laws** and regulations.
    - **Other problems:** Poor coordination across government agencies, weak institutional capacity, lack of access to information, corruption and stifled civic engagement are the key factors behind the poor effectiveness and implementation of environmental regulations.
    - India's people and the environment have been paying the price for its lethargic and poor state of environmental governance.
    - India ranked 177th out of 180 countries in the 2018 **Global Environment Performance Index (EPI)** rankings of the Yale University for being unable to improve its air quality, protect its biodiversity, and cut its greenhouse gas emissions. It also slipped by 36 points in 2018 from 141 in 2016.

## 2. Goa introduces tags to protect biodiversity zones

- **Goa State Biodiversity Board (GSBB)** recently came up with a tagging system to ensure communities residing within the biodiversity zone get **Access Benefit Share (ABS)** from their profits.
- The tag will show that the ingredients used are sourced from the nature. Under this, the sellers are supposed to pay 0.01% of their annual profit to the GSBB and the board will then use this amount to protect the habitat from where the ingredients are.

## 3. World Wetlands Day 2019

- World Wetlands Day is celebrated on February 2 each year **to mark the Day the Convention on Wetlands was adopted** in the Iranian City of Ramsar in 1971.
- *India is a party to the Convention* since 1982 and committed to the Ramsar approach of wise use of wetlands.
- *Theme:* "Wetlands and Climate Change".
- *About Ramsar convention:*
    - The Ramsar Convention is an international treaty for the **conservation and wise use of wetlands.**
    - It is named after the Iranian city of Ramsar, on the Caspian Sea, where the treaty was signed on 2 February 1971.
    - Known officially as **'the Convention on Wetlands of International Importance especially as Waterfowl Habitat'** (or, more recently, just 'the Convention on Wetlands'), it came into force in 1975.
- *Montreux Record:*
    - Montreux Record under the Convention is a **register of wetland sites** on the List of Wetlands of International Importance where **changes in ecological character have occurred, are occurring, or are likely to occur** as a result of technological developments, pollution or other human interference.
    - *It is maintained as part of the Ramsar List*. The Montreux Record was established by **Recommendation of the Conference of the Contracting Parties (1990).** Sites may be added to and removed from the Record only with the approval of the Contracting Parties in which they lie.

## 4. Elephant Corridors

- *Asian Elephant Alliance*, an umbrella initiative by five NGOs, has come together to secure 96 out of the 101 existing corridors used by elephants across 12 States in India.
- *Key facts:*
    o The alliance joined hands to raise the mammoth sum, as money was the main constraint in securing the land.
    o NGOs Elephant Family, International Fund for Animal Welfare, IUCN Netherlands and World Land Trust have teamed up with Wildlife Trust of India's (WTI) in the alliance.
- *What are Elephant Corridors?*
    o Elephant corridors are narrow strips of land that connect two large habitats of elephants. Elephant corridors are crucial to reduce animal fatalities due to accidents and other reasons. So fragmentation of forests makes it all the more important to preserve migratory corridors.
- **MIKE:**
    o Monitoring of Illegal Killing of Elephants (**MIKE**) programme is established by the UN Convention on International Trade in Endangered Species (**CITES**).
    o At the core of the MIKE Programme is the site-based monitoring of **elephant mortality**.
    o MIKE aims to help Elephant range States improve their ability to monitor elephant populations, detect changes in levels of **illegal killing**, and use this information to provide more effective law enforcement.
- **Elephant Trade Information System (ETIS):**
    o ETIS is a comprehensive information system to **track illegal trade in ivory and other elephant products.**
    o It shares the same objectives as those set out for MIKE, with the difference that its aim is to **record and analyse levels and trends in illegal trade**, rather than the illegal killing of elephants.
- **TRAFFIC:**
    o TRAFFIC is a leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.
- **About Gaj Yatra:**
    o 'Gaj Yatra', a nationwide campaign to protect elephants, was launched on the occasion of World Elephant Day in 2017. The campaign is planned to cover 12 elephant range states. The elephant is part of India's animal heritage and the Government celebrates this day to spread awareness about the conservation of the species.
    o The 15 months campaign will be led by the **Wildlife Trust of India (WTI).** The campaign aims to create awareness about elephant corridors to encourage free movement in their habitat.

## 5. Magnetic north pole drifting fast towards Russia

- News publications across the world have been reporting that the magnetic north pole is drifting fast from the Canadian Arctic and towards Russia.
- **What is Magnetic North Pole? How is it different from Geographic North Pole?**
    o The Earth has two north poles- magnetic and geographic.
    o **Geographic north pole**- It is northern axis around which the earth rotates and is fixed. The North Pole is located in the middle of the Arctic Ocean.
    o **The Magnetic North Pole** (also known as the North Dip Pole) is a point on Ellesmere Island in Northern Canada where the northern lines of attraction enter the Earth.
    o A compass needle will point to the Magnetic North Pole – which is different from the geographic north.

- *Origin of Earth's magnetism:*
  - The origin of Earth's magnetism lies in its outer core, a more than 2,000-km layer of liquid iron and some other metals like nickel, that surrounds the central core, or the innermost part.
  - This liquid iron is in constant motion due to Earth's rotation and various other reasons, and this motion produces a magnetic field.

## 6. Flamingo Sanctuary

- Western side of the Thane creek is a dedicated flamingo sanctuary. Thane Creek is home to flamingos as well as other migratory and residential bird species. It is Maharashtra's second marine sanctuary after the one at Malvan.
- *Sanjay Gandhi National Park:* Sanjay Gandhi National Park is a protected area near Mumbai. It is spread over three districts – Palgar, Thane and Mumbai Suburb.

## 7. Resilient Cities Asia-Pacific (RCAP) Congress 2019

- 4th **Resilient Cities Asia-Pacific (RCAP) Congress** 2019 was recently organized by the International Council for Local Environmental Initiatives (**ICLEI**) in association with South Delhi Municipal Corporation.
- **About Resilient Cities Asia-Pacific:**
  - It is the annual global platform for **urban resilience and climate change adaptation**.
  - It is convened by **ICLEI** – **Local Governments for Sustainability** and co- hosted by the World Mayors Council on Climate Change and the City of Bonn.
  - It was launched in **2010** with the goal of forging partnerships and dialogues that matter.
  - The **Asia-Pacific Forum on Urban Resilience and Adaptation** – **Resilient Cities Asia Pacific Congress (RCAP)** is a response to heightened demand from the Asia Pacific Region, which encouraged ICLEI to expand the congress series to include Resilient Cities Asia-Pacific, bringing the event and the focus to the Asia-Pacific region.
- **Facts for Prelims:**
  - **ICLEI –** Local Governments for Sustainability is a global network of more than 1,750 local and regional governments committed to sustainable urban development.

## 8. Western Disturbance

- It is an **extratropical storm originating in the Mediterranean region** that brings sudden winter rain to the north-western parts of the Indian sub-continent. It is a **non-monsoonal precipitation** pattern driven by the westerlies.
- Extratropical storms are a global phenomenon with **moisture usually carried in the upper atmosphere,** unlike their tropical storms where the moisture is carried in the lower atmosphere. In the case of the Indian subcontinent, moisture is sometimes shed as rain when the storm system encounters the Himalayas.
- **Formation:**
  - Western Disturbance originates in the Mediterranean Sea as extra- tropical cyclones. A high-pressure area over Ukraine and neighbourhood consolidates, causing the intrusion of cold air from Polar Regions towards an area of relatively warmer air with high moisture.
  - This generates favourable conditions for **cyclogenesis in the upper atmosphere**, which promotes the formation of an eastward-moving extratropical depression. They gradually travel across the middle-east from Iran, Afghanistan and Pakistan to enter the Indian sub-continent.
- **Impact:**

- o Plays important role in bringing **moderate to heavy rain** in low-lying areas and heavy snow to mountainous areas of the Indian Subcontinent.
- o This disturbance is usually associated with **cloudy sky, higher night temperatures and unusual rain**. This precipitation has great importance in agriculture, particularly for the Rabi crops. Wheat among them is one of the most important crops, which helps to meet India's food security.
- o Excessive precipitation due to this disturbance can cause crop damage, landslides, floods and avalanches. Over the Indo-Gangetic plains, it occasionally brings cold wave conditions and dense fog. These conditions remain stable until disturbed by another western disturbance.
- o When western disturbances move across northwest India before the onset of monsoon, a temporary advancement of monsoon current appears over the region.

## 9. Cyclone Fani
- **It was formed at low pressure region in south east of Sumatra** (Indonesian island), which further intensified into a depression.
- **Classification of Tropical Cyclones:** The criteria followed by Meteorological Department of India (IMD) to classify the low-pressure systems in the Bay of Bengal and in the Arabian Sea as adopted by World Meteorological Organisation (WMO) are as under:
- **Terminology:**
  - o Cyclones are given many names in different regions of the world – They are known as **typhoons** in the China Sea and Pacific Ocean; **hurricanes** in the West Indian islands in the Caribbean Sea and Atlantic Ocean; **tornados** in the Guinea lands of West Africa and southern USA.; **willy-willies** in north-western Australia and **tropical cyclones** in the Indian Ocean.

| Type of Disturbances | Associated Wind Speed in the Circulation |
|---|---|
| Low pressure Area | Less than17 knots (<31 kmph) |
| Depression | 17 to 27 knots (31 to 49 kmph) |
| Deep Depression | 28 to 33 knots (50 to 61 kmph) |
| Cyclonic Storm | 34 to 47 knots (62 to 88 kmph) |
| Severe Cyclonic Storm | 48 to 63 knots (89 to 118 kmph) |
| Very Severe Cyclonic Storm | 64 to 119 knots (119 to 221 kmph) |
| Super Cyclonic Storm | 119 knots and above (221 kmph and above) |

## 10. Bomb Cyclone
- A powerful bomb cyclone had impacted several parts of the US causing heavy floods.
- **What is a Bomb cyclone?**
  - o The term is used by meteorologists to indicate *a mid-latitude cyclone that intensifies rapidly*.
  - o *A bomb cyclone happens when atmospheric pressure in the middle of the storm drops at least 24 millibars over 24 hours, quickly increasing in intensity*. The lower the pressure, the stronger the storm.
- **How it works?**
  - o Deep drops in barometric pressure occur when a region of warm air meets one of cold air. The air starts to move and the rotation of the earth creates a cyclonic effect. ***The direction is***

*counter clockwise in the Northern hemisphere leading to winds that come out of the northeast*.

- **What's the difference between hurricanes, cyclones and typhoons?**
  - o Hurricanes, cyclones and typhoons are all tropical storms. They are all the same thing but are given different names depending on where they appear. When they reach populated areas they usually bring very strong wind and rain which can cause a lot of damage.
  - o Hurricanes are tropical storms form over the North Atlantic Ocean and Northeast Pacific. Cyclones are formed over the South Pacific and Indian Ocean. Typhoons are formed over the Northwest Pacific Ocean.

## 11. El Nino

- In India, there is a relationship between El Nino events and hotter than usual summers along with a decrease in rainfall during the monsoon.
- Most of the time, these events have also led to drought conditions. The weak El Nino might have an effect on the onset and intensity of monsoon.
- In the 135 years between 1880 and 2014, around 90 per cent of all evolving El Nino years have seen below normal rainfall, and 65 per cent of them experienced droughts.



**What is ENSO?**

- ENSO is nothing but **El Nino Southern Oscillation.** As the name suggests, it is an **irregular periodic variation of wind and sea surface temperature** that occurs over the tropical eastern Pacific Ocean. ENSO affects the tropics (the regions surrounding the equator) and the subtropics (the regions adjacent to or bordering the tropics).
- The **warming** phase of ENSO is called **El Nino**, while the **cooling** phase is known as **La Nina**.

- **What is El Nino?**
  - El Nino is a climatic cycle characterised by **high air pressure in the Western Pacific and low air pressure in the eastern.**
  - In normal conditions, strong trade winds travel from east to west across the **tropical Pacific**, pushing the **warm** surface waters towards the **western Pacific**. The surface temperature could witness an increase of 8 degrees Celsius in Asian waters. At the same time, **cooler** waters rise up towards the surface in the **eastern Pacific** on the coasts of Ecuador, Peru, and Chile.
  - This process called **upwelling** aids in the development of a rich ecosystem.

- **What causes El Nino?**
  - o El Nino sets in when there is **anomaly in the pattern**. The westward-blowing trade winds weaken along the Equator and due to changes in air pressure, the surface water moves eastwards to the coast of northern South America. The central and eastern Pacific regions warm up for over six months and result in an El Nino condition. The temperature of the water could rise up above normal. **Warmer surface waters increase precipitation and bring above-normal rainfall in South America,** and droughts to Indonesia and Australia.
- **What are El Nino's effects?**

- o El Nino affects global weather. It **favours eastern Pacific hurricanes and tropical storms**. Record an unusual rainfall in Peru, Chile and Ecuador are linked to the climate pattern.
- o El Nino reduces upwelling of cold water, decreasing the uplift of nutrients from the bottom of the ocean. This affects marine life and sea birds. The fishing industry is also affected.
- o **Drought caused by El Nino** can be widespread, **affecting southern Africa, India, Southeast Asia, Australia, and the Pacific Islands**. Countries dependent on agriculture are affected.
- o **Australia and Southeast Asia get hotter**.
- o A recent WHO report on the health consequences of El Nino forecasts a **rise in vector-borne diseases**, including those spread by mosquitoes, in Central and South America. Cycles of malaria in India are also linked to El Nino.

## 12. Natural Capital Accounting

- **Natural capital** includes all of the resources that we easily recognize and measure, like minerals, energy, timber, agricultural land, fisheries and water.
- It also includes the **ecosystem services** that are often "invisible" to most people, such as air and water filtration, flood protection, carbon storage, pollination of crops, and habitats for wildlife.
- These values are not readily captured in markets, so we don't really know how much they contribute to the economy.
- **Why does natural capital matter for economic growth? Isn't GDP enough?**
  - o **Gross Domestic Product (GDP)** measures the value of goods and services produced over one year. This is an **incomplete assessment of a country's economic wellbeing** because GDP only looks at one part of economic performance—output— but tells us nothing about income in the long term.
  - o GDP doesn't take into account the wealth underpinning this output. For example, when a country exploits its minerals, it is actually using up its finite mineral wealth.
  - o A full picture of a country's wealth – obtained through a methodology called '**wealth accounting**' – includes all assets that contribute to our economic wellbeing, from buildings and factory machines, to infrastructure, human and social capital, and natural capital.
  - o Currently **GDP ignores natural capital**.
- **What are natural capital accounts? How are they different from the accounts that countries keep now?**
  - o **Natural Capital Accounts (NCA)** are sets of unbiased data for material natural resources, such as forests, energy and water. NCA follow an international standard approved by the **United Nations Statistical Commission**, called the **System for Environmental-Economic Accounts (SEEA)**.
  - o Countries already produce datasets based on the internally agreed **System of National Accounts (SNA)**. These datasets describe a country's economic performance, and form the basis for calculating GDP and other well-known economic indicators, such as balance of trade and household consumption.
  - o While national accounts are limited to the production boundary of the economy, natural capital accounts go beyond that, to account for natural goods and services.
- **Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES)**
  - o The project Is launched by the **United Nations Statistics Division**, the **UNEP**, the Secretariat of the Convention on Biological Diversity (**CBD**), and the **European Union**.
  - o Funded by the European Union through its Partnership Instrument (PI), NCAVES aims to assist the five participating partner countries, namely **Brazil**, **China**, **India**, **Mexico** and **South Africa**, to advance the knowledge agenda on environmental- economic accounting, in particular ecosystem accounting.
  - o The project will have a duration until the end of 2020.

- **Inclusive Wealth Index (IWI)**
    - The **UN International Human Dimensions Programme** has created an inclusive sustainability indicator, the Inclusive Wealth Index (IWI), which measures the productive bases of an economy: **produced, natural and human capital**, and based on these three assessments, calculates the trajectory of a country's wealth.
- **Bank of Natural Capital:**
    - It is an educational initiative associated with **The Economics of Ecosystems and Biodiversity (TEEB)** to communicate natural capital investment and value theory related to what are sometimes called **"economic intangibles"** to the global public.

## 13. EnviStats-India 2019

- EnviStats-India 2019 is released by the Ministry of Statistics and Programme Implementation (**MoSPI**)
- **Key Findings:**
    - India's economic growth, took a toll on its natural assets like forests, food, clean air, etc.
    - 11 states have registered a decline in natural capital between 2005 and 2015
    - In the last 6 years, the rate of growth of forest stock has reduced by more than 10% in almost all states.
    - **Monitoring the natural capital** is important and should be one of the determiners for sustainable development, says the report.
    - The report also reveals few positive trends. For example, Andhra Pradesh, Gujarat, Jharkhand, Kerala, Maharashtra and Odisha show an increase in parameters such as transition of fallow land to farmland, increase in forest cover along with growing carbon stock and new sources of minerals.

## 14. Wealth Accounting and the Valuation of Ecosystem Services (WAVES)

- **Wealth Accounting and the Valuation of Ecosystem Services (WAVES)** is a **World Bank**-led global partnership that aims to **promote sustainable development** by ensuring that natural resources are mainstreamed in development planning and national economic accounts.
- WAVES was launched at the **2010 Convention on Biological Diversity** meeting in **Nagoya**, Japan.
- This global partnership brings together a broad coalition of UN agencies (**UNEP, UNDP, UNCEEA**), governments, international institutes, nongovernmental organizations and academics to **implement Natural Capital Accounting (NCA)** where there are internationally agreed standards, and develop approaches for other ecosystem service accounts.
- By working with central banks and ministries of planning and finance across the world to **integrate natural resources into development planning** through NCA, to enable more informed decision making that can ensure genuine green growth and long-term advances in wealth and human well-being.
- **Objectives:**
    - Help countries adopt and implement accounts that are relevant for policies and compile a body of experience
    - Develop approaches to ecosystem accounting methodology
    - Establish a global platform for training and knowledge sharing
    - Build international consensus around natural capital accounting

## 15. Global Cooling Coalition

- The first-ever **global coalition on clean and efficient cooling** was launched at the recently held First Global Conference on Synergies between the 2030 Agenda and Paris Agreement in Copenhagen, Denmark.

- The Global Cool Coalition is a unified front that links action across the Kigali Amendment, Paris Agreement and Sustainable Development Goals.
- **Objective:** It is expected to inspire ambition, identify solutions and mobilise action to accelerate progress towards clean and efficient cooling.
- **Supporters:** Besides the UN, it is supported by the Climate and Clean Air Coalition, the Kigali Cooling Efficiency Program and Sustainable Energy for All (SEforALL).
- **Composition**: It includes government officials from Chile, Rwanda, Denmark as well as leaders from civil society, research and academia.

## 16. Sustainable Energy for All (SEforALL)

- **Sustainable Energy for All (SEforALL)** is an International Organization working with leaders in government, the private sector and civil society to drive further, faster action toward achievement of **Sustainable Development Goal 7**, which calls for universal access to sustainable energy by 2030, and the **Paris Climate Agreement**, which calls for reducing greenhouse gas emissions to limit climate warming to below 2 degrees Celsius.
- Former UN Secretary-General Ban Ki-moon launched SEforALL in September 2011 as a global initiative that would mobilize action by these diverse actors in support of **SDG7's three core objectives**:
  - ○ ensuring universal access to modern energy services
  - ○ doubling the share of renewable energy in the global energy mix
  - ○ doubling the global rate of improvement in energy efficiency
- SEforALL's global team is based in **Vienna**, Austria and **Washington, D.C**.
- It is combined partnership of **World Bank** and **UN**
- **Global Tracking Framework Report**
  - ○ It is a Multi-Tier Framework (MTF) for measuring energy access commissioned by **SE4ALL.**
  - ○ Responsibility for the development of the Global Tracking Framework was assigned to a Steering Group, which is co-chaired by the **World Bank**'s **Energy Sector Management Assistance Program (ESMAP)** and the International Energy Agency (**IEA**).
  - ○ **Its members are:**
    - ▪ Global Alliance for Clean Cookstoves ("the Alliance")
    - ▪ International Institute for Applied Systems Analysis (IIASA)
    - ▪ International Partnership for Energy Efficiency Cooperation (IPEEC)
    - ▪ International Renewable Energy Agency (IRENA)
    - ▪ Renewable Energy Network for the 21st Century (REN21)
    - ▪ UN Energy
    - ▪ UN Foundation
    - ▪ United Nations Development Programme (UNDP)
    - ▪ United Nations Environment Programme (UNEP)
    - ▪ United Nations Industrial Development Organization (UNIDO)
    - ▪ World Energy Council (WEC)
    - ▪ World Health Organization (WHO)
    - ▪ Practical Action

## 17. Central Monitoring Committee to Check River Pollution

- The **National Green Tribunal (NGT)** has formed a Central Monitoring Committee to prepare and enforce a national plan to make over 350 river stretches across the country pollution free.
- **Composition:** The committee would comprise a representative of NITI Aayog, secretaries of Ministry of Water Resources, Ministry of Urban Development and Ministry of Environment, the director general of National Mission for Clean Ganga and the Chairman of the Central Pollution

Control Board. **The Chairman of CPCB** will be the **nodal authority for coordination**. The chief secretaries of the states will act as the nodal agency at the state level.

- **Objective:** The committee has been composed to monitor pollution of rivers. The central monitoring committee will coordinate with the River Rejuvenation Committees of the states and oversee the execution of the action plans, taking into account the timelines, budgetary mechanism and other factors.

## 18. Sustainable India Finance Facility (SIFF)

- The Sustainable India Finance Facility (SIFF) is an innovative partnership between **UN Environment**, **World Agroforestry Centre** and **BNP Paribas** which aims to '**leverage private finance for public good' in India**.
- SIFF brings together governments, the private sector, academia and communities to scale up sustainable investment in natural resource management, renewable energy production, and rural livelihoods.
- **Key Projects of SIFF:**
  - **Zero Budget Natural Farming in Andhra Pradesh**
  - Conservation and Livelihoods Generation in the Western Ghats
  - Improving Air Quality and Community Health in Northern India

## 19. Forest Fires

- Odisha had registered a sudden jump in forest fires across the State resulting in massive damage to flora and fauna.
- **Causes of Forest Fire:**
  - Forest fires are **caused by Natural causes as well as Man-made or anthropogenic causes**.
  - **Natural causes** such as lightning which set trees on fire. High atmospheric temperatures and low humidity offer favourable circumstance for a fire to start.
  - **Man-made causes** like flame, cigarette, electric spark or any source of ignition will also cause forest fires.
  - Traditionally Indian forests have been affected by fires. The problem has been **aggravated with rising human and cattle population and the increase in demand for grazing**, shifting cultivation and Forest products by individuals and communities.
  - **High temperature, wind speed and direction, level of moisture in soil and atmosphere and duration of dry spells** can intensify the forest fires.
- **How does government get informed on Forest Fire?**
  - When a fire is detected by **NASA's MODIS** (Moderate Resolution Imaging Spectroradiometer) and **VIIRS** (Visible Infrared Imaging Radiometer Suite) satellites, the **Forest Survey of India (FSI)** analyses the data by overlaying the digitised boundaries of forest areas to pinpoint the location to the exact forest compartment.
  - The FSI relays news of the fire to the concerned State, so that the Divisional Forest Officer (DFO) in charge of the forest where the fire is raging is informed.

> - **About MODIS:**
>
>   - **MODIS** (or Moderate Resolution Imaging Spectroradiometer) is a key instrument aboard the **Terra** (originally known as EOS AM-1) and **Aqua** (originally known as EOS PM-1) satellites.
>   - Terra's orbit around the Earth is timed so that it passes from north to south across the equator in the morning, while Aqua passes south to north over the equator in the afternoon.
>   - **Terra MODIS and Aqua MODIS** are viewing the entire Earth's surface every 1 to 2 days, acquiring data in 36 spectral bands, or groups of wavelengths.

## 20. Face of Disasters 2019 Report

- The Face of Disasters 2019 report was recently published by **Sustainable Environment and Ecological Development Society (SEEDS).**
- The report released by SEEDS as part of its 25th anniversary, analyses past trends, looking at disasters from a broader perspective to capture their varied facets.
- **About SEEDS:**
  - **SEEDS, a non profit voluntary organization**, is a collective endeavor of young professionals drawn from development related fields.
  - **Functions:** It is involved in research activities in Community Development, Disaster Management, Environmental Planning, Transport Planning, and Urban and Regional Planning. Activities are carried out on behalf of government, semi – government and international development agencies.

## 21. Connect4Climate

- **Connect4Climate** is a global partnership program launched by the **World Bank Group** and the Italian Ministry of Environment, Land and Sea, together with the German Federal Ministry for Economic Cooperation and Development, that takes on climate change by supporting ambitious leadership, promoting transformative solutions and empowering collective action.
- The Connect4Climate community connects about 500 partners around the world including civil society groups, media networks, international organizations, academic institutions, youth groups, and the private sector.
- Connect4Climate interacts with a global audience of more than a million individuals who participate on Connect4Climate's social media channels, including Facebook, Twitter, Vimeo, YouTube, Flickr, LinkedIn, and Instagram.

## 22. Program on Forests (PROFOR)

- The **Program on Forests (PROFOR)** was created in **1997** to support in-depth analysis, innovative processes and knowledge- sharing and dialogue, in the belief that sound forest policy can lead to better outcomes on issues ranging from livelihoods and financing, to illegal logging, biodiversity and climate change.
- PROFOR encourages a big-picture approach to forest conservation and management in developing countries.
- The **World Bank** houses PROFOR's Secretariat.

## 23. Rice Knowledge Bank – Assam

- To bridge the gap between research and practice in rice production, the International Rice Research Institute (**IRRI**), in collaboration with the **Government of Assam**, Assam Agriculture University, and the World Bank funded **Assam Agribusiness and Rural Transformation Project (APART)** developed the **Rice Knowledge Bank, Assam (RKB, Assam)**—a digital extension service that provides practical knowledge solutions, specialized for small-scale farmers for the state of Assam.
- **About Rice Knowledge Banks:**
  - **Rice Knowledge Bank (RKB)**—a digital extension service that provides practical knowledge solutions, specialized for small- scale farmers in developing countries.
  - RKB showcases rice production techniques, agricultural technologies, and best farming practices based on IRRI's pool of knowledge from research findings, learning and media resources, and in- country projects.

## 24. Nandhaur Wildlife Sanctuary

- With the number of tigers steadily on the rise at Nandhaur Wildlife Sanctuary in **Uttarakhand**, the authorities feel upgrading it to a tiger reserve is necessary for the conservation of tigers at the facility.
- Nandhaur Wildlife Sanctuary is situated **close to the Nandhaur river in Kumaon region of the State**.

## 25. Toluene

- **Toluene is one of the petrochemical wastes** that get released without treatment from industries such as refineries, paint, textile, paper and rubber.
- Toluene has been reported to cause serious health problems to aquatic life, and studies point that it has genotoxic and carcinogenic effects on human beings.

## 26. Earth Day

- It is an annual event, organized to show support for environmental protection around the world on **April 22**.
- Earth Day was **founded by American senator Gaylord Nelson for environmental education**.
- This day **commenced on April 22, 1970. In the year 2020, the 50th anniversary** of the first Earth Day will be celebrated.
- **Theme** of Earth Day 2019: **Protect Our Species.**

## 27. East Asian-Australasian Flyway (EAAF)

- In a first, east Asian birds make Andaman stopover. These birds also use Andaman and Nicobar Islands for a few weeks rest before they can fly along the **East Asian-Australasian Flyway (EAAF)**.
- The routes that migratory waterbirds traverse on an annual basis are known as **'flyways'**. There are **nine major flyway around the world**.
- The **East Asian – Australasian Flyway (EAAF)** stretches from the Russian Far East and Alaska, southwards through East Asia and South-east Asia, to Australia and New Zealand and encompasses 22 countries.
- During migration, waterbirds rely on a system of highly productive wetlands to rest and feed, building up sufficient energy to fuel the next phase of their journey.

## 28. Indian Bullfrogs

- A study has found that the Indian bullfrogs introduced in the Andaman Islands are invasive, and eat native wildlife including fish and lizards.
- The Indian bullfrog (*Hoplobatrachus tigerinus*) is **native to the Indian subcontinent**. It is a **large species of frog found in mainland Myanmar, Bangladesh, India, Pakistan, Afghanistan, and Nepal**.
- Other names: Indus Valley bullfrog, Asia bullfrog.
- The bullfrogs are **prolific breeders:** they have short breeding seasons, and each egg clutch can contain up to 5,750 eggs.
- Its tadpoles are **carnivorous and eat other tadpoles, including their own species.**
- They **prefer freshwater wetlands and aquatic habitats. Generally, they avoid coastal and forest areas**.

## 29. Eurasian Lynx

- The Eurasian Lynx, found currently only in Ladakh and some parts of Pakistan-Occupied Kashmir, may have found its way into the Kashmir Valley, according to a report.
- If confirmed, the lynx would be the third smaller cat species reported from the Kashmir Valley. The other two include the **Jungle Cat and the Leopard Cat.**

- The Eurasian Lynx or Ee in Ladakhi is one of the medium-sized wild cats which roam the high and cold snow-covered mountains of Ladakh. The cat is agile and strong and is high adapted to the thin air atmosphere of Ladakh.
- It inhabits temperate and boreal forests up to an altitude of 5,500 m (18,000 ft). Because of its wide distribution, it has been listed as Least Concern on the IUCN Red List since 2008.

## 30. Yangtze giant softshell turtles



- The only known female member of one of the world's rarest turtle species has died at a zoo in southern China.
- The animal was one of four **Yangtze giant softshell turtles** known to be remaining in the world. The Suzhou zoo, where the female turtle lived, also houses a male Yangtze giant softshell turtle. The other two live in Vietnam.
- It is also known as the Red River giant softshell turtle, Shanghai softshell turtle, Swinhoe's softshell turtleor speckled softshell turtle.
- It is listed as **critically endangered** in the IUCN Red List. It may be the largest living freshwater turtle in the world.

## 31. Aquaponic and Hydroponic methods of Agriculture

- **Aquaponic** method combines **aquaculture** — cultivating fish and other aquatic animals in tanks — with **hydroponics**, where plants are cultivated in water.
- The water from the fish tank is pumped onto the beds where plants grow. While the fish excretions provide nutrients for the plants, the clean water is recirculated back to the fish tank.
- While the **initial cost** to set up the facility would be **high**, the **recurring cost is low** in aquaponics and there are two sources of revenue: Fish and Vegetables.
- **Hydroponics** can save up to 90% water than conventional agriculture.

## 32. Bamboo Rice

- Four decades later, bamboo rice shows up in **Odisha**. The rare variety, which was last harvested in **Chandaka-Dampara Wildlife Sanctuary in 1979**, grows twice or thrice in a century.
- **What is Bamboo Rice?**
  - Bamboo rice is special rice that is grown out of a dying bamboo shoot.
  - When the bamboo shoot breathes its last, it flowers into a rare variety of rice seeds, which are known as bamboo rice.
- **The Process of Storing Bamboo Rice:**
  - Given the unpredictable flowering and thorniness of the bamboo, this makes no easy rice harvest.
  - To get perfect polished bamboo rice, the area around the base of each bamboo is cleaned and all the debris formed is removed.
  - The base is then smoothed with a slush of clay and kept to dry.
  - Once dried, the bamboo rice is then stored in to the prepared surface and gathered to be consumed.

## 33. Rainfed agriculture atlas

- A new rainfed agriculture atlas has been released recently. It has been released by **Revitalising Rainfed Agriculture (RRA) Network.**
- The atlas not only maps the agro biodiversity and socio-economic conditions prevailing in such areas, but also attempts to document the policy biases that are making farming unviable for many in these areas.

## 34. The State of the World's Biodiversity for Food and Agriculture 2019

- The *Food and Agriculture Organization (FAO)* has released its report- "*The State of the World's Biodiversity for Food and Agriculture 2019.*"
- The report highlights the **growing practice of** *monoculture* —*cultivation of a single crop at a given area* — *in food production around the world.*
- *The report lists drivers of change affecting biodiversity for food and agriculture, including:*
  - o Population growth and urbanization.
  - o Over-exploitation and over-harvesting.
  - o Changes in land and water use and management.
  - o Pests, diseases and invasive alien species.
  - o Climate change.
  - o Pollution and external inputs.
  - o Natural disasters.
  - o Markets, trade and the private sector.



**Reported threats to wild foods species**

LACK OF REGULATIONS: 2%
PESTS, DISEASES AND INVASIVE SPECIES: 3%
OTHER: 3%
INFRASTRUCTURE DEVELOPMENT: 3%
CLIMATE CHANGE: 4%
WATER-CYCLE ALTERATION: 4%
AGRICULTURAL INTENSIFICATION AND EXPANSION: 6%
HUNTING AND POACHING: 6%
DEFORESTATION: 7%
OVEREXPLOITATION: 27%
HABITAT ALTERATION AND LOSS: 17%
POLLUTION: 9%
CHANGES IN LAND USE: 9%
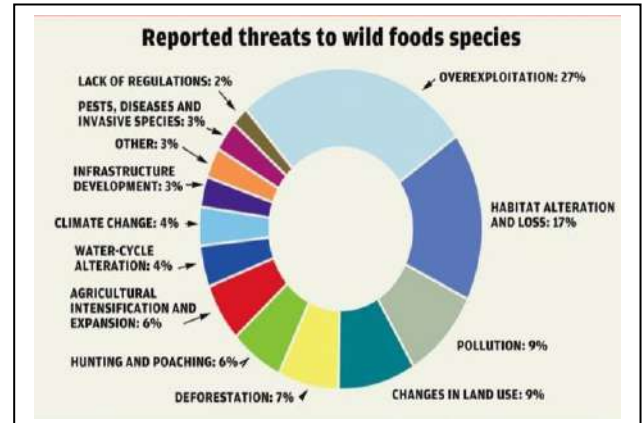
## 35. Sustainable Alternative Towards Affordable Transportation (SATAT)

- The government recently handed over the 100th Letter of Intent (LOI) to the Compressed Bio-Gas (CBG) Entrepreneur (producer) under the SATAT scheme.
- **About the initiative:**
  - o The initiative is aimed at providing a Sustainable Alternative Towards Affordable Transportation (SATAT) as a developmental effort that would benefit both vehicle-users as well as farmers and entrepreneurs.
  - o CBG produced at these plants will be transported through cascades of cylinders to the fuel station networks of OMCs for marketing as a green transport fuel alternative.
  - o The entrepreneurs would be able to separately market the other by-products from these plants, including bio-manure, carbon-dioxide, etc., to enhance returns on investment.
  - o It is planned to roll out 5,000 Compressed Bio-Gas plants across India in a phased manner.
- **Background:**
  - o Bio-gas is produced naturally through a process of **anaerobic decomposition** from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc.

**Compressed Bio-Gas (CBG):**

- Compressed Bio-Gas is exactly **similar to the commercially available natural gas** in its composition and energy potential. With calorific value (~52,000 KJ/kg) and other properties similar to CNG, Compressed Bio-Gas can be used as an alternative, **renewable automotive fuel**.
- Compressed Bio-Gas has the potential to replace CNG in automotive, industrial and commercial uses in the coming years.
- Compressed Bio-Gas can be produced from various **bio-mass/waste sources**, including agricultural residue, municipal solid waste, sugarcane press mud, distillery spent wash, cattle dung and sewage treatment plant waste. The other waste streams, i.e, rotten potatoes from cold storages, rotten vegetables, dairy plants, chicken/poultry litter, food waste, horticulture waste, forestry residues and treated organic waste from industrial **effluent treatment plants (ETPs)** can be used to generate biogas.

o After purification, it is compressed and called CBG, which has pure methane content of over 95%.

## 36. Small Grants Programme (SGP)

- A workshop on *Small Grants Programme (SGP)* was recently held in New Delhi.
- *About Small Grants Programme (SGP):*
  - *Global Environment Facility GEF Small Grants Programme (SGP)* provides *financial and technical support to communities and Civil Society Organizations to meet the overall objective of global environmental benefits secured through community-based initiatives and actions*.
  - It was *launched in 1992 with 33 participating countries*.
  - The Program is specifically designed *to mobilize bottom-up actions by empowering local civil society organizations*, and poor and vulnerable communities, including women and Indigenous Peoples.
- *How it functions?*
  - Through a **decentralized, national-level delivery mechanism**, SGP **finances community-led initiatives to address global environmental issues**.
  - It is currently *implemented by UNDP on behalf of the GEF partnership*.
  - The Programme funds *grants up to a maximum of $50,000*. In practice, the average grant has been around $25,000. *In addition, the SGP provides a maximum of $150,000 for strategic projects*.

## 37. Asiatic Lion Conservation Project

- The Centre and the Gujarat government have announced a Rs. 97.85 crore *Asiatic Lion Conservation Project*.
- **Key features of the project:**
  - Undertaking **"habitat improvement" measures**, making more sources of water available, creating a wildlife crime cell, and a task force for the Greater Gir region. *'Greater Gir' that includes, other than the existing Gir National Park, sanctuaries in Girnar, Pania and Mitiyala*.
  - *GPS-based tracking system*, which would look at surveillance tracking, animal and vehicle tracking. There would also be an **automated sensor grid** that would have magnetic sensors, movement sensors and infra-red heat sensors.
  - *A key outcome of the project is to have a dedicated veterinary institute, lion ambulances and back-up stocks of vaccines* that may be required.
- **Relocation of lions:**
  - The *Kuno-Palpur Wildlife Sanctuary in Madhya Pradesh was identified to be the most suitable for reintroducing the species*, according to a Supreme Court-appointed technical expert committee, but there has been no progress on the proposal.
  - *The SC in April 2013 had ordered the translocation of some lions from Gujarat to Madhya Pradesh within six months*, but this hasn't happened.
- **Facts for Prelims:**
  - Asiatic Lions are listed as 'Endangered' under the IUCN Red List.
  - Its population is restricted to the state of Gujarat in India.
  - With serious conservation efforts of the State and the Union Government, the population of Asiatic lions have increased to over 500 which used to be around 50 by late 1890s.
  - As per the 2015 census, there were a total of 523 Asiatic Lions in Gir Protected Area Network.

## 38. Dolphin Census

- Annual Dolphin census was recently carried out in Odisha by the state's forest and environment department.
- The census covered important aquatic ecosystems in the state including the **Chilika lake**, India's largest brackish water lagoon, the **Gahirmatha Marine Sanctuary** and its nearby areas within the **Bhitarkanika National Park** in Kendrapara district, Balasore district and the mouth of the **Rushukulya River** in Ganjam district.
- **Important findings:**
    - Population declined from 469 in 2018 to 259 this year. The reduction in the number of dolphins compared to last year could be due to the **migration of species** from the Chilika Lake and other water bodies to the deep sea.
    - Gahirmatha is the home of the state's largest dolphin population, having 126 animals. More dolphins were found in Gahirmatha than Chilika due to its bigger areas.
    - After Gahirmatha, Chilika had the next largest population at 113.
    - The dolphin species sighted during the state-wide census included the Irrawaddy, the Bottle Nose and the Humpback.
- **Key facts:**
    - Dolphins have been included in **Schedule I of the Indian Wild Life (Protection) Act 1972**, in Appendix I of the Convention on International Trade in Endangered Species (CITES), in Appendix II of the Convention on Migratory Species (CMS) and categorised as 'Endangered' on the International Union for the Conservation of Nature's (IUCN) Red List.

## 39. Green India Mission

- According to a Parliamentary committee report, Green India Mission, aimed at "protecting, restoring and enhancing India's diminishing forest cover and responding to climate change", is grossly underfunded.
- **About Green India Mission:**
    - GIM is *one of the eight missions launched under the National Action Plan on Climate Change (NAPCC)*.
    - GIM was launched in 2015.
    - *The objective of the mission is* to increase green cover to the extent of 5 million hectares (mha) and improve quality of existing green cover on another 5 mha, improve eco-system services like carbon sequestration, hydrological services and biodiversity and provisioning services like fuel, fodder, and timber and non-timber forest produces (NTFPs).
    - It also has to increase forest-based livelihood income for about 3 million households.

## 40. Cheetah reintroduction project

- The **National Tiger Conservation Authority (NTCA)** recently told a bench of the Supreme Court that African cheetahs would be translocated in India from Namibia and would be kept at **Nauradehi wildlife sanctuary in Madhya Pradesh.**
- International Union for Conservation of Nature (IUCN) has given a 'no objection' for the translocation.
- **Facts:**
    - The cheetah, Acinonyx jubatus, is one of the oldest of the big cat species, with ancestors that can be traced back more than five million years to the Miocene era.
    - The cheetah is also the **world's fastest land mammal**, an icon of nature. With great speed and dexterity, the cheetah is known for being an excellent hunter, its kills feeding many other animals in its ecosystem—ensuring that multiple species survive.

- o The country's last spotted feline died in Chhattisgarh in 1947. Later, the cheetah was declared extinct in India in 1952.
- **Cheetah reintroduction programme in India:**
  - o The Wildlife Institute of India had prepared a ₹260-crore cheetah re-introduction project six years ago.
  - o Nauradehi was found to be the most suitable area for the cheetahs as its forests are not very dense to restrict the fast movement of the spotted cat. Besides, the prey base for cheetahs is also in abundance at the sanctuary.
  - o According to the earlier action plan, around 20 cheetahs were to be translocated to Nauradehi from Namibia in Africa. The Namibia Cheetah Conservation Fund had then showed its willingness to donate the felines to India. However, the State was not ready to finance the plan contending that it was the Centre's project.

## 41. New Delhi Declaration on Asian Rhinos 2019

- India and four rhino range nations have signed a declaration *'The New Delhi Declaration on Asian Rhinos 2019'* for the conservation and protection of the species at the recently held Second Asian Rhino Range Countries meeting.
- *2nd Asian Rhino Range Countries meeting* was held at New Delhi and organised by the Ministry of Environment, Forest and Climate Change of Government of India in collaboration with the IUCN Asian Rhino Specialist Group, WWF- India and Aaranyak.
- **Key facts:**
  - o India will collaborate with Bhutan, Nepal, Indonesia and Malaysia to increase the population of three species of Asian rhinos, including the Greater one-horned rhinoceros found in the Indian sub-continent.
  - o The declaration was signed to **conserve and review the population** of the Greater one-horned, Javan and Sumatran rhinos every four years to reassess the need for joint actions to secure their future.
  - o The declaration includes undertaking studies on health issues of the rhinos, their potential diseases and taking necessary steps; collaborating and strengthening wildlife forensics for the purpose of investigation and strengthening of transboundary collaboration among India, Nepal and Bhutan for the conservation and protection of the Greater one-horned rhino.

## 42. Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016

- Ministry of Environment, Forest and Climate Change has amended the *Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016*.
- Some of the salient features of the Hazardous and Other Wastes (Management& Transboundary Movement) Amendment Rules, 2019 are as follows:
  - o *Solid plastic waste has been prohibited from import into the country including in Special Economic Zones (SEZ) and by Export Oriented Units (EOU)*.
  - o Exporters of silk waste have now been given exemption from requiring permission from the Ministry of Environment, Forest and Climate Change.
  - o *Electrical and electronic assemblies and components manufactured in and exported from India, if found defective can now be imported back into the country, within a year of export*, without obtaining permission from the Ministry of Environment, Forest and Climate Change.
  - o *Industries which do not require consent under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981, are now exempted from requiring authorization* also under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016, provided that hazardous and other wastes

generated by such industries are handed over to the authorized actual users, waste collectors or disposal facilities.

- **What is hazardous waste and what are the concerns associated with it?**
  - Hazardous waste is the waste that **poses substantial or potential threats to public health or the environment.**
  - The sources of hazardous waste are basically agricultural and agro industries, medical facilities, commercial centres, household and the informal sectors.
  - It cannot be disposed of by common means like other by products of our daily lives.

## 43. India Cooling Action Plan

- India Cooling Action Plan Launched.
- *India is the first country in world to develop such a document (ICAP)*, which addresses cooling requirement across sectors and lists out actions which can help reduce the cooling demand.
- The overarching goal is *to provide sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society*.
- **The broad objectives of the India Cooling Action Plan include:**
  - Assessment of cooling requirements across sectors in next 20 years and the associated refrigerant demand and energy use.
  - Map the technologies available to cater the cooling requirement including passive interventions, refrigerant-based technologies and alternative technologies such as not-in-kind technologies.
  - Suggest interventions in each sector to provide for sustainable cooling and thermal comfort for all.
  - Focus on skilling of RAC service technicians.
  - Develop an R&D innovation ecosystem for indigenous development of alternative technologies.

## 44. Sundarban Wetland

- **The Indian Sundarban was accorded the status of 'Wetland of International Importance' under the Ramsar Convention.**
- The Sundarbans comprises hundreds of islands and a network of rivers, tributaries and creeks *in the delta of the Ganga and the Brahmaputra at the mouth of the Bay of Bengal in India and Bangladesh*.
- Located on the southwestern part of the delta, **the Indian Sundarban constitutes over 60% of the country's total mangrove forest area.**
- *It is the 27th Ramsar Site in India*, and is now the largest protected wetland in the country.
- The **Indian Sundarban, also a UNESCO world heritage site,** is **home to the Royal Bengal Tiger**.
- It is also home to a large number of "rare and globally threatened species, such as the critically endangered northern river terrapin (Batagur baska), the endangered Irrawaddy dolphin (Orcaella brevirostris), and the vulnerable fishing cat (Prionailurus viverrinus)."
- *Two of the world's four horseshoe crab species, and eight of India's 12 species of kingfisher are also found here*.
- *How did Sundarban qualify?*
  - The Indian Sundarban met four of the nine criteria required for the status of 'Wetland of International Importance' — **presence of rare species and threatened ecological communities, biological diversity, significant and representative fish and fish spawning ground and migration path.**

## 45. Global Environment Outlook

- Global Environment Outlook report has been released. The report is the sixth and is the UN's most comprehensive report on the state of the global environment since the fifth edition in 2012.
- **About GEO report:**
  - o The GEO is often referred to as **UN Environment's flagship environmental assessment.**
  - o The first publication was in 1997 and was originally requested by Member States.
  - o It is a flagship report because it fulfills the core functions of the organization, which date back to the UN General Assembly resolution that established the UNEP in 1972.

## 46. Pilibhit Tiger Reserve (PTR)

- In a first, Uttar Pradesh had conducted otter census, beginning in the Pilibhit Tiger Reserve.
- **About Pilibhit Tiger Reserve (PTR):**
  - o PTR is in the foothills of the Himalayas, south of Nepal. The reserve sprawls across parts of Pilibhit, Lakhimpur Kheri and Bahraich districts.
  - o With the Sharda and Ghaghara rivers encircling a considerable part of the reserve, it is rich in water bodies.
  - o The forests of PTR are to home to tigers, leopards, elephants, different species of deer and monkeys and reptiles like snakes, mugger crocodiles and gharials.
- **Otters:**
  - o Otters are an important part of the forest ecosystem. A thriving population of otters means a healthy ecosystem.
  - o A mammal, an otter spends much of its time in or close to water bodies. Otters live on fish.
  - o They are classified as vulnerable.

## 47. UN Environment Assembly

- The Fourth Environment Assembly was held in Nairobi, focusing on the theme **"Innovative solutions for environmental challenges and sustainable consumption and production".**
- **About UN Environment Assembly:**
  - o The United Nations Environment Assembly is the **world's highest-level decision-making body on the environment**. It addresses the critical environmental challenges facing the world today.
  - o The Environment Assembly **meets biennially** to set priorities for global environmental policies and develop international environmental law.
  - o The Assembly is the **governing body of the UN Environment Programme (UN Environment)** and the successor of its Governing Council, which was composed of 58 member States.
  - o The UN Environment Assembly, with a universal membership, is now composed of 193 Member States.
- **History of the United Nations Environment Assembly:**
  - o The United Nations Environment Assembly was created in June 2012, when world leaders called for UN Environment to be strengthened and upgraded during the United Nations Conference on Sustainable Development, also referred to as RIO+20.
  - o The Third Environment Assembly took place in Nairobi in December 2017 under the overarching theme "Towards a pollution-free planet".

## 48. Certification Standard for Sustainable Forest Management (SFM)

- The council of **Programme for Endorsement of Forest Certification (PEFC),** a Geneva-based non-profit, has decided to endorse the Certification Standard for Sustainable Forest Management (SFM) developed by Network for Certification and Conservation of Forests (NCCF), an Indian non-profit.
- PEFC provides independent third-party certification for sustainable forest management.

- **Key facts:**
  - o The NCCF was set up in 2015 by representatives of forest-based industries, non-profits, forest auditors and government forest departments with an aim to set standards for certifying India's forests, their products and their sustainable management.
  - o The NCCF's forest certification scheme is aimed to improve India's forest management regime.
- **What is forest certification?**
  - o Forest certification, a global movement initiated in 1990s after Rio Earth Summit, is a market-based non-regulatory conservation tool designed to promote sustainable management of forests and trees outside forests by an independent third party.

## 49. IUCN red list of threatened species

- The ***hump-backed Mahseer***, found in the waters of the Cauvery, has been added to the IUCN Red List with Critically Endangered Status.
- The hump-backed mahseer is a large freshwater fish also called the tiger of the water and found only in the Cauvery river basin including Kerala's Pambar, Kabini and Bhavani rivers.
- ***Five other species have also made it to threatened categories:*** two wild orchids, the Arabian scad (a marine fish) and two wild coffee species found only in a few localities in the Western Ghats.
- **About IUCN red list of threatened species:**
  - o The IUCN Red List of Threatened Species is the **world's most comprehensive inventory of the global conservation status of plant and animal species**.
  - o It uses a set of quantitative criteria to evaluate the extinction risk of thousands of species. These criteria are relevant to most species and all regions of the world. With its strong scientific base, The IUCN Red List is recognized as the most authoritative guide to the status of biological diversity.
- **The IUCN Red List Categories:**
  - o The IUCN Red List Categories define the extinction risk of species assessed. Nine categories extend from NE (Not Evaluated) to EX (Extinct).
  - o Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) species are considered to be threatened with extinction.



| NOT EVALUATED | DATA DEFICIENT | LEAST CONCERN | NEAR THREATENED | VULNERABLE | ‹ ENDANGERED › | CRITICALLY ENDANGERED | EXTINCT IN THE WILD | EXTINCT |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NE | DD | LC | NT | VU | EN | CR | EW | EX |

- **The IUCN system uses a set of five quantitative criteria to assess the extinction risk of a given species. In general, these criteria consider:**
  - o The rate of population decline.
  - o The geographic range.
  - o Whether the species already possesses a small population size.
  - o Whether the species is very small or lives in a restricted area.
  - o Whether the results of a quantitative analysis indicate a high probability of extinction in the wild.
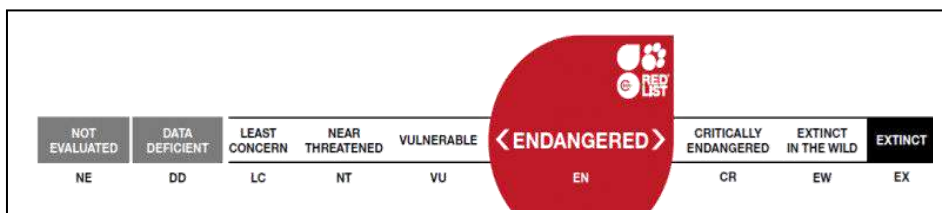
## 50. Starry dwarf frog

- Starry dwarf frog- a thumbnail-sized species was recently discovered in India's Western Ghats, one of the world's "hottest" biodiversity hotspots.

- Scientists have named the frog Astrobatrachus kurichiyana for its constellation-like markings and the indigenous people of Kurichiyarmala, the hill range where it was found.
- *kurichiyana is not only a new species to science. It's the sole member of an ancient lineage*, a long branch on the frog tree of life that researchers have classified as a new subfamily, Astrobatrachinae.

## 51. Grey Hypocolius

- The Grey Hypocolius (Hypocolius ampelinus), a small migratory bird that usually makes its home in West Asia and North Africa and is a regular visitor to Kutch, has been **sighted in Western Rajasthan for the first time** on March 4, 2019.
- The grey hypocolius (Hypocolius ampelinus) is a small passerine bird species. It is the sole member of the genus Hypocolius and it is placed in a family of its own, the Hypocoliidae.
- This slender and long tailed bird is found in the dry semi-desert region of northern Africa, Arabia, Afghanistan, Pakistan, and western India. They fly in flocks and forage mainly on fruits, migrating south in winter.
- Because the species has a large range, and because it does not meet the population size and decline criteria of the IUCN Red List, the conservation status is evaluated as being of **"least concern"**.

## 52. IPCC Special Report on Global Warming of 1.5°C

- IPCC released a **"special report"** in Incheon, South Korea on the actions the world needs to take to prevent global average temperatures from rising beyond 1.5°C as compared to pre-industrial times.
- Limiting global warming to 1.5 degrees would require rapid, far reaching and unprecedented changes in all aspects of society, the IPCC said.
- **It compares the impact of global warming of 1.5 deg C and 2 deg C.**
- IPCC has presented four pathways through which the 1.5 degree target can be achieved.
  - o Each of these pathways is also dependent on some amount of Carbon Dioxide Removal (CDR).
  - o It is the physical removal of the stock of carbon dioxide from the atmosphere to reduce its concentrations.

## 53. Katowice Cop 24 Outcomes

- The **2018 United Nations Climate Change Conference** took place in December 2018 in Katowice, Poland.
- It was the **24th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP24).**
- It is also referred to as the **Katowice Climate Change Conference**.
- The most important outcome of COP24 was that the countries have agreed on rules for the implementation of the 2015 Paris Agreement.
- *What was agreed at COP24?*
  - o Countries settled on most of the tricky elements of the **"rulebook"** for putting the 2015 Paris agreement into practice.
  - o This includes how governments will measure, report on and verify their emissions-cutting efforts, a key element because it ensures all countries are held to proper standards and will find it harder to wriggle out of their commitments.
  - o This global deal is meant for climate actions by all the countries across the globe post-2020.
- *What it contains?*

- o ***The Katowice package*** includes guidelines that will operationalize the transparency framework.
- o It sets out how countries will provide information about their Nationally Determined Contributions (NDCs) that describe their domestic climate actions. This information includes mitigation and adaptation measures as well as details of financial support for climate action in developing countries.
- ***Besides transparency framework, the Katowice package also includes guidelines that relate to the process for establishing new targets on finance from 2025 onwards*** to follow-on from the current target of mobilizing $100 billion per year from 2020 to support developing countries.
- ***It also includes how to conduct the Global Stocktake (GST)*** of the effectiveness of climate action in 2023 and how to assess progress on the development and transfer of technology.

# Polity

## 1. President's address to both Houses of Parliament

- The President's address to the joint sitting of Parliament at the beginning of the Budget Session every year is *a Constitutional requirement*.
- *What does the Constitution say about this?*
    - *Article 87(1) says:* "At the commencement of the **first session after each general election to the House of the People and at the commencement of the first session of each year** the President shall address both Houses of Parliament assembled together and inform Parliament of the causes of its summons." No other business is transacted till the President has addressed both Houses of Parliament assembled together.
    - *First Constitutional Amendment:* Originally, the Constitution required the President to address both Houses of Parliament at the commencement of "every session". This requirement was changed by the First Amendment to the Constitution.
- *President's address:*
    - The President's speech essentially *highlights the government's policy priorities and plans for the upcoming year*. It is drafted by the Cabinet, and provides a broad framework of the government's agenda and direction.

## 2. Motion of Thanks

- The President makes an address to a joint sitting of Parliament at the start of the Budget session. It is essentially a statement of the legislative and policy achievements of the government during the preceding year and gives a broad indication of the agenda for the year ahead.
- The address is followed by a **motion of thanks moved in each House by ruling party MPs**. During the session, political parties discuss the motion of thanks also suggesting amendments.
- **Amendments to the "Motion of Thanks":**
    - Notices of amendments to Motion of Thanks on the President's Address can be tabled after the President has delivered his Address.
    - Amendments may refer to matters contained in the Address as well as to matters, in the opinion of the member, the Address has failed to mention.
    - Amendments can be moved to the Motion of Thanks in such form as may be considered appropriate by the Speaker.
- **Limitations:**
    - The only limitations are that members cannot refer to matters which are not the direct responsibility of the Central Government and that the name of the President cannot be brought in during the debate since the Government and not the President is responsible for the contents of the Address.
- **Provisions governing them:**
    - President's Address and Motion of Thanks are governed by **Articles 86 (1) and 87 (1)** of the Constitution and Rules 16 to 24 of the Rules of Procedure and Conduct of Business in Lok Sabha.
- **Its passage:**
    - Members of Parliament vote on this motion of thanks. This motion must be passed in both of the houses.
    - A failure to get motion of thanks passed amounts to defeat of government and leads to collapse of government. This is why, the Motion of Thanks is deemed to be a no-confidence motion.

## 3. Official Secrets Act

- The law meant for **ensuring secrecy and confidentiality in governance**, mostly on national security and espionage issues.
- The Indian Official Secrets Act, 1904 was enacted during the time of Lord Curzon, Viceroy of India from 1899 to 1905.
- One of the main purposes of the Act was to muzzle the voice of nationalist publications.
- The **Indian Official Secrets Act** (Act No XIX of 1923) replaced the earlier Act, and was extended to all matters of secrecy and confidentiality in governance in the country.
- **Ambit of the Act:**
  - o The secrecy law broadly deals with two aspects — spying or espionage, which is dealt with in Section 3 of the Act, and disclosure of other secret information of the government, which is dealt with in Section 5. The secret information can be any official code, password, sketch, plan, model, article, note, document or information.

## 4. Compensation for Victims

- The **Code of Criminal Procedure was amended in 2008 to insert Section 357A** under which every **State government has to prepare a scheme to set up a fund from which compensation can be paid to victims of crime** and their dependants who have suffered loss and injury and who may require rehabilitation.
- The Centre has a **Central Victim Compensation Fund.**
- On Supreme Court directions, the National Legal Services Authority has prepared a compensation scheme for women victims and survivors of sexual assault and other crimes. Many States have notified schemes on these lines.

## 5. Systematic Voters Education and Electoral Participation (SVEEP)

- SVEEP is a programme of multi interventions through different modes and media designed to **educate citizens, electors and voters about the electoral process** in order to increase their awareness and participation in the electoral processes.
- SVEEP is designed according to the socio-economic, cultural and demographic profile of the state as well as the history of electoral participation in previous rounds of elections and learning thereof.

## 6. Service Voter

- The soldiers of Indo-Tibetan Border Police (ITBP) were the first to cast their vote for the 2019 Lok Sabha elections in Arunachal Pradesh as Service Voters.
- **Service voter belonging to defence and paramilitary forces have the option of either voting through postal ballot or through a proxy voter duly appointed by him/her**.
- **There are roughly 30 lakh service voters** including defence and paramilitary forces who (in many cases with families at family stations) will cast their votes through service voter facility.
- **Who is a service voter?**
  - o Service voter is a voter having service qualification. According to the provisions of sub – section (8) of Section 20 of Representation of People Act, 1950, service qualification means:
    - Being a member of the armed Forces of the Union ; or
    - Being a member of a force to which provisions of the Army Act, 1950 (46 of 1950), have been made applicable whether with or without modification ;
    - Being a member of an Armed Police Force of a State, and serving outside that state; or
    - Being a person who is employed under the Government of India, in a post outside India.

- **How is a service voter different from an ordinary elector?**
  - While an ordinary elector is registered in the electoral roll of the constituency in which his place of ordinary residence is located, person having service qualification can get **enrolled as 'service voter' at his native place** even though he actually may be residing at a different place (of posting). He has, however, an option to get himself enrolled as general elector at the place of his posting where he factually, at the point of time, is residing ordinarily with his family for a sufficient span of time.
- **Are members of all Armed Forces / Para Military Forces eligible to be enrolled as service voters?**
  - As per the existing arrangements, members of Indian Army, Navy and Air Force and personnel of General Reserve Engineer Force (Border Road Organization), Border Security Force, Indo Tibetan Border Police, Assam Rifles, National Security Guards, Central Reserve Police Force, Central Industrial Security Force and Sashastra Seema Bal are eligible to be registered as service voters.
- **Is wife or son/daughter of a service voter also enrolled as a service voter?**
  - The wife of a service voter shall, if she is ordinarily residing with him, be also deemed to be a service voter in the constituency specified by that person.
  - The service voter has to make a statement to the effect in the relevant Form 2/2A/3 that his wife ordinarily resides with him. The wife will be enrolled as a service voter on the basis of declaration made by her husband in the application form itself submitted by him and no separate declaration / application is required to be made by the wife.
  - A son / daughter / relative / servant etc. residing ordinarily with a service voter cannot be enrolled as service voter.
- **Is facility of enrollment as a service voter available to the husband of a female service voter?**
  - Under the existing law, this facility is available only to the wife of a male service voter and is not available to the husband of a female service voter.
- **Can one be enrolled simultaneously as a service voter at his native place as well as a general voter at the place of posting?**
  - No. A person, at a particular time, cannot be enrolled as a voter at more than one place in view of the provisions contained under Sections 17 and 18 of Representation of People Act, 1950. Likewise, no person can be enrolled as an elector more than once in any electoral roll.
- **Who is a Classified Service Voter?**
  - Service voter belonging to Armed Forces or forces to which provisions of Army Act, 1950 are applicable, has option of either voting through postal ballot or through a proxy voter duly appointed by him.
  - A service voter who opts for voting through a proxy is called Classified Service Voter (CSV).
- **Who is a 'proxy'?**
  - A service voter may appoint (by applying to Returning Officer in Form 13 F of Conduct of Elections Rules, 1961 – Form available at the website of Election Commission) any person as his / her proxy to give vote on his / her behalf and in his / her name at the polling station. The proxy shall have to be ordinary resident of that constituency. He need not be a registered voter but he / she must not be disqualified to be registered as a voter.
  - The provision for voting through proxy **is valid till the person making the appointment is a service voter**.

## 7. Role of Election Commission

- **Where does the EC derive its powers and what is its extent?**
  - **Article 324** says the superintendence, direction and control of all elections to Parliament, the State legislatures, and the offices of the President and Vice-President shall be vested in

the EC. The Article has been interpreted by courts and by orders of the EC from time to time to mean that the power vested in it is plenary in nature.

   o  In other words, the EC can take any action it deems fit to ensure that elections and the election process are free and fair.

- **Has the EC always been a multi-member body?**
   o  No, the Election Commission was a single Chief Election Commissioner for decades since the body was **set up in 1950 based on the provisions of the Constitution**.
   o  It was on October 16, 1989, that two more Election Commissioners were appointed to expand the panel's **composition**. Their tenure ended in 1990.
   o  Thereafter, two Election Commissioners were appointed in 1993. Since then, the EC has been a three- member panel, with a Chief Election Commissioner and two Election Commissioners.

- **How decisions are made and how are EC's different from CEC?**
   o  Decision-making within the panel is by **majority**.
   o  While the CEC can only be removed in the manner set out for a Supreme Court judge, the other two Commissioners may be removed on the recommendation of the CEC.
   o  In 1995, the Supreme Court held that the Election Commissioners are on a par with the CEC and the latter is not superior in standing with the other Commissioners.
   o  The EC has been demanding that the **protection and safeguards given to the CEC under the Constitution should also be extended to the other Election Commissioners**.

- **What kind of control does the EC have over civil servants during an election?**
   o  As the superintendence and control over all aspects of the election process is vested in the EC, **it exercises direction and control over civil servants deployed for election-related work**. This means that bureaucrats engaged in the administrative aspects of elections, including police officers with law and order duties, are also amenable to the EC's jurisdiction.
   o  This power enables the EC to monitor both the manner in which civil servants perform their election- related duties, and prevent activities which may be seen as partisan.
   o  The EC often cites its vast powers under **Article 324 to transfer or suspend officials during election time, even though they normally come under the disciplinary purview of the government of India or the State governments**. There have been instances of the EC transferring not only Returning Officers, but also Commissioners of Police and Superintendents of Police.

- **What are the possible actions it can take against candidates and parties?**
   o  The EC monitors the adherence of political parties and candidates to the '**Model Code of Conduct**'.
   o  If the violations are also offences under election law and the criminal law of the land, the EC has the power to **recommend registration of cases against the offenders**.
   o  However, for some violations — such as canvassing for votes during a period when electioneering is barred, making official announcements while the MCC is in force, and making appeal to voters on sectarian grounds
   o  — the EC has the power to advise or censure candidates, in addition to directing registration of cases.
   o  In some cases, as recent incidents would show, the **EC may bar candidates or leaders from campaigning for specified periods**.
   o  **Asking individuals to leave a constituency or barring entry into certain areas are other powers that the EC may exercise**. These powers are not necessarily traceable to any provision in law, but are generally considered inherent because of the sweeping and plenary nature of the EC's responsibility under the Constitution to ensure free and fair elections.

- o Its powers extend to postponing elections to any constituency, cancelling an election already notified, and even to abrogate or annul an election already held.
- **What are the limitations of the EC's powers?**
  - o The EC does **not have the power to disqualify candidates who commit electoral malpractices. At best, it may direct the registration of a case**.
  - o The EC also does **not have the power to deregister any political party**. However, the Constitution empowers the EC to decide whether a candidate has incurred disqualification by holding an office of profit under the appropriate government, or has been declared an insolvent, or acquired the citizenship of a foreign state.
  - o When a question arises whether a candidate has incurred any of these disqualifications, the President of India or Governor has to refer it to the EC. The poll panel's decision on this is binding.

## 8. MCC and Religion

- **Paragraph 1 the Model Code of Conduct** forbids parties and candidates from indulging in "any activity which may aggravate existing differences or create mutual hatred or cause tension between different castes and communities, religious or linguistic".
- **What do RPA and IPC say on this?**
  - o Invoking religion to seek votes, or making statements to the effect of creating disharmony between two communities, is a violation of the poll conduct and may invite prosecution under Section 125 of the **Representation of the People Act, 1951** (Promoting enmity between classes in connection with election), Sections 153A, 153B, l7IC, 295A and 505(2) of the **Indian Penal Code** and **Religious Institutions (Prevention of Misuse) Act, 1988**.

## 9. Voting Rights

- Under **Section 62(5) of the Representation of the People Act, 1951,** individuals in lawful custody of the police and those serving a sentence of imprisonment after **conviction cannot vote**. **Undertrial prisoners** are also excluded from participating in elections even if their names are on electoral rolls.
- Only those under **preventive detention** can cast their vote through **postal ballots**.

## 10. Form 26

- Recently, the Law Ministry made it mandatory for election candidates to reveal their income-tax returns of the last five years, as well as the details of their offshore assets. ***This was done by amending Form 26***, after the Election Commission of India wrote to the Ministry on February 13.
- **What is Form 26?**
  - o ***A candidate in an election is required to file an affidavit called Form 26 that furnishes information on her assets, liabilities, educational qualifications, criminal antecedents (convictions and all pending cases) and public dues, if any***. The affidavit has to be filed along with the nomination papers and should be sworn before an Oath Commissioner or Magistrate of the First Class or before a Notary Public.
  - o ***The objective behind introducing Form 26 was that it would help voters make an informed decision***. The affidavit would make them aware of the criminal activities of a candidate.
- **When and how was it introduced?**
  - o Like most recent electoral reforms in India, Form 26 was introduced following a court order.
  - o The genesis of the affidavit can be traced to the **170th Report of the Law Commission**, submitted in May 1999, which suggested steps for preventing criminals from entering electoral politics. One of the suggestions was to disclose the criminal antecedents as well as the assets of a candidate before accepting her nomination.
- **What has changed?**

- o Earlier, a candidate had to only declare the last I-T return (for self, spouse and dependents). Details of foreign assets were not sought. Offshore assets means *"details of all deposits or investments in foreign banks and any other body or institution abroad and details of all assets and liabilities in foreign countries"*.
- o It is now *mandatory for candidates to reveal their own income-tax returns of the last five years rather than only one, and the details of offshore assets, as well as the same details for their spouse, members of the Hindu Undivided Family* (if the candidate is a karta or coparcener), and dependents.

## 11. Rule 49MA of 'The Conduct of Elections Rules'

- A petition alleged that Rule 49MA of 'The Conduct of Elections Rules' was unconstitutional as it **criminalises reporting of malfunctioning of Electronic Voting Machines and Voter Verified Paper Audit Trails.**
- Under the rule, where printer for paper trail is used, if an elector after having recorded his vote under rule 49M alleges that the paper slip generated by the printer has shown the name or symbol of a candidate other than the one he voted for, the presiding officer shall obtain a written declaration from the elector as to the allegation, after warning the elector about the consequence of making a false declaration.
- The rules outline that if after investigation, the allegation of EVM malfunctioning is found to be false or incorrect, then the complainant can be prosecuted under Section 177 of the Indian Penal Code for "furnishing false information".
- In such a case, a jail term of six months or a fine of Rs 1,000 or both is guaranteed.

## 12. Registration of political parties

- Registration of Political parties is governed by the provisions of **Section 29A of the Representation of the People Act, 1951.**
- A party seeking registration under the said Section with the Commission has to submit an application to the Commission within a period of 30 days following the date of its formation as per guidelines prescribed by the Election Commission of India in exercise of the powers conferred by Article 324 of the Commission of India and Section 29A of the Representation of the People Act, 1951.
- **To be eligible for a 'National Political Party of India,' the Election Commission has set the following criteria:**
  - o It secures at least six percent of the valid votes polled in any four or more states, at a general election to the House of the People or, to the State Legislative Assembly; and
  - o In addition, it wins at least four seats in the House of the People from any State or States. OR
  - o It wins at least two percent seats in the House of the People (i.e., 11 seats in the existing House having 543 members), and these members are elected from at least three different States.
- **To be eligible for a 'State Political Party,' the Election Commission has set the following criteria:**
  - o It secures at least six percent of the valid votes polled in the State at a general election, either to the House of the People or to the Legislative Assembly of the State concerned; and
  - o In addition, it wins at least two seats in the Legislative Assembly of the State concerned. OR
  - o It wins at least three percent (3%) of the total number of seats in the Legislative Assembly of the State, or at least three seats in the Assembly, whichever is more.
- **Benefits:**
  - o If a party is recognised as a **State Party**, it is entitled for exclusive allotment of its **reserved symbol** to the candidates set up by it in the State in which it is so recognised, and if a party

is recognised as a `National Party' it is entitled for exclusive allotment of its reserved symbol to the candidates set up by it throughout India.

o Recognised `State' and `National' parties need only **one proposer for filing the nomination** and are also entitled for two sets of electoral rolls free of cost at the time of revision of rolls and their candidates get one copy of electoral roll free of cost during General Elections.

o They also get **broadcast/telecast facilities over Akashvani/Doordarshan during general elections.**

o Political parties are entitled to nominate **"Star Campaigners"** during General Elections. A recognized National or State party can have a maximum of 40 "Star campaigners" and a registered un-recognised party can nominate a maximum of 20 'Star Campaigners".

o The travel expenses of star campaigners are not to be accounted for in the election expense accounts of candidates of their party.

## 13. Community Radio Stations

- In a first of its kind initiative, the Election Commission of India had reached out to over 150 Community Radio stations from across the country to help educate and inform the voters.
- **What is community radio?**
  o Community radio is **a type of radio service that caters to the interests of a certain area, broadcasting content that is popular to a local audience**.
  o Community radio is **confined to a small geographical area**. It **serves a community which uses common resources for livelihood**, has common development issues and concerns, which are relatively localized, nevertheless connected to national and regional development goals.
  o Today, **there are more than 180 community radio stations across India**, broadcasting in languages like Bundelkhandi, Garhwali, Awadhi and Santhali — tongues that typically find little or no space on television.
- **Eligibility to apply for a Community Radio Station:**
  o As per the 2006 policy of the Government, an organisation desirous of operating a Community Radio Station (CRS) must be able to satisfy and adhere to the following principles:
    ▪ It should be explicitly constituted as **a 'non-profit' organisation and should have a proven record** of at least three years of service to the local community.
    ▪ The Community Radio Station should **serve a specific well-defined local community**.
    ▪ The ownership and management structure should be such that it reflects the community which it serves.
    ▪ It should only broadcast programmes that cater to the educational, developmental, social and cultural needs of the community.
    ▪ The organization must be **a Legal Entity,** it should be registered (under the registration of Societies Act or any other such act relevant to the purpose).

## 14. Criminalisation of Politics

- Currently, **under the Representation of Peoples (RP) Act, lawmakers cannot contest elections only after their conviction in a criminal case**.
- Section 8 of the Representation of the People (RP) Act, 1951 disqualifies a person convicted with a sentence of two years or more from contesting elections. But those under trial continued to be eligible to contest elections. The Lily Thomas case (2013), however, ended this unfair advantage.

## 15.Assam Rifles

- The Delhi High Court has sought the response from the Cabinet Committee on Security on a plea seeking directions to remove **the dual control of Assam Rifles and bring it under the Ministry of Defence**.
- Assam Rifles which is also referred to as the **Sentinels of North East** is the **oldest paramilitary force** of India.
- The **administrative** control of Assam Rifles lies with the **Home Ministry**, while the **operational** control is with the **Defence Ministry**.
- **What's the issue now?**
    o A plea filed in the court alleges **the dual control as the violation of the rights of the troopers of Assam Rifles**.
    o The plea challenges the **Government of India (Allocation of Business) Rules, 1961 saying that it places Assam Rifles under the head 'Police'**, which is arbitrary, unreasonable and violates the rights of Assam Rifles ex-servicemen guaranteed under Article 14 of the Constitution.

## 16.Unlawful Activities (Prevention) Act

- The Union Home Ministry has banned the *Tehreek-ul-Mujahideen (TuM) under the Unlawful Activities (Prevention) Act* for promoting terrorism and radicalising and recruiting youth for terrorist activities in India.
- Set up in the 1990s, *TuM claims to be fighting for the "liberation of Kashmir."*
- **About the Unlawful Activities (Prevention) Act (UAPA):**
    o This law is *aimed at effective prevention of unlawful activities associations in India*.
    o Its main objective is *to make powers available for dealing with activities directed against the integrity and sovereignty of India*.
    o The Act makes it *a crime to support any secessionist movement or to support claims by a foreign power to what India claims as its territory*.
    o The UAPA, framed in 1967, *has been amended twice since: first in 2008 and then in 2012*.
- **The law is contested for few draconian provisions:**
    o The Act introduces *a vague definition of terrorism* to encompass a wide range of non-violent political activity, including political protest.
    o It *empowers the government to declare an organisation as 'terrorist' and ban it*. Mere membership of such a proscribed organisation itself becomes a criminal offence.
    o It allows *detention without a chargesheet for up to 180 days and police custody can be up to 30 days*.
    o It *creates a strong presumption against bail and anticipatory bail is out of the question*. It creates a presumption of guilt for terrorism offences merely based on the evidence allegedly seized.
    o It *authorises the creation of special courts*, with wide discretion to hold in-camera proceedings (closed-door hearings) and use secret witnesses but contains no sunset clause and provisions for mandatory periodic review.

## 17.Permanent Residence Certificate

- Violence erupted in Arunachal Pradesh over the issue of *Permanent Residence Certificate* to six non-Arunachal Pradesh Scheduled Tribes (APSTs) living in the Namsai and Changlang districts and to the Gorkhas living in Vijaynagar.
- **What is Permanent Residence Certificate?**

- o The State Government of Arunachal Pradesh issues *the domicile certificate otherwise called as Permanent Residence Certificate (PRC) to the residents of the state who stayed therein over a period*. Those citizens who are not currently residing in the state but are sure of permanently staying therein can also apply for it.
  - o *Besides the permanent residence certificate, the State also offers Temporary Residence Certificate (TRC)* for those who reside in the State on a temporary basis.
- **Purpose of the Certificate:**
  - o Permanent Residence Certificate is a **legal document that serves as an evidence of residence** and thus must be submitted wherever a residence proof is required.
  - o Permanent Residence Certificate should be produced in many situations such as admission in educational organisations, job reservation under specific quotas especially for government jobs, etc. to get local preferences.
  - o To apply for ration card permanent residence certificate is a vital and mandate document.
  - o To **avail the provisions of various schemes of the state** or to claim scholarships of the State, permanent residence certificate is essential.

## 18. Forest Rights Act, 2006

- The act was passed in December 2006. It deals with the rights of forest-dwelling communities over land and other resources.
- The Act *grants legal recognition to the rights of traditional forest dwelling communities*, partially correcting the injustice caused by the forest laws.
- Rights under the Act:
  - o *Title rights –* Ownership to land that is being farmed by tribals or forest dwellers subject to a maximum of 4 hectares; ownership is only for land that is actually being cultivated by the concerned family, meaning that no new lands are granted.
  - o *Use rights –* to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.
  - o *Relief and development rights –* to rehabilitation in case of illegal eviction or forced displacement; and to basic amenities, subject to restrictions for forest protection.
  - o *Forest management rights –* to protect forests and wildlife.
- **Eligibility:**
  - o Eligibility to get rights under the Act is confined to those who **"primarily reside in forests"** and who depend on forests and forest land for a livelihood.
  - o Further, either the claimant must be a member of the Scheduled Tribes scheduled in that area or must have been residing in the forest for 75 years.
- **Process of recognition of rights:**
  - o The Act provides that the **gram sabha**, or village assembly, will initially pass a resolution recommending whose rights to which resources should be recognised.
  - o This resolution is then screened and approved at the level of the sub-division (or taluka) and subsequently at the district level.
  - o The screening committees consist of three government officials (Forest, Revenue and Tribal Welfare departments) and three elected members of the local body at that level. These committees also hear appeals.

## 19. Welfare panel for nomadic Communities

- The Centre will form a **welfare *panel for nomadic, semi-nomadic and de-notified communities*.**
- *A **Welfare Development Board*** will also be set up under the Ministry of Social Justice and Empowerment to design and implement programmes for these hard-to-reach communities.
- *Key facts:*

- o The committee will be set up *under NITI Aayog* to complete the task of identifying de-notified, nomadic and semi-nomadic communities.
- o The committee will follow up on the work of the ***Renke Commission and the Idate Commission.***
- o The Renke Commission and the Idate Commission have done commendable work in studying the various problems faced by these communities and recommending measures to address the issues more comprehensively.

- ***Denotified and Nomadic Tribes:***
    - o The Denotified Tribes are *communities that were listed or notified as **'born criminal 'by the British under a number of laws.*** The term, 'Denotified and Nomadic Tribes', can be traced to the ***Criminal Tribes Act (CTA) of 1871.***
    - o The colonial government notified nearly 200 tribal communities to be hereditary criminals, cementing their societal identity as outcasts and subjecting them to constant harassment by the administration.
    - o *Forest laws* that came into force from the mid-nineteenth century onwards deprived a large number of communities of their traditional rights of hunting and gathering. *The new laws criminalised their very source of livelihood when it practiced*.
    - o When the forests were cleared by the British for commercial use and forest communities asked to contribute to labour, some communities resisted and were declared *'criminal'*.
    - o *After India gained Independence, these tribes were 'de-notified' from the list of Criminal Tribes*.

# Government Schemes

## 1. Swadesh Darshan scheme

- First project in Sikkim under the Swadesh Darshan scheme has been inaugurated at the Zero Point, Gangtok.
- The project is officially named as "**Development of North East Circuit**: Rangpo– Rorathang- Aritar-Phadamchen- Nathang-Sherathang- Tsongmo- Gangtok-Phodong- Mangan- Lachung-Yumthang-Lachen- Thangu-Gurudongmer- Mangan- Gangtok-Tuminlingee- Singtam".
- Under this project, the Ministry has developed tourism infrastructure facilities like Tourist Information Centre, Meditation Centre, Organic Eco Tourism centre, Log Huts, Zip Line, Flower etc.

## 2. Pradhan Mantri Shram-Yogi Maandhan Yojana

- Announced in the budget 2019.
- It is a scheme for the *unorganised sector workers with monthly income upto Rs 15,000*. A sum of Rs 500 crore has been allocated for the Scheme.
- This scheme shall provide *an assured monthly pension of Rs 3,000 from the age of 60 years* on a monthly contribution of a small affordable amount during their working age.
- An *unorganised sector worker joining pension yojana at the age of 29 years will have to contribute only Rs 100 per month till the age of 60 years*. *A worker joining the pension yojana at 18 years, will have to contribute as little as Rs 55 per month only*.
- The *Government will deposit equal matching share in the pension account of the worker every month*.

## 3. Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

- To provide an *assured income support to the small and marginal farmers*, the Government is launching the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN).
- Under this programme, *vulnerable landholding farmer families, having cultivable land upto 2 hectares, will be provided direct income support at the rate of Rs. 6,000 per year*.
- This income support will be *transferred directly into the bank accounts of beneficiary farmers*, in three equal installments of Rs. 2,000 each.

## 4. New e-commerce policy

- India's new e-commerce policy came into effect on February 1, 2019.
- *Key Highlights of the new policy:*
- Bar online retailers from selling products through vendors in which they have an equity interest.
- Also bars them from entering into exclusive deals with brands for selling products only on their platforms.
- *All online retailers will be required to maintain a level playing field* for all the vendors selling their products on the platform, and it shall not affect the sale prices of goods in any manner.
- *Disallows e-commerce players to control the inventory of the vendors*. Any such ownership over the inventory will convert it into inventory-based model from marketplace based model, which is not entitled to FDI.
- Under the new rules, the e-commerce retailer shall be deemed to own the inventory of a vendor if over 25 per cent of the purchases of such a vendor are through it.
- *Restricts marketplaces from influencing prices* in a bid to curb deep discounting. With this, special offers like cashback, extended warranties, faster deliveries to some brands will be prohibited, with the view to provide a level playing field.

## 5. Rashtriya Gokul Mission

- To **conserve and develop indigenous bovine breeds**, government has launched 'Rashtriya Gokul Mission' under the *National Programme for Bovine Breeding and Dairy Development (NPBBD)*.
- *The Mission is being implemented with the objectives to:* a) development and conservation of indigenous breeds b) undertake breed improvement programme for indigenous cattle breeds so as to improve the genetic makeup and increase the stock; c) enhance milk production and productivity; d) upgrade nondescript cattle using elite indigenous breeds like Gir, Sahiwal, Rathi, Deoni, Tharparkar, Red Sindhi and e) distribute disease free high genetic merit bulls for natural service.
- *Implementation:*
  - Rashtriya Gokul Mission will be *implemented through the "State Implementing Agency (SIA viz Livestock Development Boards)*. State Gauseva Ayogs will be given the mandate to sponsor proposals to the SIA's (LDB's) and monitor implementation of the sponsored proposal. All Agencies having a role in indigenous cattle development will be the "Participating Agencies" like CFSPTI, CCBFs, ICAR, Universities, Colleges, NGO's, Cooperative Societies and Gaushalas with best germplasm.
- *Gokul Gram:*
  - Funds under the scheme will be allocated for the establishment of Integrated Indigenous Cattle Centres viz "Gokul Gram".
  - *Gokul Grams will be established in:* i) the native breeding tracts and ii) near metropolitan cities for housing the urban cattle.
  - Gokul Gram will *act as Centres for development of Indigenous Breeds* and a dependable source for supply of high genetic breeding stock to the farmers in the breeding tract.
  - The Gokul Gram will be *self-sustaining and will generate economic resources* from sale of A2 milk (**A2 milk** is cow's milk that mostly lacks a form of β-casein proteins called A1 and instead has mostly the A2 form), organic manure, vermi-composting, urine distillates, and production of electricity from bio gas for in house consumption and sale of animal products.
  - The Gokul Gram will also *function as state of the art in situ training centre* for Farmers, Breeders and MAITRI's.

## 6. Rastriya Kamdhenu Aayog

- It is in pursuance of the announcement of setting up of the Aayog in the Union Budget 2019-20.
- This aayog will undertake the **development work for Cow welfare**.
- The setting up of Rashtriya Kamdhenu Aayog will lead to conservation, protection and development of cattle population in the country including **development and conservation of indigenous breeds**.
- It will result in increased growth of livestock sector which is more inclusive, benefitting women, and small and marginal farmers.
- The Rashtriya Kamdhenu Aayog will work in collaboration with Veterinary, Animal Sciences or Agriculture University or departments or organizations of the Central/State Government engaged in the task of research in the field of breeding and rearing of cow, organic manure, biogas etc.

## 7. Know My India Programme

- The *National Foundation for Communal Harmony (NFCH)* organized a special workshop for 42 Youth in the age group of 15 to 22 years, who have been victims of communal violence in the past, under the *Know My India Programme*.
- *Know My India Programme* is a unique programme initiated by the NFCH *to bring together financially assisted children of the Foundation from different States/Regions of the country to promote oneness, fraternity and national integration*.

- The programme is all about familiarization with the environment, family life, social customs, etc. of the people living in different parts of the country; developing understanding of the common historical and cultural heritage of the country.
- ***NFCH:***
  - It is ***an autonomous organization under the administrative control of the Ministry of Home Affairs***.
  - The main objective of the Foundation is to provide assistance to the children / youth rendered orphan / destitute in communal, caste, ethnic or terrorist violence for their rehabilitation besides promoting communal harmony and national integration through various activities.
  - The NFCH sponsors/conducts different activities for the promotion of communal harmony and strengthening of national integration.

## 8. Kerala sets up drug price monitor

- ***Kerala has become the first State to set up a price monitoring and research unit (PMRU)*** to track violation of prices of essential drugs and medical devices under the Drugs Price Control Order (DPCO).
- The move comes more than five years after the ***National Pharmaceutical Pricing Authority (NPPA)*** proposed such a system for the States and the Union Territories.

## 9. Millet Village scheme

- It is a special scheme to promote the cultivation of cereals such as millet, ragi, bajra and maize by setting up a millet village at Attappady.
- ***What are Millets?***
  - Millet is a common term to categorize small-seeded grasses that are often termed nutri-cereals or dryland-cereals, and includes sorghum, pearl millet, ragi, small millet, foxtail millet, proso millet, barnyard millet, kodo millet and other millets.
- ***Benefits of Millets:***
  - ***An important staple cereal crop***.
  - ***Nutritionally superior to wheat & rice***.
  - ***The anaemia (iron deficiency), B-complex vitamin deficiency, pellagra (niacin deficiency) can be effectively tackled***.
  - ***Millets can also help tackle health challenges*** such as obesity, diabetes and lifestyle problems as they are gluten free, have a low glycemic index and are high in dietary fibre and antioxidants.
  - ***Adapted to low or no purchased inputs and to harsh environment*** of the semi-arid tropics, they are the backbone for dry land agriculture.
  - ***Photo-insensitive & resilient to climate change***.
- ***Efforts by government to promote millets:***
  - India had notified these crops as **"Nutri-Cereals"** and allowed its inclusion in the **Public Distribution System (PDS)** for improving nutritional support in April.
  - Recognising millets' **anti-diabetic properties**, the notification called it a **"powerhouse of nutrients"**. The millets in the category of "Nutri-Cereals" include Sorghum (Jowar), Pearl Millet (Bajra), Finger Millet (Ragi), Foxtail Millet (Kangani/Kakun) and Buckwheat (Kuttu) among others.
  - Besides, the government had in July substantially **hiked the minimum support price (MSP) of millets**
- ***Facts for Prelims:***

o 160th session of the *Food and Agriculture Organization (FAO) Council, held in Rome in December 2018, approved India's proposal to observe an International Year of Millets in 2023*.

## 10. Operation Smile

- The 'Operation Smile-V' initiative launched by Hyderabad Police has helped in rescuing 325 children, who were either working as labourers or begging on the streets, since January 1 this year.
- *Objective:* To trace the missing children and rescue child labourers, Operation Smile-V was launched on January 1 across Telangana.
- *Operation Smile also called as Operation Muskaan* is an initiative of the Ministry of Home Affairs (MHA) to rescue/rehabilitate missing children.

## 11. National Sports Development Fund

- The Ministry of Youth Affairs & Sports is implementing *Target Olympic Podium Scheme (TOPS) within overall ambit of National Sports Development Fund (NSDF)* for providing financial assistance to elite athletes included in TOPS for their customized training in world class training institutes/academies within the country and abroad.
- Established in 1998, under *Charitable Endowments Act 1890*, vide Government of India Notification dated 12th November 1998.
- *Functions:*
  o The NSDF **supports sportspersons to excel in the field** by providing opportunities to train under coaches of international repute with technical, scientific and psychological support and also in getting exposure to international competitions.
  o Financial assistance is also provided to specific projects for promotion of sports and games sponsored by reputed Organizations/Institutes, provided the facilities so created are made available to a sizeable population of the area/region.
- *The Council:*
  o The Fund is managed by a Council constituted by the Central Government.
  o **Union Minister for Youth Affairs and Sports is the Chairperson of the council.**
  o The representatives of the Apex industry organizations namely, FICCI, CII and ASSOCHAM have been included in the Council as members.
  o The representatives of Sports Promotion Boards of reputed organizations are also members of the Council.
  o Joint Secretary to the Government of India in the Ministry of Youth Affairs & Sports is the ex-officio Member Secretary of the Council.

## 12. National Service Scheme (NSS)

- It is an Indian government-sponsored **public service program** conducted by the **Ministry of Youth Affairs and Sports** of the Government of India.
- The scheme was launched in Gandhiji's Centenary year in 1969.
- Aim: The **University Grants Commission (UGC) headed by Dr. Radhakrishnan recommended introduction of national service in the academic institutions** on a voluntary basis with a view to developing healthy contacts between the students and teachers on the one hand and establishing a constructive linkage between the campus and the community on the other hand.
- **The broad objectives of NSS are to:**
  o Understand the community in which they work.
  o Understand themselves in relation to their community.
  o Identify the needs and problems of the community and involve them in problem solving process.

- o Develop among themselves a sense of social and civic responsibility.
- o Utilize their knowledge in finding practical solution to individual and community problems.
- o Develop competence required for group living and sharing of responsibilities.
- o Gain skills in mobilizing community participation.
- o Acquire leadership qualities and democratic attitude.
- o Develop capacity to meet emergencies and natural disasters.
- o Practice national integration and social harmony.

## 13. Pre-Departure Orientation Training (PDOT) programme

- Given the need to orient potential migrant workers with regard to language, culture, do's and don'ts in the destination country, the emigration process and welfare measures, a *Pre-Departure Orientation Training (PDOT) programme* has been launched.
- *Key facts:*
  - o The *Ministry of External Affairs (MEA) in collaboration with Ministry of Skill Development and Entrepreneurship (MSDE) is conducting the PDOT programme under the Pravasi Kaushal Vikas Yojana (PKVY)*.
  - o The *National Skill Development Corporation is the implementing agency* for this programme.
- *About Pravasi Kaushal Vikas Yojana (PKVY):*
  - o The Pravasi Kaushal Vikas Yojana (PKVY) is aimed *at skilling Indians seeking employment abroad*.
  - o The programme is also *aimed at boosting the confidence of the Indian youth* so that they don't feel like strangers when they land in a country of their choice for vocation.
  - o PKVY will train and certify Indians, who are keen on overseas employment in select sectors, in line with international standards.
  - o *It will be implemented by the National Skill Development Corporation* through its training partners and in consultation with the Ministry of External Affairs and the Skill Development Ministry.

## 14. Safe City project

- Empowered Committee of Officers for Nirbhaya funds scheme has approved *pilot Safe City projects in eight selected metropolitan cities*, namely, Delhi, Kolkata, Mumbai, Chennai, Bengaluru, Hyderabad, Ahmedabad and Lucknow with a view to provide safety to women in public places.
- *The project would be implemented as a Centrally Sponsored Scheme* with Centre and State sharing the funding in *60:40 ratio*.
- *The major components of the Safe City project include, inter-alia:*
  - o Setting up an Integrated Smart Control Room;
  - o Setting up Pink Out-posts (exclusively administered by Women police) for facilitating ease of filing complaint by women;
  - o Pink Patrols of Women police;
  - o Setting up Women Help Desks in all Police Stations with Counsellors;
  - o Augmentation of existing Asha Jyoti Kendra;
  - o Implementing Safety measures in buses, including Cameras;
  - o Improving Street Lighting in identified Hot Spot areas;
  - o Setting up Pink Toilets;
  - o Integration of Women power-help line with single Emergency number.

## 15. Kisan Credit Card Scheme

- The *Indian Banking Association (IBA)* has issued advisory guidelines requesting banks to waive off the processing, documentation, inspection, ledger folio charges and all other service charges for crop loans up to Rs 3 Lakhs or for the *Kisan Credit Card Scheme*. The move aims to provide direct benefit to farmers and ease the pressure on them.
- *Campaign:*
    - *The Department of Agriculture, Cooperation and Farmers Welfare* has announced the launch of campaign with immediate effect to saturate farmers for financial inclusion under Kisan Credit Cards (KCC).
    - *This campaign will be launched through the Financial Institutions* including Commercial Banks, Cooperative Banks and Regional Rural Banks in collaboration with the State Governments. The Department of Financial Services has already issued directives to these financial institutions under their purview.
- *Kisan Credit Card Scheme:*
    - The Kisan Credit Card (KCC) scheme was announced in the Budget speech of 1998-99 to fulfil the financial requirements of the farmers at various stages of farming through institutional credit.
    - The model scheme was prepared by the National Bank for Agriculture and Rural Development (NABARD) on the recommendation of *V Gupta committee*.
    - *The KCC scheme is being implemented by the all Co-operative banks, Regional Rural Banks and Public Sector Banks throughout the country*.
    - *Scheme covers risk of KCC holders against death or permanent disability resulting from accidents*.
- *Objectives:*
    - To provide adequate and timely credit support from the banking system to the farmers at the cheap rate of interest.
    - To provide credit at the time of requirement.
    - To support post-harvest expenses.
    - To provide Working capital for maintenance of farm assets and activities allied to agriculture.
    - Investment credit requirement for agriculture and allied activities (land development, pump sets, plantation, drip irrigation etc.)
    - Consumption requirements of farmers.
- *Other Salient features of the Scheme:*
    - Revolving cash credit facility involving any number of withdrawals and repayments within the limit.
    - Limit to be fixed on the basis of operational land holding, cropping pattern and scale of finance.
    - Entire production credit needs for full year plus ancillary activities related to crop production to be considered while fixing limit.
    - Card valid for 5 years subject to annual review. As incentive for good performance, credit limits could be enhanced to take care of increase in costs, change in cropping pattern, etc.
    - Conversion/reschedulement of loans also permissible in case of damage to crops due to natural calamities.
    - Operations may be through issuing branch (and also PACS in the case of Cooperative Banks) through other designated branches at the discretion of bank.

- o Crop loans disbursed under KCC Scheme for notified crops are covered under Crop Insurance Scheme, to protect the interest of the farmer against loss of crop yield caused by natural calamities, pest attacks etc.

## 16. Categorisation of Farmers

- In agriculture Census, the operational holdings are categorised in five size classes as follows:
  - o Marginal: Below 1.00 hectare.
  - o Small: 1.00-2.00 hectare.
  - o Semi- Medium: 2.00-4.00 hectare.
  - o Medium: 4.00-10.00 hectare.
  - o Large: 10.00 hectare and above.

## 17. Utkarsh Bangla and Sabuj Sathi schemes have won World Summit on the Information Society (WSIS) Awards

- **West Bengal's** Utkarsh Bangla and Sabuj Sathi schemes have won the prestigious World Summit on the Information Society **(WSIS) awards** under the **United Nations**.
- Key facts:
  - o Utkarsh Bangla and Sabuj Sathi were selected out of 1,062 nominations and they also topped the list in their respective categories.
  - o **Utkarsh Bangla** got the topmost award and emerged a winner in the Capacity Building category.
  - o **Sabuj Sathi** ranked in the first five as a champion project under the ICT application: E-Government category.
- **About Utkarsh Bangla:**
  - o Under Utkarsh Bangla, **skill development training** is given to youths. Several centres have been opened and youths are being given training there. The trained youths are then absorbed in different industries.
- **About Sabooj Sathi:**
  - o Sabooj Sathi is a scheme for **distribution of bicycles** to the students of class IX to XII studying in Govt. run and Govt. aided Schools and Madrashas.

> **World Summit on the Information Society Awards:**
> - Aims to create an effective mechanism to evaluate and recognize individuals, governments, civil society, local, regional and international agencies, research institutions and private-sector companies for outstanding success in implementing development-oriented strategies that leverage the power of ICTs as an enabler of the development.

- **About WSIS:**
  - o WSIS is, at global level, the world's largest annual gathering of the **'ICT for development'** community and provides an opportunity for information exchange, knowledge creation and sharing of best practices, while identifying emerging trends and fostering partnerships, taking into account the evolving Information and Knowledge Societies.
  - o The WSIS Forum is co-organized by The International Telecommunication Union (ITU), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Development Programme (UNDP).
  - o In 2019, The **World Summit on the Information Society (WSIS) Forum** celebrate its 10th anniversary of the establishment of WSIS Forum in Geneva at the International Telecommunication Union, under the theme "Information and Communication Technologies for achieving the Sustainable Development Goals".

## 18. Namami Gange gets Global Recognition at World Summit

- The National Mission for Clean Ganga (**NMCG**) was awarded the distinction of "**Public Water Agency of the Year**" by **Global Water Intelligence** at the **Global Water Summit** in **London**.
- **Global Water Awards:**
    - The Global Water Awards are presented at the Global Water Summit, the major business conference for the water industry worldwide.
    - The awards recognise excellence across the international water industry and reward those initiatives in the water, waste water, and desalination sectors, which bring remarkable improvements in the lives of people.
- **Global Water Summit:**
    - Global Water Summit is the annual business conference for the water industry worldwide. The summit attracts high-level executives from industry, municipalities and international water companies and provides the opportunity to connect with hard-to-reach industry insiders that will not attend any other water event.
    - The summit provides a platform for connecting the public and private sector and for accelerating change and innovation within the sector, it attracts the most influential industry representatives and also becomes a forum for business development and expanding your network.

## 19. Traditional Knowledge Digital Library (TKDL)

- AYUSH ministry and the Council of Scientific and Industrial Research (CSIR), New Delhi will collaborate in research and education in areas of traditional systems of medicine and its integration with modern science.
- This is not the first collaboration of the two organisations. CSIR and the Department of AYUSH (now Ministry) developed the **Traditional Knowledge Digital Library (TKDL).**
- **About TKDL:**
    - The Traditional Knowledge Digital Library (TKDL) is an Indian **digital knowledge repository** of the **traditional knowledge**, especially about medicinal plants and formulations used in Indian systems of medicine.
    - Set up in 2001, as a collaboration between the Council of Scientific and Industrial Research (CSIR) and the MINISTRY OF AYUSH.
    - objective of the library is **to protect the ancient and traditional knowledge of the country from exploitation** through biopiracy and unethical patents, by documenting it electronically and classifying it as per international patent classification systems.
    - Apart from that, the non-patent database serves to **foster modern research based on traditional knowledge**, as it simplifies access to this vast knowledge of remedies or practices.
- **The TKDL contains documentation of publicly available traditional knowledge (TK) that:**
    - relates to Ayurveda, Unani, Siddha and Yoga
    - is in digitized format
    - is available in five languages: English, German, French, Japanese and Spanish.
- **The TKDL:**
    - seeks to prevent the granting of patents for products developed utilizing TK where there has been little, if any, inventive step
    - intends to act as a bridge between information recorded in ancient Sanskrit and patent examiners (with its database containing information in a language and format understandable to patent examiners)

- o facilitates access to information not easily available to patent examiners, thereby minimizing the  possibility that patents could be granted for "inventions" involving only minor or insignificant modifications.

## 20. National Institutional Ranking Framework (NIRF)

- Started in 2015, NIRF outlines a methodology to **rank educational institutions** across the country.
- The parameters used for ranking broadly cover teaching, learning and resources, research and professional practices, graduation outcome, outreach and inclusivity, and perception.
- From 2017, besides being ranked under specific disciplines, large institutions were also given a common overall rank.
- This year as well, educational institutions across the country were ranked in nine categories – overall, universities, engineering, colleges, management, pharmacy, medical, architecture and law.

## 21. RailWire Wi- Fi

- RailWire Wi-Fi by RailTel is now live at 1600 railway stations across the country.
- What is RailWire?
  - o **RailWire is a retail Broadband initiative of the RailTel**. It envisages extending broadband and application services to the public. RailTel is working to establish bringing fast and free Wi-Fi at all stations (except the halt stations) within a year.
  - o The Wi-Fi at 415 A, A1 and C category stations has been provided **in association with Google as the technology partner**. Wi-Fi connections at 200 stations were provided with support from the **Universal Service Obligatory Fund** of the Government of India.
- **About RailTel:**
  - o RailTel Corporation a "Mini Ratna (Category-I)" PSU of Ministry of Railways, is the largest neutral telecom services providers in the country owning a Pan-India optic fiber network covering all important towns & cities of the country and several rural areas covering 70% of India's population.
  - o RailTel is in the forefront in providing nationwide Broadband Telecom & Multimedia Network in all parts of the country in addition to modernization of Train operations and administration network systems for Indian Railways.

## 22. FAME II Scheme

- NITI Aayog & Rocky Mountain Institute (RMI) Release Technical Analysis of **FAME II Scheme**. Report looks at potential saving in areas of energy, oil and carbon emissions.
- **What are the salient features of FAME 2 scheme?**
  - o Faster Adoption and Manufacturing of Hybrid and Electric Vehicles, or FAME 2 scheme aims **to boost electric mobility and increase the number of electric vehicles in commercial fleets**.
  - o **Targe**t: The outlay of ₹10,000 crore has been made for three years till 2022 for FAME 2 scheme.
  - o The government will offer the **incentives for electric buses, three-wheelers and four-wheelers to be used for commercial purposes**.
  - o **Plug-in hybrid vehicles** and those with a sizeable lithium-ion battery and electric motor will also be included in the scheme and fiscal support offered depending on the size of the battery.
  - o FAME 2 will also encourage interlinking of renewable energy sources with charging infrastructure.
- **Outcomes of the recent meeting:**

- o The Inter-Ministerial Steering Committee of the **National Mission for Transformative Mobility** has decided to incorporate localisation conditions to avail benefits under the FAME-II Scheme.
  - o The steering committee has mandated that **only companies that meet the 50% localisation threshold will be eligible for the incentives that will be available under the FAME-II scheme**. The decision has been taken to ensure that the tax payer's money is not used to subsidise imports and encourage local manufacturing.
- **Background:**
  - o FAME India is a part of the **National Electric Mobility Mission Plan**. Main thrust of FAME is to encourage electric vehicles by providing subsidies. **FAME focuses on 4 areas i.e.** Technology development, Demand Creation, Pilot Projects and Charging Infrastructure.

## 23.Renewable Energy Certificates (RECs)

- Renewable Energy (RE) companies have moved the Delhi High Court, seeking an exemption for Renewable Energy Certificates (RECs) under the GST.
- **What are Renewable Energy Certificates (RECs)?**
  - o Renewable Energy Certificates (RECs), also known as **green energy certificates or tradable renewable certificates are proof that energy has been generated from renewable sources such as solar or wind power**.
  - o Each REC represents the environmental benefits of 1MWh of renewable energy generation. When you purchase RECs, renewable energy is generated on your behalf.
- **Significance:**
  - o It is a **market based mechanism** which will help the states meet their regulatory requirements (such as **Renewable Purchase Obligations (RPOs)**) by overcoming the geographical constraints on existing renewable potential in different states.
  - o RECs unbundle the electricity component (commodity) from the green/environmental attributes of the power generated from renewable sources. Both the components can then be traded separately.
  - o Thus, RECs help in **incentivizing the production of renewable energy** over and above the RPO state limit as tradable certificates are not constrained by the geographical limitations of commodity electricity.
- **Need for removal of GST:**
  - o RECs are being charged GST, while bundled power (RECs plus electricity, irrespective of source) or even just electricity are devoid of the same.
  - o **Cost of electricity generation from renewable energy sources is classified as cost of electricity generation** (equivalent to conventional energy sources) and the cost of environmental attributes. REC is the environmental attribute of the electricity derived from RE.
  - o As per regulations, RPO compliance through REC is at par with sourcing electricity directly from RE. Therefore, **GST applicable on the sale of RECs negatively affects its parity with similar electricity sale alternatives, be it conventional or renewable**.
  - o Moreover discoms, the major buyer of RECs (around 50-60 per cent), do not get GST credit; and the increase in their cost of RPO compliance will translate to increased tariff for the end consumer.

## 24.National Common Mobility Card (NCMC)

- Dubbed as **'One Nation One Card'**, the inter-operable transport card would allow the holders to pay for their bus travel, toll taxes, parking charges, retail shopping and even withdraw money.

- This card runs on RuPay card. With the advent of this indigenously-developed and one-of-its-kind card, the country is no longer required to be dependent on foreign technology.
- The stored value on card supports offline transaction across all travel needs with minimal financial risk to involved stakeholders.
- **Ministry of housing & urban affairs** brought to the fore the National Common Mobility Card (NCMC) to enable seamless travel by different metros and other transport systems across the country besides retail shopping and purchases.

## 25. National Rural Economic Transformation Project (NRETP)

- India has signed a $250 million loan agreement with the World Bank for the *National Rural Economic Transformation Project (NRETP)* that aims to help women in rural households shift to a new generation of economic initiatives by developing viable enterprise for farm and non-farm products.
- The National Rural Economic Transformation project *is additional financing to the $500 million National Rural Livelihoods Project (NRLP)* approved by the World Bank in July 2011.
- The project will *support enterprise development programs for rural poor women and youth* by creating a platform to access finance including start-up financing options to build their individual or collectively owned and managed enterprises.
- The project will *involve developing financial products using digital financial services to help small producer collectives scale-up and engage with the market*.
- *It will also support youth skills development*, in coordination with the Deen Dayal Upadhyaya Grameen Kaushalya Yojana.

## 26. Smart India Hackathon 2019

- Smart India Hackathon 2019 is a nationwide initiative to provide students a platform to solve some of pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem solving.
- An initiative by Ministry of HRD, AICTE, Persistent Systems, i4c and Rambhau Mhalgi Prabodhini.
- In SIH 2019, the students would also have the opportunity to work on challenges faced within the private sector organisations and create world class solutions for some of the top companies in the world, thus helping the Private sector hire the best minds from across the nation.

## 27. National Knowledge Network

- India has decided to extend its National Knowledge Network to Bangladesh.
- **About NKK:**
    - NKN is a **multi-gigabit pan-India network** which facilitates the development of India's communications infrastructure, stimulates research and creates next generation applications and services.
    - Aim: NKN aims to **connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country** to address such paradigm shift.
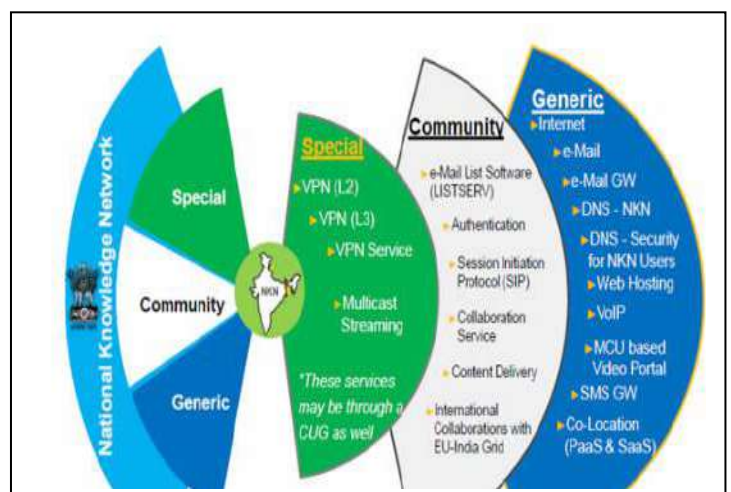
- o What it does? It enables **collaboration among researchers** from different educational networks such as TEIN4, GARUDA, CERN and Internet2. It also enables sharing of scientific databases and remote access to advanced research facilities. The leading mission oriented agencies in the fields of nuclear, space and defence research are also part of NKN.
- **Role of NKN:**
    - o Establishing a high-speed backbone connectivity which will enable knowledge and information sharing amongst NKN connected institutes.
    - o Enabling collaborative research, development and innovation amongst NKN connected institutes.
    - o Facilitating advanced distance education in specialized fields like engineering, science, medicine etc.
    - o Facilitating an ultra-high-speed e-governance backbone.
    - o Facilitating connection between different sectoral networks in the field of research.
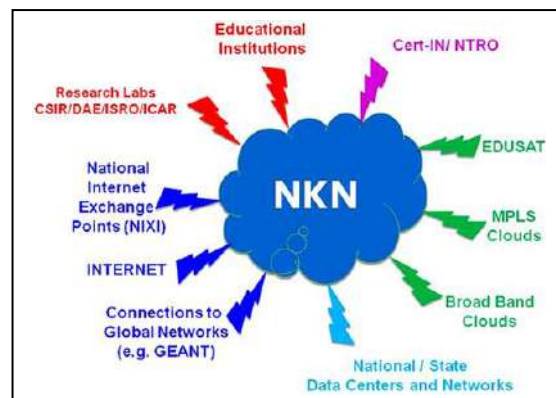


## 28. Café Scientifique

- 'Café Scientifique' is the first of its kind initiative in the State of Kerala **aimed at popularising Science**.
- **Objective:** The café envisages to bring science back into popular culture by demystifying scientific research for the public and empowering non- scientists to comfortably assess science and technology issues, particularly those that impact social policymaking.
- **Background:** It is **a grassroots public science initiative based on the French Café Philosophique model**. Originating in England, the concept quickly gained popularity and was adopted by other countries.

## 29. National Mineral Policy, 2019

- National Mineral Policy, 2019 approved by Cabinet.
- Focus on transparency, better regulations & enforcement, balanced growth & sustainability, Grant of Industry status to Mining activity.
- **Objective:**
    - o The aim of National Mineral Policy 2019 is to have a more effective, meaningful and implementable policy that brings in further transparency, better regulation and enforcement, balanced social and economic growth as well as sustainable mining practices.
- **The National Mineral Policy 2019 includes provisions which will give boost to mining sector. Some of the provisions are:**
    - o Introduction of Right of First Refusal for RP/PL holders.
    - o **Encouraging the private sector** to take up exploration.
    - o Encouragement of merger and acquisition of mining entities.
    - o Creation of **dedicated mineral corridors** to boost private sector mining areas.
    - o The 2019 Policy proposes to **grant status of industry to mining activity** to boost financing of mining for private sector and for acquisitions of mineral assets in other countries by private sector.
    - o It also mentions that **Long-term import-export policy** for mineral will help private sector in better planning and stability in business.

- o The Policy also mentions rationalize reserved areas given to PSUs which have not been used and to put these areas to auction, which will give more opportunity to private sector for participation.
- o The Policy also mentions to make efforts to **harmonize taxes, levies & royalty** with world benchmarks to help private sector.
- o The Policy also introduces the concept of **Inter-Generational Equity** that deals with the well-being not only of the present generation but also of the generations to come and also proposes to constitute an inter-ministerial body to institutionalize the mechanism for ensuring sustainable development in mining.
- **Background:**
  - o National Mineral Policy 2019 replaces the extant National Mineral Policy 2008 ("NMP 2008"). The impetus to review NMP 2008 came about by way of a direction from the Supreme Court vide its judgment in Common Cause v/s Union of India & Others.

## 30. Festival of Innovation & Entrepreneurship (FINE)

- Festival of Innovation and Entrepreneurship was held in Gandhinagar, Gujarat.
- FINE is *an initiative being organised by Rashtrapati Bhavan in association with the Department of Science and Technology*, Government of India and the *National Innovation Foundation-India*.
- It will recognise, respect, showcase, reward innovations and to foster a supportive ecosystem for innovators.
- FINE will provide a platform for innovators for building linkages with potential stakeholders to develop their ideas into implementable projects for the larger social good.
- It will provide a window to showcase creative and innovative solutions for social development through innovation emerging from grassroots, student ideas and other technologies.

## 31. MSP for Minor Forest Produce scheme

- The **Ministry of Tribal Affairs (MoTA)** has added nine minor forest produce (MFP) items to its minimum support price (MSP) for MFP scheme. The total number of MFPs covered under the list is 49.
- *The nine new items are:* Bakul (dried bark), Kutaj (dried bark), Noni/Aal (dried fiuits), Sonapatha/Syonak pods, Chanothi seeds, Kalihari (dried tubers), Makoi (dried fiuits), Apang plant and Sugandhrnantri roots/tubers.
- **About MSP for MFP scheme:**
  - o The MSP for MFP scheme was started by the Centre in 2013 to ensure fair and remunerative prices to MFP gatherers.
  - o *The scheme is designed as a social safety net for improvement of livelihood of MFP gatherers* by providing them fair price for the MFPs they collect.
  - o *The scheme has been started with the objective of providing fair price to MFP gatherers*, enhance their income level and ensure sustainable harvesting of MFPs.
- **Implementation of the scheme:**
  - o *Ministry of Tribal Affairs, Government of India is the Nodal Ministry for implementation of the scheme* which will announce Minimum Support Price (MSP) for the selected MFPs with the technical support from TRIFED.
  - o *TRIFED will act as the Central Nodal Agency for implementation and monitoring of the scheme through State level implementing agencies*.
  - o State designated agencies will undertake procurement of notified MFPs directly from MFP gatherers (individual or collectives) at haats notified procurement centers at grass root level at prefixed Minimum Support Price.

## 32.Agri-Market Infrastructure Fund (AMIF)

- The Cabinet Committee of Economic Affairs has given its approval for the creation of a corpus of Rs. 2000 crore for *Agri-Market Infrastructure Fund (AMIF).*
- The fund will be *created with NABARD for development and up-gradation of agricultural marketing infrastructure in Gramin Agricultural Markets and Regulated Wholesale Markets*.
- AMIF will provide the State/UT Governments *subsidized loan* for their proposal for developing marketing infrastructure in 585 Agriculture Produce Market Committees (APMCs) and 10,000 Grameen Agricultural Markets (GrAMs).
- *States may also access AMIF for innovative integrated market infrastructure projects including Hub and Spoke mode and in Public Private Partnership mode*.

## 33.Sela Tunnel Project

- The foundation stone for the strategically important *Sela Tunnel Project in Arunachal Pradesh was laid recently*.
- The project is being *constructed by the Border Roads Organisation (BRO)* and would be completed in the next three years.
- **Significance of the project:**
  - o Once the 12.04-km tunnel is complete it will give a fillip to the overall development of the area as it will provide *all-weather connectivity to Tawang and other areas*.
  - o *It will also reduce the travelling time from Tezpur to Tawang* by more than an hour and boost tourism and related economic activities in the region.
  - o *Need:* Till now, the entry to the area was only through the 13,700-feet Sela Pass, which is covered in snow in the winters making the movement of vehicles difficult.
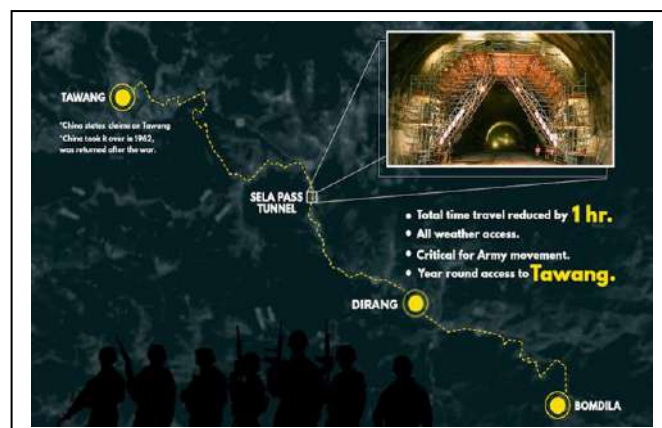
## 34.Transport and Marketing Assistance (TMA) for specified agriculture products

- The Centre has notified a scheme for *Transport and Marketing Assistance (TMA) for specified agriculture products* that will provide assistance for the international component of freight and marketing of agricultural produce.
- The scheme will be available for exports effected from March 1, 2019 to March 31, 2020.
- *Eligibility:* All exporters, duly registered with relevant Export Promotion Council as per Foreign Trade Policy, of eligible agriculture products shall be covered under this scheme.
- *Exceptions: The assistance* is available for most agricultural product exports with some exceptions such as live animals, products of animal origin, milk, cream, curd, butter, buttermilk, whey, rice, wheat, tobacco and garlic.
- The assistance, at notified rates, will be *available for export of eligible agriculture products to the permissible countries, as specified from time to time*. The assistance shall be admissible only if payments for the exports are received in Free Foreign Exchange through normal banking channels.
- The scheme shall be admissible for exports made *through EDI (Electronic Data Interchange) ports only*.
- The scheme *covers freight and marketing assistance for export by air as well as by sea*.

## 35. Pradhan Mantri JI-VAN (Jaiv Indhan- Vatavaran Anukool fasal awashesh Nivaran) Yojana

- The Cabinet Committee on Economic Affairs has approved the "Pradhan Mantri JI-VAN (Jaiv Indhan-Vatavaran Anukool fasal awashesh Nivaran) Yojana ".
- The scheme provides **financial support to Integrated Bioethanol Projects using lignocellulosic biomass and other renewable feedstock.**
- The scheme focuses to **incentivise 2G Ethanol sector** and support this nascent industry by creating a suitable ecosystem for setting up commercial projects and increasing Research & Development in this area.
- Apart from supplementing the targets envisaged by the Government under EBP programme, the **scheme will also have the following benefits:**
  - Meeting Government of India vision of **reducing import dependence** by way of substituting fossil fuels with Biofuels.
  - **Achieving the GHG emissions reduction targets** through progressive blending/ substitution of fossil fuels.
  - **Addressing environment concerns** caused due to burning of biomass/ crop residues & improve health of citizens.
  - **Improving farmer income** by providing them remunerative income for their otherwise waste agriculture residues.
  - **Creating rural & urban employment opportunities** in 2G Ethanol projects and Biomass supply chain.
  - **Contributing to Swacch Bharat Mission** by supporting the aggregation of nonfood biofuel feedstocks such as waste biomass and urban waste.
  - **Indigenizing of Second Generation Biomass to Ethanol technologies.**
- **Key facts:**
  - The ethanol produced by the scheme beneficiaries will be mandatorily supplied to Oil Marketing Companies (OMCs) to further enhance the blending percentage under EBP Programme.
  - Centre for High Technology (CHT), a technical body under the aegis of MoP&NG, will be the implementation Agency for the scheme.
  - "Pradhan Mantri JI-VAN Yojana" is being launched as a tool to create 2G Ethanol capacity in the country and attract investments in this new sector.

## 36. Hydro Power Sector

- Cabinet has approved measures to promote the Hydro Power Sector.
- These measures include:
  - *Large Hydropower Projects to be declared as Renewable Energy source* (as per existing practice, only hydropower projects less than 25MW are categorized as Renewable Energy).
  - *Hydropower Projects (HPO) as a separate entity within non-solar Renewable Purchase Obligation* to cover LHPs commissioned after notification of these measures (SHPs are already covered under Non-Solar Renewable Purchase Obligation).
  - *The trajectory of annual HPO targets will be notified by Ministry of Power based on the projected capacity addition plans in hydropower sector*. Necessary amendments will be introduced in the Tariff Policy and Tariff Regulations to operationalize HPO.
  - *Budgetary support for funding flood moderation component of hydropower projects on case to case basis*.
- **India's hydropower potential:**
  - India ranks 5th in terms of exploitable hydro-potential on global scenario.

o India is endowed with large hydropower potential of 1,45,320 MW of which only about 45,400 MW has been utilized so far. Only about 10,000 MW of hydropower has been added in the last 10 years.
o The hydropower sector is currently going through a challenging phase and the share of hydropower in the total capacity has declined from 50.36% in the 1960s to around 13% in 2018-19.
- **What is the classification of Hydro Projects based on Installed Capacity?**
   o Micro: upto 100 KW.
   o Mini: 101KW to 2 MW.
   o Small: 2 MW to 25 MW.
   o Mega: Hydro projects with installed capacity >= 500 MW.
   o Thermal Projects with installed capacity >=1500 MW.

## 37. UNNATEE (Unlocking NATional Energy Efficiency potential)

- *Bureau of Energy Efficiency (BEE)* has developed a national strategy document- *UNNATEE (Unlocking NATional Energy Efficiency potential)*– for accelerating energy efficiency in India.
- The strategy document describes a plain framework and implementation strategy to establish a clear linkage between energy supply-demand scenarios and energy efficiency opportunities.
- The document offers a comprehensive roadmap to address India's environmental and climate change mitigation action through energy efficiency measures.

## 38. District cooling system

- **India's First District cooling system will come up in Amravati, capital of the Andhra Pradesh.**
- **What is District cooling system?**
   o District cooling systems produce chilled water, steam or hot water at a central plant and then pipe that energy out (either underground or over rooftops) to buildings for air conditioning, space heating and water heating. As a result, these buildings don't require their own chillers, air conditioners, boilers or furnaces.
   o They are considered to be highly efficient to address each of the challenges like high Capital and operating costs, reliability, flexibility and environmental sustainability while meeting their comfort and process cooling and heating needs.
   o District cooling uses only 50% of primary energy consumption for cooling urban building n compared to other cooling systems. This also reduces carbon emissions.

## 39. BEE Star Rating

- The Ministry of Power has announced that two more electrical appliances **microwave ovens and washing machines** will now be assigned star ratings based on their energy efficiency metrics.
- The programme of star rating of Microwave Ovens and Washing Machines will be implemented on a voluntary basis and will be valid up to December 31, 2020.
- **What is BEE Star Rating?**
   o Star ratings are provided to all the major kind of appliances in the form of labels. These star ratings are given out of 5 and they provide a basic sense of how energy efficient each product is, just in a single glance.
   o The manufacturers are officially required to put these labels as per the Standards and Labelling Program introduced in 2006.
- **Why do they put these BEE Star Rating labels?**
   o The prime importance of these Star Ratings is to **educate and inform consumers** about how energy efficient each product is.
- **How do they decide the BEE Star Ratings?**

- o One of the most common myths about the BEE Star Rating is that it is solely based on the appliance's power consumption. A lot of factors contribute into formulating the final star rating on the product.
  - o Although the manufacturers rate and label the product, **BEE sets all the standards and norms which need to be followed while rating an appliance**.
  - o While some category of appliances necessarily have to be given a star rating, for others it's optional.
  - o **Appliances which need to have an energy rating label mandatorily**: Frost-free refrigerator, Tubular Fluorescent Lamps, Room Air-Conditioners, Distribution Transformer, Colour TV, CST AC, Direct Cool Refrigerator and Electric Geyser.
  - o The appliances with the lowest energy consumption in a product category are given the most stars and those with the highest energy consumption are given the least.
- **There are two variants of these labels, a big one and a smaller version:**
- **Big label:**
  - o The big energy rating label is aimed at appliances which have a constant usage and consume more electricity.
  - o These labels show additional information such as the yearly energy consumption of the product, brand name, product category and much more.
  - o For consumers, this big label is helpful as it allows you to calculate the actual money you would spend in electricity bills for that particular product.
  - o Products with a big label: Refrigerators, air-conditioners, geysers and washing machines.
- **Small Label:**
  - o Small labels can be found in appliances which usually don't consume more energy. These labels just give you a visual representation of the energy consumption levels by showing star ratings.
  - o Products with a small label: Ceiling fans, tube lights, computers/laptops and televisions.
- **Facts for Prelims:**
  - o Bureau of Energy Efficiency is a statutory body set up under the **Energy Conservation Act, 2001.**
  - o The Bureau of Energy Efficiency assists the government in developing policies and strategies with a thrust on self-regulation and market principles with the primary objective of reducing the energy intensity of the Indian economy within the overall framework of the Energy Conservation Act, 2001.

## 40. Darwaza Band -Part 2
- The **Swachh Bharat Mission Grameen** has launched the 'Darwaza Band -Part 2' campaign starring Amitabh Bachchan.
- The campaign, produced by the **Ministry of Drinking Water and Sanitation**, and supported by the World Bank.
- The campaign talks about how a toilet must be used by all, always and under all circumstances (har koi, har roz, hamesha).
- The focuses on sustaining the open defecation free status of villages across the country.
- It focuses on ensuring that people's behaviour is changed for good and everyone always uses a toilet.

## 41. Credit Linked Capital Subsidy Scheme
- The Central government will continue the *"Credit Linked Capital Subsidy and Technology Upgradation Scheme"* for micro, small, and medium enterprises (MSEs) beyond the 12th Plan period for three years from 2017-18 to 2019-20.

- The *Cabinet Committee on Economic Affairs* has approved the continuation of the scheme with a total outlay of Rs 2,900 crore.
- **Credit Linked Capital Subsidy Scheme:**
  - The objective of the Scheme is *to facilitate technology up-gradation in MSEs by providing an upfront capital subsidy* of 15 per cent (on institutional finance of up to Rs 1 crore availed by them) for induction of well-established and improved technology in the specified 51 sub-sectors/products approved.
  - The major objective is *to upgrade their plant & machinery with state-of-the-art technology, with or without expansion and also for new MSEs* which have set up their facilities with appropriate eligible and proven technology duly approved under scheme guidelines.
  - The Scheme is *a demand driven one without any upper limit on overall annual spending on the subsidy disbursal*.

## 42. Swachh Shakti Programme

- *Swachh Shakti 2019 Awards* were recently distributed by the PM on the occasion of *Swach Shakti 2019 programme*.
- The Swachh Shakti Programme is *a national event which aims to bring in to focus the leadership role played by rural women in Swachh Bharat Mission*.
- Launched in 2017, the Programme is *a part of ongoing activities under the aegis of the Swachh Bharat Mission*, launched on October 2, 2014 by the Prime Minister Narendra Modi to achieve a clean and Open Defecation Free (ODF) India by October 2, 2019.
- The programme is *attended by women panchs and sarpanchs from across the country*.
- The *first edition of Swachh Shakti programme was launched from Gandhinagar, Gujarat on International Women's Day 2017*.

# International Relations

## 1. Transparency International

- The **Transparency International** conducted a survey to analyse the best practices followed by the states in the Budget Formulation.
- **The survey was based on 4 parameters** which include public disclosure, budgetary process, post-budget fiscal management and efforts to make the budget more transparent and citizen-friendly.
- **Transparency International:**
    - An international non-governmental organization based in Berlin, Germany.
    - Founded in 1993 by a group of individuals who decided to take up a stance against corruption.
    - The **Corruption Perception Index** is the most widely used indicator of corruption worldwide.

## 2. INSTEX – Instrument In Support Of Trade Exchanges

- It is **a payment mechanism being setup by the European Union** to secure trade with Iran and skirt US sanctions after Washington pulled out of the landmark nuclear deal last May.
- **Key features of INSTEX:**
    - INSTEX will **allow trade between the EU and Iran** without relying on direct financial transactions.
    - **INSTEX is registered at Paris** with an initial 3,000 Euros in the capital and a supervisory board with members from France and Germany and chaired by the UK.
    - It is a project of the governments of France, Germany and Britain and will receive the formal endorsement of all 28 EU members.
    - It will initially be **used for non-sanctionable trade**, including humanitarian goods such as medicine, food and medical devices.

## 3. Asia LPG Summit

- 2nd edition of the Asia LPG Summit was held in New Delhi.
- The summit was organized by the World LPG Association (WLPGA) in association with major Indian public-sector oil companies (OMCs) Indian Oil, Hindustan Petroleum, and Bharat Petroleum.
- **Objectives of the summit:**
    - The summit will offer a unique opportunity to the global LPG industry to interact with development agencies, NGOs and non-profit organizations who have facilitated last-mile access to LPG for the beneficiaries.
    - The summit will also bring together academia and private sector to exchange their views on the use of LPG and how pathbreaking initiatives such as 'Pradhan Mantri Ujjwala Yojana' can bring remarkable socio-economic transformation.
- **About World LPG Association:**
    - The World LPG Association (WLPGA) is the authoritative global voice for the liquefied petroleum gas (LPG) industry and the worldwide industry association which represents the interests of the LPG industry globally.
    - The WLPGA promotes the use of LPG to foster a cleaner, healthier and more prosperous world.
    - With over 200 members and presence in more than 125 countries, the WLPGA represents the interests of private and public companies from the entire LPG value chain under one umbrella.
    - The WLPGA provides a platform for the exchange of best practices, facts and figures among its members.

o The WLPGA was officially granted **Consultative Status with the United Nations Economic and Social Council** in 1989. Publications such as its Annual Statistical Review have become LPG industry references.

## 4. Trade Across LoC

- **MHA has issued orders to suspend the LoC trade in Jammu & Kashmir**. This action has been taken as the Government of India has been receiving reports that the Cross-LoC trade routes are being misused by the Pakistan based elements for funnelling illegal weapons, narcotics and fake currency etc.
- **Trade across LoC:**
  o LoC trade is meant **to facilitate exchange of goods of common use between local populations across the LoC in Jammu & Kashmir**.
  o The trade is **allowed through two Trade Facilitation Centres located at Salamabad, Uri, District Baramulla and Chakkan-da-Bagh, District Poonch**.
  o The trade **takes place four days a week**.
  o The Trade is based on **Barter system and zero duty.**

## 5. India gains access to Bolivian Lithium Reserves

- **India** and **Bolivia** have signed an agreement for the development and industrial **use of lithium**, a prime component used to power electric vehicles and cell phones.
- India and Bolivia agreed to forge a mutually beneficial partnership to facilitate Bolivian supplies of lithium Carbonate to India and foster joint ventures for lithium battery/cell production plants in India.
- This agreement will make **Bolivia,** which is known to **have one-fourth of the world's lithium reserves,** one of the **major provider of metal for India's e-mobility and e-storage needs**.
- The agreement **facilitates** mechanisms for the **commercialization of Lithium Carbonate and Potassium Chloride produced in Bolivia by** Yacimientos de Litio Bolivianos Corporación (YLB – Corporación).
- **Significance of the agreement:**
  o Bolivia is estimated to hold over **60% of the world's reserves for lithium** but has not yet started producing it commercially.
  o **India is the second largest manufacturer of mobile phones in the world and has the ambitious goal of 30 per cent electric vehicles by 2030**. But **India imports all its lithium-ion batteries since India has no known sources of lithium**, and zero lithium-ion battery manufacturing capabilities currently.
  o As a result, **India is heavily dependent on China**, **Taiwan and Japan for import**, especially of batteries required for portable electronics.

## 6. India-Africa Institute of Agriculture and Rural Development (IAIARD)

- India has signed an agreement with the National Bank for Agriculture and Rural Development Consultancy Service (NABCONS) for setting up the **India-Africa Institute of Agriculture and Rural Development (IAIARD) in Malawi, a landlocked country in southeastern Africa**.
- The agreement is a part of India's efforts to enhance capacity in the areas of agro-financing and entrepreneurship development for African countries.
- **About India-Africa Institute of Agriculture and Rural Development (IAIARD):**
  o IAIARD will be **a Pan-African Institute** wherein trainees from Malawi and other African countries will be trained to develop their human resources and build their capacity.

- o The entire expenditure on India faculty, their travel, logistics and training course expenses for students from other African countries will be borne by the Indian Government for an initial period of three years.
    - o IAIARD will develop training programmes in the areas of micro-financing and agro-financing, among others.
- **Significance:**
    - o This will be the **first of its kind institute developed in an African country by India**.

## 7. Bangladesh-Bhutan-India-Nepal (BBIN) Initiative

- **Bangladesh, Bhutan, India and Nepal (BBIN) had signed a framework MVA in June 2015** to enable movement of passenger and cargo vehicles across borders among the four countries. Bhutan has not yet ratified the pact for its entry to come into force.
- However, Bhutan had given its consent for the BBIN MVA to enter into force amongst the other 3 countries i.e. Bangladesh, India and Nepal, who have already ratified it.
- **About BBIN MVA:**
    - o **What is it?** The landmark MVA was signed by Transport Ministers of the BBIN countries in Thimphu, Bhutan on 15 June 2015.
    - o As per the agreement, member countries would allow vehicles registered in the other countries to enter their territory under certain terms and conditions.
    - o Customs and tariffs will be decided by the respective countries and these would be finalised at bilateral and trilateral forums.
    - o **Objective:** The main objective of the agreement is to provide seamless people-to-people contact and enhance economic interaction by facilitating cross border movement of people and goods.
    - o **Benefits:** It would permit unhindered movement of passenger and cargo vehicles among the four countries. Cargo vehicles do not have to be changed at the border, a practice that has prevailed until now.

## 8. Generalised System of Preferences (GSP) Programme

- The move by the United States (U.S.) to terminate India's designation as beneficiary developing country under the Generalized System of Preferences (GSP) programme because it no longer complied with the statutory eligibility criteria.
- Some of the product segments which may face a decline in exports to U.S. due to withdrawal of GSP concessions include plastics raw materials, consumer and houseware items and polyester films.
- **Recent developments:**
    - o Recently, U.S. President Donald Trump decided to rescind the benefits Indian exports enjoy under the Generalised System of Preferences (GSP) programme.
    - o The trigger for the latest downturn in trade ties was **India's new rules on e-commerce** that restrict the way Amazon.com Inc. and Walmart-backed Flipkart do business in a rapidly growing online market set to touch $200 billion by 2027.
    - o That, coming on top of a drive to force **global card payments companies such as Mastercard and Visa to move their data to India** and the **imposition of higher tariffs on electronic products and smartphones**, left a broader trade package the two sides were working on through last year in tatters.
- **Implications:**
    - o With this, India could lose a vital U.S. trade concession, under which it enjoys zero tariffs on $5.6 billion of exports to the United States.
- **Generalised System of Preferences (GSP):**

o The Generalized System of Preferences (GSP) is a **U.S. trade program** designed to promote economic growth in the developing world by providing preferential duty-free entry for up to 4,800 products from 129 designated beneficiary countries and territories.

- **What is the objective of GSP?**
  o The objective of GSP was to give development **support to poor countries** by promoting exports from them into the developed countries. GSP promotes sustainable development in beneficiary countries by helping these countries to increase and diversify their trade with the United States.

- **Benefits of GSP:**
  o **Indian exporters benefit indirectly –** through the benefit that accrues to the importer by way of reduced tariff or duty-free entry of eligible Indian products
  o Reduction or removal of import duty on an Indian product makes it **more competitive to the importer** – other things (e.g. quality) being equal.
  o **This tariff preference helps new exporters to penetrate a market and established exporters to increase their market share** and to improve upon the profit margins, in the donor country.

- **What is the difference between GSP and the usual trade arrangement under WTO?**
  o Under the normal trade laws, the WTO members must give equal preferences to trade partners. There should not be any discrimination between countries. This trade rule under the WTO is called the Most Favored Nation (MFN) clause.
  o **The MFN instructs non-discrimination that any favorable treatment to a particular country**. At the same time, the WTO allows members to give special and differential treatment to from developing countries (like zero tariff imports). This is an exemption for MFN. The MSP given by developed countries including the US is an exception to MFN.

## 9. Kafala

- **Qatar** is set to abolish its controversial **exit visa system** for all foreign workers by the end of 2019. The new law allows most workers to leave the country without exit permits from their employers.
- The 'kafala' system is a system that lays down obligations in the treatment and protection of foreign **'guests'**. Kafala means 'to guarantee' or 'to take care of' in Arabic.
- Under the system, a migrant worker's immigration status is legally bound to an individual employer or sponsor ('kafeel') during the contract period. The migrant worker cannot enter the country, transfer employment nor leave the country for any reason without first obtaining explicit written permission from the kafeel.

| **Where is the kafala system practiced?** |
| :--- |
| - It is being practiced in **the Gulf Cooperation Council (GCC) member countries** of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates, and also in the Arab states of **Jordan** and **Lebanon**. |

- **When did the kafala system start?**
  o The kafala system began in the 1950s when several Middle East countries started hiring foreign workers to accelerate development following the discovery of oil.

## 10. President of World Bank

- **David Malpass** has been appointed as the President of World Bank. He was nominated by the US president Donald Trump.
- **Appointment of the President of World Bank:**
  o **As per the guidelines of the World Bank, the World Bank president must have:**
    - A proven track record of leadership.
    - Experience managing large organizations with international exposure, and a familiarity with the public sector.

- ▪ Ability to articulate a clear vision of the Bank's development mission.
- ▪ A firm commitment to and appreciation for multilateral cooperation.
- ▪ Effective and diplomatic communication skills, impartiality, and objectivity.
- **Who can nominate?**
  - o Executive directors of the World Bank can nominate candidates for the post and the candidate must be citizens of one of the bank's member countries and cannot be a bank governor, executive director or alternate.
  - o If there are more than three candidates, there would be a shortlisting process to narrow the field through an informal straw poll. Then the shortlisted candidates will be interviewed by the board. The board will then make a final selection through a majority vote.
- **Number of votes needed to win:**
  - o To win the presidency of the World Bank, a candidate must win approval from the institution's executive board, which has 25 members. The US holds a 16% share of board voting power hence more often it is the US-backed candidate gets elected for the post of the president.

## 11.International Maritime Organisation (IMO)

- International Maritime Organisation (**IMO**) has launched new rules to introduce **electronic information exchange** between ships and ports for national governments.
- Its objective is **to make cross border trade easy and hassle free**.
- Background:
  - o The requirement, mandatory under **IMO's Convention on Facilitation of International Maritime Traffic (FAL Convention)**, is part of amendments under the revised Annex to the FAL Convention, adopted in 2016.
- **What is Facilitation of International Maritime Traffic (FAL Convention)?**
  - o Adopted in 1965, the main objective of the convention is **to achieve the most efficient maritime transport as possible, looking for smooth transit in ports of ships, cargo, and passengers**.
  - o The Convention encourages the use of a "single window" for data, to enable all the information required by public authorities in connection with the arrival, stay and departure of ships, persons and cargo, to be submitted via a single portal, without duplication.
  - o Under the requirement for electronic data exchange, all national authorities should now have provision for electronic exchange of this information.
- **About IMO:**
  - o The **International Maritime Organization –** is the **United Nations specialized agency** with responsibility for the **safety and security of shipping** and the **prevention of marine pollution** by ships.
  - o The IMO's primary purpose is to develop and maintain a comprehensive regulatory framework for shipping and its remit includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping.
  - o IMO is **governed by an assembly of members and is financially administered by a council of members elected from the assembly**.
  - o **The IMO's structure comprises** the Assembly, the Council, the Maritime Safety Committee, the Marine Environment Protection Committee, the Legal Committee, the Technical Cooperation Committee, and the secretariat, headed by a Secretary-General.

## 12. International Finance Corporation (IFC)

- The International Finance Corporation (IFC) is an international financial institution that offers investment, advisory, and asset management services to **encourage private sector development in developing countries.**
- It is a **member of the World Bank Group** and is headquartered in Washington, D.C., United States.
- It was established in 1956 as the private sector arm of the World Bank Group to advance economic development by investing in strictly for-profit and commercial projects that purport to reduce poverty and promote development.
- The IFC is owned and governed by its member countries, but has its own executive leadership and staff that conduct its normal business operations.
- It is a corporation whose shareholders are member governments that provide paid-in capital and which have the right to vote on its matters.
- **Functions:**
    - It offers an array of debt and equity financing services and helps companies face their risk exposures, while refraining from participating in a management capacity.
    - The corporation also offers advice to companies on making decisions, evaluating their impact on the environment and society, and being responsible.
    - It advises governments on building infrastructure and partnerships to further support private sector development.

## 13. World Heritage Day

- Every year, 18th April is celebrated Worldwide as World Heritage Day to create awareness about Heritage among communities.
- **Theme:** The theme for this year's celebrations is 'Rural Landscapes', which is related to the theme of the
- 2019 ICOMOS Scientific Symposium on Rural heritage that will take place in Marrakesh, Morocco in October.
- **There are 37 World Heritage Sites located in India**. These include 29 cultural sites, seven natural sites and one mixed site. India has the sixth largest number of sites in the world.
- **What is a World Heritage site?**
    - A World Heritage site is classified as **a natural or man-made area or a structure that is of international importance, and a space which requires special protection**.
    - These sites are **officially recognised by the UN and the United Nations Educational Scientific and Cultural Organisation**, also known as UNESCO. UNESCO believes that the sites classified as World Heritage are important for humanity, and they hold cultural and physical significance.
- **Background:**
    - In 1982, the **International Council on Monuments and Sites (ICOMOS)** announced, 18 April as the "World Heritage Day", approved by the General Assembly of UNESCO in 1983, with the aim of **enhancing awareness of the importance of the cultural heritage of humankind**, and redouble efforts to protect and conserve the human heritage.
- **What are rural landscapes and why are they significant?**
    - In the ICOMOS "Principles concerning rural landscapes as heritage", adopted by the ICOMOS General Assembly in 2017, **rural landscapes are defined as "terrestrial and aquatic areas co-produced by human- nature interaction used for the production of food and other renewable natural resources, via agriculture, animal husbandry and pastoralism, fishing and aquaculture, forestry, wild food gathering, hunting, and extraction of other resources, such as salt**. **Rural landscapes are multifunctional resources**. At the same time, all rural

areas have cultural meanings attributed to them by people and communities: all rural areas are landscapes."
  o Rural landscapes encompass an increasing accumulation of tangible and intangible heritage which is in constant adaptation to environmental, cultural, social, political and economic conditions. They are the most common type of continuing cultural landscape.

## 14. UN Mission in South Sudan (UNMISS)
- A total of 150 Indian peacekeepers serving with the **UN Mission in South Sudan (UNMISS)** have received medals of honour for their dedicated service and sacrifice.
- **About United Nations Mission in South Sudan:**
  o **On 9 July 2011 South Sudan became the newest country in the world**. The birth of the Republic of South Sudan is the culmination of a six-year peace process which began with the signing of the Comprehensive Peace Agreement (CPA) in 2005.
  o However, the Security Council determined that the situation faced by South Sudan continued to constitute a threat to international peace and security in the region and established the United Nations Mission in the Republic of South Sudan (**UNMISS**) to **consolidate peace and security** and to help establish conditions for development.
  o Following the crisis which broke out in South Sudan in December 2013, the Security Council reinforced UNMISS and reprioritized its **mandate** towards the protection of civilians, human rights monitoring, and support for the delivery of humanitarian assistance and for the implementation of the **Cessation of Hostilities Agreement**.
- **The stated UNMISS Mandate includes:**
  o Support for peace consolidation and thereby fostering longer- term state building and economic development.
  o Support the Government of the Republic of South Sudan in exercising its responsibilities for conflict prevention, mitigation and resolution and protect civilian ns.
  o Support the Government of the Republic of South Sudan in developing its capacity to provide security, to establish rule of law, and to strengthen the security and justice sectors.

## 15. United Nations Arms Trade Treaty
- US President Donald Trump has rejected the United Nations' 2013 Arms Trade Treaty aimed at regulating the global arms trade.
- Trump described the UN arms trade treaty as misguided and an intrusion on US sovereignty.
- By pulling out of the ATT, the US joins India, which has not signed the treaty.
- **Why is India against this treaty?**
  o One of the arguments made by India in 2013 against the treaty was that New Delhi had "strong and effective national export controls" on military hardware to ensure they don't fall into the wrong hands.
- **What does the Arms Trade Treaty seek to do?**
  o The UN Arms Trade Treaty (ATT) has the ambitious aim of responding to international concern that the $70 billion a year trade in conventional weapons leaves a trail of atrocities in its wake.
  o The treaty calls for the international sale of weapons to be linked to the human rights records of buyers.
  o It requires countries to establish regulations for selling conventional weapons.
  o It calls for potential arms deals to be evaluated in order to determine whether they might enable buyers to carry out genocide, crimes against humanity, or war crimes.

- o The treaty also seeks to prevent conventional military weapons from falling into the hands of terrorists or organized criminal groups, and to stop deals that would violate UN arms embargos.
- **What types of conventional weapons deals does the Arms Trade Treaty seek to regulate?**
    - o Conventional weapons covered by the UN Arms Trade Treaty include tanks and other armored combat vehicles, artillery, attack helicopters, naval warships, missiles and missile launchers, and small arms.
    - o It also establishes common international standards for the regulation of the international trade in ammunition, weapons parts, and arms components.
    - o The treaty does not regulate the domestic sale or use of weapons in any country. It also recognizes the legitimacy of the arms trade to enable states to provide for their own security.

## 16.Indo-Pacific Regional Dialogue (IPRD) – 2019

- The second edition of Indo-Pacific Regional Dialogue (IPRD) – 2019 was held in New Delhi.
- Aim: To provide a platform for substantive and insightful discussions pertaining to the **geopolitical developments affecting the maritime domain of the Indo-Pacific**, and provide policy-relevant inputs to the policy-makers and the public at large.
- **About IPRD- Indo- Pacific Regional Dialogue:**
    - o The idea of an Indo-Pacific Regional Dialogue (IPRD) was first conceptualised and conducted in 2018, as the apex level conference of the Indian Navy, organised by the National Maritime Foundation as the Navy's Knowledge Partner.
    - o The permanent theme of this annual dialogue is a **review of India's opportunities and challenges in the Indo-Pacific region.**
    - o The aim is to focus attention on the Indo-Pacific, as a maritime geographical-entity, while deliberating aspects of great relevance to regional geopolitics.

## 17.TIR convention

- The first shipment under the *United Nations 'Transports Internationaux Routiers' (TIR) convention* arrived in India from Afghanistan through Iran's Chabahar Port.
- The *Customs Convention on International Transport of Goods under cover of TIR Carnets, 1975 (TIR Convention)*, is an *international transit system under the auspices of the United Nations Economic Commission for Europe (UNECE) to facilitate the seamless movement of goods within and amongst the Parties to the Convention*.
- *The 1975 convention replaced the TIR Convention of 1959*, which itself replaced the 1949 TIR Agreement between a number of European countries.
- *The TIR system not only covers customs transit by road but a combination is possible with other modes of transport* (e.g., rail, inland waterway, and even maritime transport), as long as at least one part of the total transport is made by road.

## 18.Trends in International Arms Transfers 2018 Report

- The **Stockholm International Peace Research Institute (SIPRI)** has released the Trends in International Arms Transfers 2018 Report. The assessment was done for a five-year period (2014-2018).
- India was the world's second largest importer of major arms in 2014-18 and accounted for 9.5% of the global total.
- After eight years of holding the position of the largest importer of weapons, **India has been superseded by Saudi Arabia and dropped down to become the second largest importer of**

**weapons** in the world. Last year (for the period 2013-17), India accounted for 13% of all imports and was the world's largest importer.

- Reasons for gradual lowering of imports by India: Imports decreased by 24% between 2009-13 and 2014-18 (two five-year blocks), partly due to delays in deliveries of arms produced under licence from foreign suppliers, such as combat aircraft ordered from Russia in 2001 and submarines ordered from France in 2008.
- The five biggest exporters in five-year block period 2011-2015 were the US, Russia, France, Germany and China. The US and Russia remain by far the largest exporters, accounting for 36% and 21%, respectively, of the total global trade.
- **Stockholm International Peace Research Institute:**
  - o Stockholm International Peace Research Institute (SIPRI) established in 1966 is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament.
  - o Based in Stockholm the Institute provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

## 19. IEA Bioenergy TCP

- Cabinet approves joining of IEA Bioenergy TCP by Ministry of Petroleum and Natural Gas as its 25th member.
- The other members are Australia, Austria, Belgium, Brazil, Canada, Croatia, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Japan, the Republic of Korea, the Netherlands, New Zealand, Norway, South Africa, Sweden, Switzerland, the United Kingdom, the United States, and the European Commission.
- **About IEA Bioenergy TCP:**
  - o International Energy Agency's Technology Collaboration Programme on Bioenergy (IEA Bioenergy TCP) is an international platform for **co-operation among countries with the aim of improving cooperation and information exchange** between countries that have national programmes in bioenergy research, development and deployment.
  - o IEA Bioenergy TCP works under the framework of **International Energy Agency (IEA)** to which India has "Association" status since 30th March, 2017.
- **What is bioenergy?**
  - o Bioenergy is defined as material which is directly or indirectly produced by photosynthesis and which is utilised as a feedstock in the manufacture of fuels and substitutes for petrochemical and other energy intensive products.

## 20. United Nations Office of Drugs and Crime (UNODC)

- The latest report released by United Nations Office of Drugs and Crime (UNODC) says that **India is one of the major hubs of illicit drug trade** ranging from age-old cannabis to newer prescription drugs like tramadol, and designer drugs like methamphetamine.
- **Key findings:**
  - o While the global trend of purchasing drugs over the internet, particularly on darknet trading platforms using cryptocurrencies has already spread across South Asia, it is particularly rampant in India.
  - o India is also a transit country for illicitly produced opiates, in particular heroin. The route used by traffickers to smuggle opiates through South Asia is an alternative part of the so-called "southern route", which runs through Pakistan or the Islamic Republic of Iran, via the Gulf countries, continues to East Africa and on to destination countries.
  - o Also, India, Australia, France and Turkey accounted for 83% of global production of morphine-rich opiate raw materials in 2017.

- **About UNODC:**
  - Established in 1997 through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention, UNODC is a global leader in the fight against illicit drugs and international crime.
  - UNODC relies on voluntary contributions, mainly from Governments, for 90% of its budget.
  - UNODC is mandated to assist Member States in their struggle against illicit drugs, crime and terrorism.
- **The three pillars of the UNODC work programme are:**
  - Field-based technical cooperation projects to enhance the capacity of Member States to counteract illicit drugs, crime and terrorism.
  - Research and analytical work to increase knowledge and understanding of drugs and crime issues and expand the evidence base for policy and operational decisions.
  - Normative work to assist States in the ratification and implementation of the relevant international treaties, the development of domestic legislation on drugs, crime and terrorism, and the provision of secretariat and substantive services to the treaty-based and governing bodies.

## 21.International Criminal Court (ICC)

- Malaysia has ratified the Rome Statute making it the 124th State party to the International Criminal Court (ICC).
- The International Criminal Court (ICC), located in The Hague, is the court of last resort for **prosecution of genocide, war crimes, and crimes against humanity.**
- It is the first **permanent, treaty based**, international criminal court established to help end impunity for the perpetrators of the most serious crimes of concern to the international community.
- Its founding treaty, the **Rome Statute,** entered into force on July 1, 2002.
- Funding: Although the Court's expenses are **funded primarily by States Parties**, it also receives **voluntary contributions from governments, international organisations, individuals, corporations and other entities.**
- **Composition and voting power:**
  - The Court's management oversight and legislative body, the Assembly of States Parties, consists of one representative from each state party.
  - **Each state party has one vote and "every effort" has to be made to reach decisions by consensus.** If consensus cannot be reached, decisions are made by vote. The Assembly is presided over by a president and two vice-presidents, who are elected by the members to three-year terms.



| ICJ vs. ICC | | |
| --- | --- | --- |
| | International Court of Justice (ICJ) La Cour Internationale de Justice (CIJ) | International Criminal Court (ICC) La Cour pénale internationale (CPI) |
| Year Court Established | 1946 | 2002 |
| UN-Relationship | Official court of the U.N., commonly referred to as the "World Court." | Independent. May receive case referrals from the UN Security Council. |
| Location | The Hague, The Netherlands | The Hague, The Netherlands |
| Types of Cases | Contentious between parties & Advisory opinions | Criminal prosecution of individua |
| Subject Matter | Sovereignty, boundary, & maritime disputes, trade, natural resources, human rights, treaty violations, treaty interpretation, and more. | Genocide, crimes against humanit; war crimes, crimes of aggression |
| Funding | UN-funded. | Assessed contribution from state parties to the Rome Statute; voluntary contributions from the U.N.; voluntary contributions from governments, international organizations, individuals, corporations and other entities. |

- **Jurisdiction:**
  - The ICC has the jurisdiction to prosecute individuals for the international crimes of genocide, crimes against humanity, and war crimes.

- o The ICC is intended to complement existing national judicial systems and it may therefore only exercise its jurisdiction when certain conditions are met, such as when national courts are unwilling or unable to prosecute criminals or when the United Nations Security Councilor individual states refer situations to the Court.
- **Criticism:**
  - o It **does not have the capacity to arrest suspects** and depends on member states for their cooperation.
  - o Critics of the Court argue that there are **insufficient checks and balances** on the authority of the ICC prosecutor and judges and insufficient protection against politicized prosecutions or other abuses.
  - o The ICC has been accused of bias and as being a **tool of Western imperialism**, only punishing leaders from small, weak states while ignoring crimes committed by richer and more powerful states.
  - o ICC cannot mount successful cases without state cooperation is problematic for several reasons. It means that the ICC acts inconsistently in its selection of cases, is prevented from taking on hard cases and loses legitimacy. It also gives the ICC less deterrent value, as potential perpetrators of war crimes know that they can avoid ICC judgment by taking over government and refusing to cooperate.

## 22. World Meteorological Organisation (WMO)

- Every year, on March 23, the World Meteorological Organisation (WMO) commemorates its founding by observing World Meteorological Day. This year, the organisation is celebrating its 69th anniversary.
- Theme: "The Sun, the Earth and the weather". This year's theme also sits in perfectly with the next cycle of the Sun's activity starting in 2020, also known as the Solar Cycle 25.
- **What does WMO do?**
  - o WMO coordinates the activities of National Meteorological and Hydrological Services in 191 States and Territories so that basic weather, climate and water services are made available to anyone who needs them, when they need them.
  - o WMO guarantees the publication of observations and statistics and furthers the application of meteorology and hydrology to all aspects of human activities such as aviation, shipping, water management and agriculture.
  - o WMO also encourages research and training in meteorology and hydrology and their related applications and contributes towards reducing the impact of weather- and climate-related hazards. This is accomplished through regular, reliable forecasts and early warnings on flooding, drought, tropical cyclones, tornadoes and other extreme events.
  - o Predictions concerning locust swarms and the transport of pollutants (nuclear and toxic substances, volcanic ash) are also provided by WMO Members.

**About WMO:**

- The World Meteorological Organization (WMO) is a specialized agency of the United Nations dedicated to meteorology (weather), climatology (climate), operational hydrology (water) and other related geophysical sciences such as oceanography and atmospheric chemistry.
- *Predessor organization —* International Meteorological Organization (IMO) — founded in 1873.

**Reports:**

1. Greenhouse Gas Bulletin.
2. Status of the World Climate.

## 23. Global Fund to Fight AIDS, Tuberculosis and Malaria

- Hyderabad-based pharma company Laurus Labs Limited has announced that it has entered into a strategic partnership agreement with Global Fund for a period of 3.5 years. Through this agreement Laurus Labs will have the volume commitments from the Global Fund for the treatment of HIV/AIDS.
- The **Global Fund to Fight AIDS, Tuberculosis and Malaria (or simply the Global Fund)** is an international financing organization that aims to "attract, leverage and invest additional resources to end the epidemics of HIV/AIDS, tuberculosis and malaria to support attainment of the Sustainable Development Goals established by the United Nations."
- Founded in 2002, the Global Fund is a **partnership between governments, civil society, the private sector and people affected by the diseases.**
- The organization maintains its secretariat in Geneva, Switzerland.
- **Historical background:**
  - The Global Fund was formed as an independent, non-profit foundation under Swiss law and hosted by the World Health Organization in January 2002.
  - In January 2009, the organization became an administratively autonomous organization, terminating its administrative services agreement with the World Health Organization.

## 24. African Union

- India and the African Union have signed a Memorandum of Understanding to establish an India-Africa health sciences collaborative platform.
- The African Union (AU) *is a continental union consisting of 55 countries of the continent of Africa, with exception of various territories of European possessions located in Africa*.
- The bloc was founded on 26 May 2001 in Addis Ababa, Ethiopia and launched on 9 July 2002 in South Africa.
- The intention of the AU is to replace the Organisation of African Unity (OAU), established on 25 May 1963 in Addis Ababa by 32 signatory governments.
- The most important decisions of the AU are made by the Assembly of the African Union, a semi-annual meeting of the heads of state and government of its member states.
- The AU's secretariat, the African Union Commission, is based in Addis Ababa.
- *Key objectives:* To achieve greater unity and solidarity between the African countries and Africans. To defend the sovereignty, territorial integrity and independence of its Member States. To accelerate the political and social-economic integration of the continent.

## 25. Geneva Convention

- An Indian pilot was captured by Pakistan. India cited the *Geneva Conventions* while demanding the release of Wing Commander in Pak custody.
- **Geneva Convention:**
  - The 1949 Geneva Conventions are *a set of international treaties that ensure that warring parties conduct themselves in a humane way with non-combatants* such as civilians and medical personnel, as well as with combatants no longer actively engaged in fighting, such as prisoners of war, and wounded or sick soldiers.
  - **All countries are signatories to the Geneva Conventions.** There are four conventions, with three protocols added on since 1949.
- **Does the captured pilot count as a prisoner of war?**
  - The provisions of the conventions *apply in peacetime situations, in declared wars, and in conflicts that are not recognised as war by one or more of the parties*.

- o India had said its *airstrikes were a "non-military" intelligence-led operation* and therefore both sides are bound by the Geneva Conventions. *This means the IAF officer is a prisoner of war*, and his treatment has to be in accordance with the provisions for PoWs under the Geneva Conventions.
- **What are the provisions for PoWs?**
  - o The *treatment of prisoners of war is dealt with by the Third Convention or treaty*. The *Third Convention is unambiguous about how prisoners must be treated:* "humanely". And the responsibility for this lies with the detaining power, not just the individuals who captured the PoW.
  - o Any unlawful act or omission by the Detaining Power causing death or seriously endangering the health of a prisoner of war in its custody is prohibited, and will be regarded as a serious breach of the present Convention.
  - o In particular, *no prisoner of war may be subjected to physical mutilation or to medical or scientific experiments of any kind which are not justified by the medical, dental or hospital treatment of the prisoner concerned and carried out in his interest*.
  - o Likewise, *prisoners of war must at all times be protected*, particularly against acts of violence or intimidation and against insults and public curiosity. Measures of reprisal against prisoners of war are prohibited," says Article 13 of the Convention.
- **What rights is a PoW entitled to?**
  - o Article 14 of the Convention lays down that PoWs are "entitled to in all circumstances to respect for their persons and their honour".
  - o In captivity, a PoW must not be forced to provide information of any kind under "physical or mental torture, nor any other form of coercion".
  - o Refusal to answer questions should not invite punishment.
  - o A PoW must be protected from exposure to fighting.
  - o Use of PoWs as hostages or human shields is prohibited, and a PoW has to be given the same access to safety and evacuation facilities as those affiliated to the detaining power.
  - o Access to health facilities, prayer, recreation and exercise are also written into the Convention.
  - o The detaining power has to facilitate correspondence between the PoW and his family, and must ensure that this is done without delays.
  - o A PoW is also entitled to receive books or care packages from the outside world.
- **What do the provisions say about the release of prisoners?**
  - o Parties to the conflict "are bound to send back" or repatriate PoWs, regardless of rank, who are seriously wounded or sick, after having cared for them until they are fit to travel".
  - o The conflicting parties are expected to write into any agreement they may reach to end hostilities the expeditious return of PoWs.
- **Previous such instances:**
  - o At the end of the 1971 war, India had more than 80,000 Pakistani troops who had surrendered to the Indian Army after the liberation of Dhaka. India agreed to release them under the Shimla Agreement of 1972. Pakistan can decide to send Wing Commander Abhinandan unilaterally, or negotiate his release with India.
  - o *In such situations, who monitors whether the Geneva Conventions are being followed?*
  - o The Geneva Conventions have a system of "Protecting Powers" who ensure that the provisions of the conventions are being followed by the parties in a conflict. In theory, *each side must designate states that are not party to the conflict as their "Protecting Powers"*. In practice, the International Committee of the Red Cross usually plays this role.

## 26. LAWASIA Human Rights Conference

- The first *LAWASIA Human Rights Conference was organised by LAWASIA*, in association with the Bar Association of India recently.
- The conference *aims to provide a unique opportunity for lawyers and associated professional members to exchange insights and expertise on topics of significant importance to all*.
- *Theme:* "State Power, Business and Human Rights: Contemporary Challenges".
- *The conference explored a wide range of human rights issues of relevance in the Asia Pacific region.*
- **About LAWASIA:**
  - It is a *regional association of lawyers, judges, jurists and legal organisations* and it advocates for the interests and concerns of the Asia Pacific legal profession.
  - It provides *a platform to promote the cross-jurisdictional exchange of legal knowledge*; as a voice of the legal profession; and as a conduit for encouraging adherence to mutually-held principles of the rule of law, professional integrity and the protection of human rights.

## 27. Global Health Expenditure Database (GHED)

- The *World Health Organization (WHO)* has released a new report on *global health expenditure*. The *Global Health Expenditure Database (GHED)* provides internationally comparable data on health spending for close to 194 countries, since 2000.

## 28. Global Digital Health Partnership (GDHP)

- India is hosting 4th Summit of Global Digital Health Partnership.
- **About GDHP:**
  - Global Digital Health Partnership (GDHP) is *an international collaboration of governments, government agencies and multinational organisations dedicated to improving the health and well-being of their citizens through the best use of evidence-based digital technologies*.
  - Established in February **2018**, the GDHP provides *an opportunity for transformational engagement between its participants*, who are striving to learn and share best practice and policy that can support their digital health systems.
  - It has been created to provide an international platform to facilitate global collaboration and cooperation to share policy insights, best practices and evidence based implementation of safe, secure digital technologies to improve the quality, accessibility and sustainability of health systems.

> **GDHP Member Countries:**
>
> - Currently, 23 countries are the member of this group which include Argentina, Australia, Austria, Brazil, Canada, Estonia, Hong Kong SAR, **India**, **Japan** Republic of Indonesia, Italy, New Zealand, Netherlands Kingdom of Saudi Arabia, Singapore, South Korea, Switzerland, Sweden, Portugal, the **United Kingdom**, the **United States**, Ukraine, Uruguay and the **World Health Organization**.

> **Five work streams of GDHP:**
>
> 1. Cyber Security.
> 2. Evidence and Evaluation.
> 3. Policy Environments.
> 4. Interoperability
> 5. Clinical and Consumer Engagement.

## 29. United Nations Entity for Gender Equality and the Empowerment of Women (UN Women)

- The government of Odisha has been applauded by *The United Nations Entity for Gender Equality and the Empowerment of Women (UN Women)* for proposing 33% reservation for women in Parliament and the State Assemblies.
- **UN Women:** The United Nations Entity for Gender Equality and the Empowerment of Women:

- o UN Women is the *UN entity dedicated to gender equality and the empowerment of women*. UN Women was established to accelerate progress on meeting their needs worldwide.
- o *In July 2010, the United Nations General Assembly created UN Women, the United Nations Entity for Gender Equality and the Empowerment of Women*.
- o It merges and builds on the important work of four previously distinct parts of the UN system, which focused exclusively on gender equality and women's empowerment:
  - Division for the Advancement of Women (DAW).
  - International Research and Training Institute for the Advancement of Women (INSTRAW).
  - Office of the Special Adviser on Gender Issues and Advancement of Women (OSAGI).
  - United Nations Development Fund for Women (UNIFEM).

## 30. Sary-Arka-Antiterror 2019

- The Shanghai Cooperation Organization's (SCO) member states will hold *a joint anti-terrorism exercise "Sary-Arka-Antiterror 2019."* The decision to hold a joint exercise was announced during the 34th meeting of the RATS council held in Tashkent, Uzbekistan.
- **Other outcomes of RATS council meeting:**
  - o Chaired by Russia, the meeting also declared plans to hold the first stage of *the joint border operation "Solidarity 2019-2021,"* the 7th meeting of the heads of the border services, and training workshops on identifying and preventing the use of the Internet for terrorist, separatist and extremist purposes.

## 31. BOLD-QIT Project

- **Project BOLD-QIT (Border Electronically Dominated QRT Interception Technique) under CIBMS (Comprehensive Integrated Border Management system)** has been inaugurated on India-Bangladesh border in Dhubri District of Assam.
- BOLD-QIT is the project to **install technical systems** under the Comprehensive Integrated Border Management System (CIBMS), which **enables BSF to equip Indo-Bangla borders with different kind of sensors in unfenced riverine area of Brahmaputra and its tributaries.**
- **What is CIBMS?**



Sealing the border with Pakistan using smart technology-aided fence will be in place by December next year.
KIREN RIJIJU Minister of state for home affairs
**Underlining Role of Technology**
Comprehensive Integrated Border Management System (CIBMS) to be deployed on Pakistan border
CIBMS integrates manpower, sensors and command & control to facilitate quick responses
CIBMS will counter infiltration and cross-border terror attacks by using technology that can detect infiltration via land, underwater, air and tunnels
ITBP's operational requirements include better road network on LAC

  - o The concept of CIBMS is the integration of manpower, sensors and command and control to improve situational awareness and facilitate quick response to emerging situations.
  - o Among major components of CIBMS is the **'virtual fence'.** The second component is the command and control, which will help in optimum use of resources for border management. Another component is power management to keep CIBMS running.

## 32. International Vision Zero Conference

- *'International Vision Zero Conference'* to Promote Occupational Safety and Health is being held in Mumbai.
- The conference provides *a forum for promoting safety and health at work by exchanging knowledge, practices and experience*.

- *The Conference has been organized by* Directorate General Factory Advice and Labour Institutes (DGFASLI), Ministry of Labour and Employment, German Social Accident Insurance (DGUV), Germany in association with Indian Institute of Technology, Bombay and International Social Security Association – Manufacturing, Construction and Mining.
- **What is 'Vision Zero' concept?**
    - The concept of Vision Zero is based on *four fundamental principles viz. life is non-negotiable, humans are fallible, tolerable limits are defined by human physical resistance, and people are entitled to safe transport and safe workplaces*.
    - The Vision is based on principles of Controlling Risks, Ensuring Safety and Health in Machines, Equipment and Workplaces and Skill Upgradation of Workforce.

# Art and Culture

## 1. Maithili Language

- A committee constituted for making a report for the **Promotion and Protection of Maithili Language** and its scripts, has submitted its report to MHRD in which it has made several recommendations for promotion and protection of Maithili language.
- **Background:**
    - **Mithilakshar or Tirhuta** is the script of broader cultural Mithila. It is an extremely ancient script and is one of the scripts of the broader North Eastern India.
    - The scripts of Mithilaksar, Bangla, Assamese, Nebari, Odia and Tibetan are part of the family.
    - Mithilakshar had come to its current shape by 10th Century AD. The oldest form of Mithilakshar is found in the Sahodara stone inscriptions of 950 AD. Afterwards, the scripts has been used throughout Mithila from Champaran to Deoghar.

## 2. Bharat Rang Mahotsav (BRM)

- 20th edition of Bharat Rang Mahotsav was held in New Delhi.
- It was organized by **National School of Drama (NSD).**
- **Bharat Rang Mahotsav (BRM):**
    - It is the *annual international theatre festival of India* organized by the National School of Drama (NSD).
    - It was established two decades ago to stimulate the growth and development of theatre across India.
    - Originally a national festival showcasing the work of the most creative theatre workers in India, BRM has evolved to international scope, hosting theatre groups from around the world, and is now the largest theatre festival of Asia.

## 3. Sangeet Natak Akademi

- The Sangeet Natak Akademi – India's national academy for music, dance and drama – is the **first National Academy of the arts** set-up by the Republic of India. It was created by a **resolution of Government of India.**
- It was set up in 1952.
- The academy functions as the apex body of the performing arts in the country to preserve and promote the vast cultural heritage of India expressed in music, dance and drama.
- It also works with governments and art academies in states and territories of the country.
- The academy **Renders advice and assistance to the government** of India in the task of formulating and implementing policies and programmes in the field. It carries a part of the responsibilities of the state for fostering cultural contacts between regions in the country, as well as between India and the world.
- *The Akademi Awards* are the highest national recognition conferred on eminent artistes.
- Each year the Academy awards Sangeet Natak Akademi Fellowships, Ratna Sadsya, to distinguished individuals for their contribution to the field of arts, music, dance and theatre.
- *Ustad Bismillah Khan award is given to young artists* for their talent in the fields of music, dance and drama.

## 4. Salt Satyagraha Memorial

- *National Salt Satyagraha Memorial* has been opened at Dandi in Navsari district, Gujarat. It was dedicated to the nation on the occasion of Mahatma Gandhi's 71st death anniversary *(30th January)*.
- The memorial encapsulates the *ideals of Mahatma Gandhi- Agrah for Swadeshi, Swatchagrah and Satyagraha*.
- *Significance:*
  - The memorial aims *to serve as a reminder of the great sacrifices made by the people of the nation for the cause of freedom*. It is a tribute to the Satyagrahis led by Gandhi Ji, who worked for India's freedom and is expected to be a major attraction for the tourists.
- *About the Salt Satyagraha:*
  - On March 12, 1930, Mahatma Gandhi embarked a *historic Salt March from Sabarmati Ashram* in Gujarat's Ahmedabad to the village of Dandi in the state's coastal area *to protest against the steep tax the British levied on salt*. The Salt March began on March 12, 1930 and continued till April 6, 1930.
  - It was a 24-day Salt March, which was non-violent in nature, is historically significant as it led to the *mass Civil Disobedience Movement*.
  - Upon reaching the seashore in Dandi, Mahatma Gandhi broke the law by producing illegal salt. This later turned into a mass civil disobedience movement throughout India as millions broke salt laws by either making salt or buying illegal salt.
- *Historical Background:*
  - During that time, the British had prohibited Indians from collecting or selling salt. Indians were also forced to buy the staple diet ingredient from the British, who, not only exercised monopoly over its manufacture and sale but also levied a heavy salt tax. The Salt March was a collective beginning of a mass resistance movement against the British tyranny.

## 5. Guru Padmasambhava

- An **international conference and exhibition of rare artefacts about the life and legacy of 8th century Buddhist sage Guru Padmasambhava was held in New Delhi**.
- Guru Padmasambhava is known as the **Second Buddha** because he played a seminal role in spreading Buddhism and Buddhist teachings across the Himalayan region including Northeast India, Nepal, Bhutan and Tibet.
- In Tibetan, Guru Padmasambhava is generally referred to as Guru Rinpoche, which means "precious master."
- He undertook many travels across India, Bhutan, Tibet and Nepal.
- *Thangka paintings*, sculptures and photographs portray the life and teachings of the Guru.

## 6. Maharshi Badrayan Vyas Samman Awards

- Vice President recently conferred around 100 **'President's Certificate of Honour' and 'Maharshi Badrayan Vyas Samman' Awards** to scholars in Classical Languages.
- **Who was Maharshi Badrayan?**
  - He was **an Indian philosopher about whom almost no personal details are reliably known**.

> **'Maharshi Badrayan Vyas Samman' Awards:**
>
> The Maharshi Badrayan Vyas Samman distinction is conferred on persons **in recognition of their substantial contribution in the field of Sanskrit, Persian, Arabic, Pali, Prakrit, Classical Oriya, Classical Kannada, Classical Telugu** and **Classical Malayalam.**
> - Introduced in the year 2002.
> - Given to selected young scholars in the age group of 30 to 45 years.
> - Carries a certificate of honour, a memento and a one-time cash prize of Rs.1 lakh.

- o Badarayana is regarded as having written the **basic text of the Vedanta system, the Vedāntasūtra a.k.a. Brahmasūtra**. He is thus considered the **founder of the Vedānta system of philosophy**.
- o The date of Badarayana and his **Brahma Sutras is uncertain**. Different scholars have dated the Brahma Sutras variously from 500 BCE to 450 BCE.

## 7. Saraswati Samman

- Telugu poet **K Siva Reddy** has been selected for the prestigious **Saraswati Samman**, 2018 for his work *Pakkaki Ottigilite* which is a collection of poetry.
- Saraswati Samman is the annual award given to an outstanding literary work in any Indian language mentioned in Schedule VIII of the Constitution and published in 10 years preceding the specified award year.
- **It is the highest recognition in the field of Indian literature in the country and carries a citation, a plaque and award money of ₹15 lakh**.
- The award **is presented by the KK Birla Foundation**, a literary and cultural organisation that also gives the Vyas Samman for Hindi, and Bihari Puraskar for Hindi and Rajasthani writers of Rajasthan.

## 8. Garia Festival

- **Garia festival** is an important festival for the **Tripuri tribal community** of the state. The **Garia dance** is very popular among the **Tripuris** and the **Reangs**. Symbolic of the worship of deities as well as of the socio-economic activities of the households, these dances represent hunting, fishing, food-gathering and various other activities.
- The Garia Puja is usually **held from the beginning of the last day of the month of Chaitra till the seventh day of the month of April (*Vaishakha*)**.
- They offer prayers to a **bamboo pole** whom they considered as their Lord Garia and sought His blessings for a good and prosperous life.
- The devotees sacrifice roosters as part of the rituals during the puja.
- The puja is followed by **traditional dance derived from the Garia dance** or the dance of Shiva and other cultural activities.

## 9. Muslim League

- It was a political party established in 1906 in the British Indian Empire. Its strong advocacy for the establishment of a separate Muslim-majority nation-state, Pakistan, successfully led to the partition of British India in 1947 by the British Empire.
- The party arose out of a literary movement begun at The Aligarh Muslim University in which Syed Ahmad Khan was a central figure.
- The first stage of its formation was the meeting held at Lucknow in September 1906, with the participation of representatives from all over India.
- With global events leading up to World War II and the Congress party's effective protest against the United Kingdom unilaterally involving India in the war without consulting the Indian people, the Muslim League went on to support the British war efforts.
- **Evolution post-independence:**
  - o Soon after Partition, the All India Muslim League, which had led the movement for Pakistan, was disbanded. Over the next few months, the party of Mohammed Ali Jinnah was succeeded by the Muslim League in West Pakistan and The All Pakistan Awami Muslim League in East Pakistan.
  - o In East Pakistan, the Awami Muslim League championed the cause of Bengali nationalism, and sought to chart a course independent from Punjabi-dominated West Pakistan. Under

the leadership of Sheikh Mujibur Rahman, East Pakistan ultimately broke free from the West.

- **In India:**
  - o In independent India, the **All India Muslim League** was succeeded by the **Indian Union Muslim League (IUML).**
  - o The IUML fought elections under the Constitution of India, and has always had a constant, if small, presence in Lok Sabha.
  - o The IUML is the strongest in Kerala, and has a unit in Tamil Nadu as well. It has long been recognised by the Election Commission of India as a state party in Kerala.

## 10.Marayoor Jaggery
- The **Marayoor Jaggery, the traditional and handmade product from Idukki district of Kerala**, has received the Geographical Indication (GI) tag from the Central Government.
- The Jaggery is produced in Marayoor, a town in Idukki district of Kerala. It is made from sugarcane and no chemicals are added during the manufacturing process.
- It is not produced in modern factories or using modern equipment. It is prepared in sheds located on the sugarcane farm.

## 11.Sharda Peeth corridor
- Pakistan has given its green signal for Sharda Peeth corridor. The Sharda Peeth corridor, when opened, will be the second religious tract after Kartarpur corridor in Pakistan-controlled territory that will connect the two neighbouring nations.
- **Background:**
  - o The temple has been completely deserted since Partition in 1947. Travel restrictions on Indians also discouraged the devotees from visiting the shrine.
- **When was it built?**
  - o One of the accounts of construction of the temple says that it was built during the rule of Kushans (early 1st century). While many other accounts say that Buddhists had a strong involvement in the Sharda region, the researchers have not been able to find evidence to support the claim.
  - o Academics also believe that Raja Lalitaditya had built the Sharada Peeth for containing the religious and political influence of the Buddhism. The claim is supported by the fact that Lalitaditya was a master of building massive temples.
- **Where is it located?**
  - o The Sharada temple, as well as the adjacent ruins of Sharada University, are situated in Neelam Valley, which is 160 km from Muzaffarabad, and close to the Line of Control. It is in a small village Shardi where the river Neelam joins Madhumati and Sargun streams.

## 12.Operation Vijay
- Goa recently celebrated the 57th Liberation Day. On this day, Goa attained independence from the 450-years of Portuguese rule.
- *Portuguese were the first ones to colonize parts of India and were the last to leave*. The Portuguese invaded Goa in the year 1510.
- *Operation Vijay began on December 17, 1961*, when the then Prime Minister Jawaharlal Nehru ordered the invasion. The Indian attack overpowered the ill-prepared Portuguese army. The attack was successful and was carried forward to retrieve the other Portuguese-controlled areas, Daman and Diu.

- *At this point on December 18, the Portuguese Governor General Vassalo da Silva gave up control of the Union Territory of Goa, Daman and Diu*. Three days after the attack began, Goa finally became a part of India.
- *Referendum and Statehood:*
  - The *Goa Opinion Poll* was *a referendum held in the state of Goa*, India, on 16 January 1967, to decide the future of the Union Territory of Goa, Daman and Diu within the Indian Union.
  - Although popularly called an opinion poll, it was in fact, a referendum, as the results of the poll were binding on the government of India.
  - The referendum offered the people of Goa a choice between continuing as a union territory or merging with the state of Maharashtra. It is the only referendum to have been held in independent India. The people of Goa voted against the merger and Goa continued to be a union territory. Subsequently, *in 1987, Goa became a full-fledged state within the Indian Union*.

# Science and Technology

## 1. GSLV Programme

- The Union Cabinet has approved the ongoing **Phase 4 of the Geosynchronous Satellite Launch Vehicle (GSLV) programme.**
- **The programme and its significance:**
  - o The GSLV Programme – Phase 4 will enable the launch of 2 tonne class of satellites for Geo-imaging, Navigation, Data Relay Communication and Space Sciences into the Geosynchronous Transfer Orbit (GTO).
  - o Under the GSLV Continuation Programme, five GSLV flights have been planned during the period 2021-2024.
  - o The GSLV Continuation Programme – Phase 4 will meet the launch requirement of satellites for providing critical **Satellite Navigation Services and Data Relay Communication** for supporting the Indian Humanspaceflight programme 'Gaganyaan' and the next interplanetary mission to Mars.
- **Overall significance:**
  - o It will help sustain the self-reliance in the launching of similar satellites for national requirements including next generation navigation satellites, data relay communication satellites and interplanetary missions.

> **What is Geosynchronous Satellite Launch Vehicle (GSLV)?**
>
> - GSLV is a 49 m tall **three stag**e vehicle with **the first stage** comprising a **solid booster** with four liquid strap-on motors**. The second stage** is a **liquid** engine and the **third stage** is the indigenously built **Cryogenic Upper Stage** (CUS) which uses cryogenic propellants such as Liquid Hydrogen (LH2) as fuel and Liquid Oxygen (LOX) as Oxidiser.
> - **With the recent successful launch of GSLV-F11** on December 19, 2018, GSLV has successfully placed 10 national satellites.

## 2. GSAT-31

- Indian Space Research Organisation's latest communication satellite, *GSAT-31 was successfully launched by Arianespace aboard its launch vehicle Ariane 5* from the spaceport in French Guiana recently.
- *About GSAT- 31:*
  - o *A telecommunications satellite designed and manufactured by the Indian Space Research Organisation (ISRO).*
  - o *India's 40th communication satellite .*
  - o It will be placed in *Geostationary Orbit (36,000 km above the equator) using its onboard propulsion system*.
  - o It has a unique configuration of providing flexible frequency segments and flexible coverage. Hence, *it will provide communication services to Indian mainland and islands*.
  - o It will also provide DTH Television Services, connectivity to VSATs for ATM, Stock-exchange, Digital Satellite News Gathering (DSNG) and e-governance applications. The satellite will also be used for bulk data transfer for a host of emerging telecommunication applications.

## 3. EMISAT Mission

- The Indian Space Research Organisation (ISRO) has launched the **country's first electronic surveillance** satellite, EMISAT.
- It was **launched on-board PSLV-C45.**
- **How does EMISAT work?**

- o EMISAT is an **advanced electronic intelligence (ELINT) satellite jointly developed by ISRO-DRDO**. It is meant for electromagnetic spectrum measurements.
- o It is **modelled after a famous Israeli spy satellite called SARAL (Satellite with ARgos and ALtika)**. Both these satellites have the SSB-2 bus protocol — the core component for their sharp electronic surveillance capabilities across the length and width of a large country like India.
- o EMISAT also has **a special altimeter (a radar altitude measuring device) called 'AltiKa'** that works in the Ka- band microwave region of the spectrum. The electronic surveillance payload of EMISAT was developed under **a DRDO's project called KAUTILYA**.
- o **The main capability of EMISAT is in signal intelligence** — intercepting signals broadcasted by communication systems, radars, and other electronic systems. The Ka-band frequency that EMISAT is sensitive to, allows the EMISAT to scan through ice, rain, coastal zones, land masses, forests and wave heights with ease.
- **Many Firsts In The Launch:**
  - o **First time ISRO is launching satellites in three different orbits**.
  - o The PSLV-C45 launch vehicle is also the **first PSLV rocket to use four strap-on motors**. The four strap-on motor rockets are from the PSLV-QL range.
  - o This is the **first time it has been envisaged to provide a microgravity environment** for research organizations and academic institutes to perform experiments.
  - o The PSLV-C45 is also the **first launch to use solar panels to make the fourth stage last longer in orbit**. Using the solar panels in the fourth stage, the PSLV can provide power to attached payloads almost indefinitely.
  - o PSLV-C45: **First Launch Vehicle to Use Solar Propulsion.**

## 4. Hayabusa-2

- **Japan's** spacecraft Hayabusa-2 recently dropped an explosive on an asteroid to make a crater. Also, this spacecraft will collect its underground samples to find possible clues to the origin of the solar system.
- Notably, **Hayabusa2 is the second Japanese spacecraft to land on an asteroid**, after Hayabusa achieved a similar feat back in 2005.
- **Hayabusa:**
  - o In mid-September 2005, Hayabusa landed on the asteroid Itokawa, and managed to collect samples in the form of grains of asteroidal material. It returned to Earth with the samples in June 2010, thereby becoming the first spacecraft to return asteroid samples to Earth for analysis.
- **Hayabusa2:**
  - o It is an **asteroid sample-return mission** operated by the Japanese space agency, JAXA.
  - o It was launched on 3 December 2014 and rendezvoused with near-Earth asteroid 162173 Ryugu on 27 June 2018.
  - o It is in the process of surveying the asteroid for a year and a half, departing in December 2019, and returning to Earth in December 2020.
  - o Hayabusa2 carries multiple science payloads for remote sensing, sampling, and four small rovers that will investigate the asteroid surface to inform the environmental and geological context of the samples collected.
  - o Since it arrived at Ryugu in June 2018, **Hayabusa 2 has dropped two hopping landers, collectively known as MINERVA-II**, onto the surface of the space rock to take pictures and measure the asteroid's temperature.

## 5. Blackholes

- The first photograph of a black hole was revealed by scientists recently.
- **What is a black hole?**
  - A black hole is an object in space that is so dense and has such **strong gravity** that **no matter or light can escape** its pull. Because no light can escape, it is black and invisible.
  - There's a boundary at the edge of a black hole called the **event horizon**, which is the **point of no return** — any light or matter that crosses that boundary is sucked into the black hole.
  - Anything that crosses the event horizon is destined to fall to the very centre of the black hole and be squished into a single point with infinite density, called the **singularity**.
- **If black holes are invisible, how can we detect or photograph them?**
  - By **looking for the effects of their extreme gravity**, which pulls stars and gases toward them.
  - Also, while anything past **the event horizon is invisible**, outside that boundary there is sometimes a spiral disk of gas that the black hole has pulled toward — but not yet into — itself.
  - **The gases in that accretion disk are heated up as they accelerate toward the black hole**, causing them to glow extremely brightly. The colours they glow are invisible to us, but are detectable with an X-ray telescope.
  - **Scientists have also detected the gravitational waves generated when two black holes collide**.
- **How big are black holes?**
  - Small black holes are called **stellar-mass black holes**. They have **masses similar to those of larger stars** — about five to 20 times the mass of the sun. The other kind is **supermassive black holes**, which are millions to billions of times more massive than the sun. There is some evidence that black holes between these two sizes exist, but that has yet to be confirmed.
  - While black holes are very massive, that doesn't mean they take up a lot of space. Because they're so dense, they're actually quite small.
- **Where are black holes found?**
  - Supermassive black holes are found at the centre of most galaxies, including our own Milky Way. The one in our galaxy is called **Sagittarius A\***.
  - **Sagittarius A\*** isn't the only black hole in our galaxy, though. Earlier this year, astronomers discovered another 12 within three light-years of it, suggesting there could be upwards of 10,000 black holes around the galactic centre.



**Singularity**
At the very centre of a black hole, matter has collapsed into a region of infinite density called a singularity. All the matter and energy that fall into the black hole ends up here. The prediction of infinite density by general relativity is thought to indicate the breakdown of the theory where quantum effects become important.

**Event horizon**
This is the radius around a singularity where matter and energy cannot escape the black hole's gravity: the point of no return. This is the "black" part of the black hole.

**Photon sphere**
Although the black hole itself is dark, photons are emitted from nearby hot plasma in jets or an accretion disc (see below). In the absence of gravity, these photons would travel in straight lines, but just outside the event horizon of a black hole, gravity is strong enough to bend their paths so that we see a bright ring surrounding a roughly circular dark "shadow".

**Relativistic jets**
When a black hole feeds on stars, gas or dust, the meal produces jets of particles and radiation blasting out from the black hole's poles at near light speed. They can extend for thousands of light-years into space.

**Innermost stable orbit**
The inner edge of an accretion disc is the last place that material can orbit safely without the risk of falling past the point of no return.

**Accretion disc**
A disc of superheated gas and dust whirls around a black hole at immense speeds, producing electromagnetic radiation (X-rays, optical, infrared and radio) that reveal the black hole's location. Some of this material is doomed to cross the event horizon, while other parts may be forced out to create jets.

- **Where do black holes come from?**
  - **Supermassive black holes are believed to form at the same time as the galaxy that surrounds them, but astronomers aren't sure exactly how**.
  - **Stellar mass black holes** form when a star with a mass greater than three times that of our sun runs out of fuel. It explodes into a supernova and collapses into an extremely dense core that we know as a black hole — something predicted by Albert Einstein's general theory of relativity.
  - **Einstein's theory also predicts the size and shape of the black holes** that the Event Horizon Telescope is trying to photograph.

## 6. Wide Field InfraRed Survey Telescope

- WFIRST telescope will give humans the **largest, deepest, clearest picture of the universe** since the Hubble Space Telescope could find as many as 1,400 new planets outside Earth's solar system.
- The new telescope paves the way for a more accurate, more focused search for extra-terrestrial life, with about 100 of the not-yet-discovered planets having the same or lower mass as Earth.
- *WFIRST, the Wide Field InfraRed Survey Telescope*, is a **NASA observatory** designed to settle essential questions in the areas of dark energy, exoplanets, and infrared astrophysics.
- *WFIRST will have two instruments, the Wide Field Instrument, and the Coronagraph Instrument*.
- *WFIRST will use **gravitational microlensing** in its search for new planets*.
- Gravitational microlensing is a technique that relies on the gravity of stars and planets to bend and magnify the light coming from stars that pass behind them from the telescope's viewpoint.

## 7. Atmospheric Waves Experiment (AWE)

- The National Aeronautics and Space Administration has selected a new mission- *Atmospheric Waves Experiment (AWE)- that will help scientists understand and ultimately, forecast the vast space weather system around the Earth*.
- **About Atmospheric Waves Experiment (AWE):**
  - It will be launched in August 2022 and will be *attached to exterior of Earth-orbiting International Space Station (ISS)*.
  - *Objective of AWE* is to study and focus on airglow, a colourful band of light in Earth's atmosphere to determine what combination of forces drive space weather in upper atmosphere.
  - *It will be the first such experiment to obtain global observations of important driver of space weather* in



Technological infrastructure affected by space weather events

  dynamic region of Earth's upper atmosphere that can cause interference with radio and GPS communications.
  - *AWE is a Mission of Opportunity under NASA's Heliophysics Explorers Program*, which conducts focused scientific research and develops instrumentation to fill the scientific gaps between the agency's larger missions.
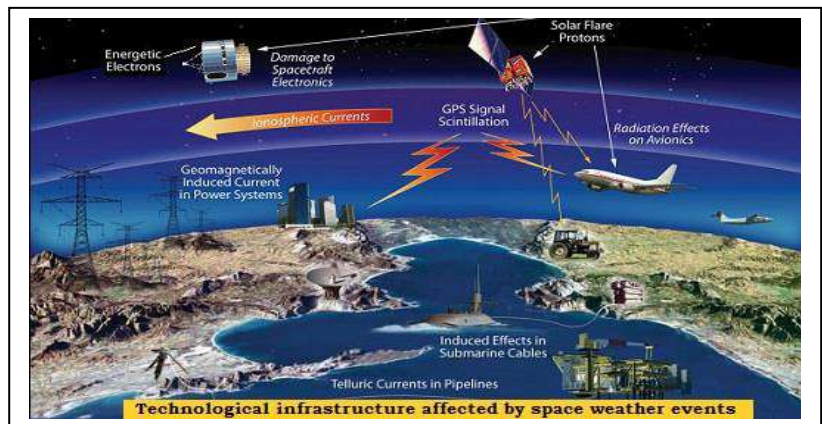
## 8. GRAPES-3

- For the first time in the world, researchers at the **GRAPES-3 muon telescope facility in Ooty** have measured the electrical potential, size and height of a thundercloud that passed overhead on December 1, 2014.
- **Why study properties of thunder clouds?**
  - Learning about the properties of thunderclouds can be useful in **navigation of aircraft and preventing short circuits.**
- **About GRAPES 3:**
  - The GRAPES-3 experiment (or Gamma Ray Astronomy PeV EnergieS phase-3) located at Ooty in India started as a collaboration of the Indian Tata Institute of Fundamental Research and the Japanese Osaka City University, and now also includes the Japanese Nagoya Women's University.
  - GRAPES-3 is designed to **study cosmic rays** with an array of air shower detectors and a large area muon detector.

## 9. Nirbhay Missile

- India recently successfully test-fired its **first Sub-sonic cruise missile, Nirbhay**.
- Nirbhay is a long range, all-weather, subsonic cruise missile, with a sharper 'terrain hugging capability'. designed and developed in India by the Defence Research and Development Organisation (DRDO).
- The guidance, control and navigation systems of the missile are configured around the indigenously designed **Ring Laser Gyroscope** and MEMS based, inertial Navigation System.
- The missile can be launched from multiple platforms and is capable of carrying conventional and nuclear warheads.
- It is **a two-stage missile powered by Solid rocket motor booster**.
- It is capable of **carrying warheads of up to 300kg at a speed of 0.6 to 0.7 Mach (sub- sonic).**
- It has **an operational range of 1000 km (long range)**. No other indigenous missile has been tested at such altitude
- The Nirbhay cruise missile is **an Indian version of the American Tomahawk.**



DRDO Successfully Test-Fired Sub-Sonic Cruise Missile 'Nirbhay'

- Indigenously designed & developed long range cruise missile
- Deployable from multiple platforms
- sea-skimming capability to cruise at very low altitudes
- Ability to strike targets at 1,000 km range

## 10. Quick Reaction Surface-to-Air missiles (QRSAM)

- India has successfully test-fired two indigenously developed *Quick Reaction Surface-to-Air missiles (QRSAM)* from a test range off the Odisha coast.
- **About QRSAM:**
  - It has been developed to **replace the 'Akash' missile defence system**, and has 360-degree coverage.
  - It uses solid fuel propellant and has a strike range of 25-30 km with capability of hitting multiple targets.
  - It is capable of hitting the low flying objects.

## 11. Solid Fuel Ducted Ramjet (SFDR)

- Defence Research and Development Organisation (DRDO) successfully flight tested the second indigenously developed 'Solid Fuel Ducted Ramjet (SFDR)' propulsion-based missile system.
- **Solid Fuel Ducted Ramjet (SFDR):**
    - It is a missile propulsion technology jointly developed by **India and Russia.**
- **Significance:**
    - It will help both India's surface-to-air and air-to-air missiles to perform better and enhance their strike range, making them more lethal.
    - With it, India can have fastest long-range missiles in two categories, providing full-fledged and multi-layered aerial protection from hostile attacks.
- **What is ramjet?**
    - Ramjet is a form of **air-breathing jet engine** that **uses the vehicle's forward motion to compress incoming air for combustion without a rotating compressor**.
    - Fuel is injected in the combustion chamber where it mixes with the hot compressed air and ignites.
    - A ramjet-powered vehicle requires an assisted take-off like a rocket assist to accelerate it to a speed where it begins to produce thrust.

## 12. Melamine

- The government has extended **the ban on import of milk and its products, including chocolates, from China** till laboratories at ports for testing presence of toxic chemical **melamine** are upgraded.
- Key facts:
    - **Uttar Pradesh is the leading state in milk production** followed by Rajasthan and Gujarat.
    - **Although India does not import milk**, milk products from China, it has imposed the ban as a preventive measure.
- **What is melamine?**
    - Melamine is an organic base chemical most commonly found in the form of white crystals rich in nitrogen.
- **What is melamine generally used for?**
    - Melamine is widely used in **plastics, adhesives, countertops dishware, whiteboards**.
- **Why is melamine added into milk and powdered infant formula?**
    - **The addition of melamine increases the nitrogen content of the milk and therefore its apparent protein content**.
    - Addition of melamine into food is not approved by the FAO/WHO Codex Alimentarius (food standard commission), or by any national authorities.
- **Has melamine been found in other food products?**
    - In 2007, **melamine was found in wheat gluten and rice protein concentrate exported from China and used in the manufacture of pet food in the United States**. This caused the death of a large number of dogs and cats due to kidney failure.
    - Melamine contamination has also been **found in a number of different brands of powdered infant formula, in one brand of a frozen yogurt dessert and in one brand of canned coffee drink.** All these products were most probably manufactured using ingredients made from melamine-contaminated milk.

## 13. Maternal spindle transfer (MST)

- Fertility doctors in Greece and Spain say they have **produced a baby from three people** in order to overcome a woman's infertility.
- **Background:**

- o **The experimental form of IVF uses an egg from the mother, sperm from the father, and another egg from a donor woman**. It was developed to help families affected by deadly mitochondrial diseases which are passed down from mother to baby.
  - o **The technique was used in** Mexico in 2016 to produce a baby for a family with **mitochondrial disease complications.**

> **The structure of a cell:**
> 1. **Nucleus:** Where the majority of our DNA is held – this determines how we look and our personality.
> 2. **Mitochondria:** Often described as the cell's factories, these create the energy to make the cell function.
> 3. **Cytoplasm:** The jelly like substance that contains the nucleus and mitochondria.

- **How was it done?**
  - o The team used a technique called **maternal spindle transfer (MST)**.
  - o All cells have **mitochondria, which are like power packs for the cells and create the energy that keeps cells alive**. While a child's DNA is a mixture from both the mother and father, **mitochondria are separate "packages of genetics" that come solely from the mother**.
  - o **Some people have a mitochondrial disease** — a problem with the genetics in their mitochondria — which can lead to severe, life-threatening conditions, although this is rare.
  - o One treatment for a woman who might have one of these **diseases is to replace the mitochondria in her eggs via IVF**. This can be done via a process like the one used in Greece where the DNA is taken out of the woman's egg and put into a donor woman's egg once the DNA has been stripped from it, which is then fertilised with sperm to create an embryo.

## 14.E-cigarettes

- An electronic cigarette (or e-cig) is a **battery- powered vaporizer** that mimics tobacco smoking. It works by heating up a nicotine liquid, called "juice."
- propylene glycol is the ingredient that produces thicker clouds of vapor.
- Proponents of e-cigs argue that the practice is healthier than traditional cigarettes because users are only inhaling water vapor and nicotine.
- **Regulation:**
  - o **Why its hard to regulate them?** As e-cigarettes contain nicotine and not tobacco, they do not fall within the ambit of the **Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003** (**COTPA**), which mandates stringent health warnings on the packaging and advertisements of tobacco products.
- **WHO report on e- cigarettes and effects:**
  - o As per the report, Electronic Nicotine Delivery Systems (ENDS) (e-cigarettes) emits nicotine, the addictive component of tobacco products. **Nicotine can have adverse effects on the development of the foetus during pregnancy** and may contribute to cardiovascular disease.
  - o Although nicotine itself is not a carcinogen, it may function as a **"tumour promoter"** and seems to be involved in the biology of malignant disease, as well as of neurodegeneration.
  - o Foetal and adolescent nicotine exposure may have long-term consequences for brain development, potentially leading to learning and anxiety disorders.

## 15.Genome Sequencing

- In an **indigenous genetic mapping** effort, nearly 1,000 rural youth from the length and breadth of India will have their **genomes sequenced** by the Council of Scientific and Industrial Research (**CSIR**).
- **Genomes will be sequenced based on a blood sample** and the scientists plan to hold at least 30 camps covering most States.

- Every person whose genomes are sequenced will be given a report.
- **Need for genome sequencing:**
  - Ever since the human genome was first sequenced in **2003**, it opened a fresh perspective on the link between disease and the unique genetic make-up of each individual.
  - Nearly 10,000 diseases — including cystic fibrosis, thalassemia — are known to be the result of a **single gene malfunctioning**.
  - Genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.

> **What are the uses of genome sequencing?**
>
> - A genome is an organism's **complete set of DNA**, including all of its genes.
> - **Genomics** is an interdisciplinary field of science focusing on the structure, function, evolution, mapping, and editing of genomes. Genomics also involves the sequencing and analysis of genomes through uses of high throughput DNA sequencing.

## 16. Clean Meat

- The Department of Biotechnology (**DBT**) has decided to fund the Centre for Cellular and Molecular Biology (**CCMB**) and the National Research Centre on Meat for research on **cell-based meat**.
- **What is it?**
  - **Cell-based meat,** also called **clean meat** or **cultured meat, is nutritionally equivalent to conventional meat, and tastes, smells, looks and feels exactly the same**. The only difference is in **the way it is produced**.
  - Rather than raising livestock and slaughtering them for meat, **cell-based meat is produced through 'cellular agriculture', with animal cells being cultivated into meat**.
- **Why It's the Future?**
  - Lab-grown meats beat the old-fashioned kind in two areas: **They're better for body and they're better for** the environment.
  - Clean meats are grown in a sterile environment, meaning that you'll avoid bacteria found in traditional meats.
  - According to one study, **replacing livestock with lab-grown meats will cut down on the land needed by 99 percent, and the water needed by 90 percent**.

## 17. Centre for Cellular & Molecular Biology (CCMB)

- Scientists at CCMB have discovered a **new enzyme which helps in breaking cell walls of bacteria** and hence, offers a potential for a new drug delivery route to arrest the anti-bacterial resistance.
- The Centre for Cellular & Molecular Biology (**CCMB**) is a premier research organization which conducts high quality basic research and trainings in frontier areas of modern biology, and promote centralized national facilities for new and modern techniques in the interdisciplinary areas of biology.
- It was set up initially as a **semi-autonomous Centre** on April 1, **1977** with the Biochemistry Division of the then Regional Research Laboratory (presently, Indian Institute of Chemical Technology, IICT) Hyderabad.
- It is located in Hyderabad and operates under the aegis of the Council of Scientific and Industrial Research (**CSIR**).
- It is designated as "Center of Excellence" by the Global Molecular and Cell Biology Network, UNESCO.

## 18. National Science Day

- National Science Day is celebrated on 28th of February every year in order to **commemorate the invention of the Raman Effect** in India by the Indian physicist, Sir Chandrasekhara Venkata Raman on the same day in the year 1928.
- Chandrasekhara Venkata Raman was awarded and honored with the Nobel Prize in the Physics in the year 1930.
- Theme: "Science for the People and the People for Science."
- **What is Raman effect?**
    - The Raman Effect is a change in the wavelength of light that occurs when a light beam is deflected by molecules. When a beam of light traverses a dust-free, transparent sample of a chemical compound, a small fraction of the light emerges in directions other than that of the incident (incoming) beam.
    - Most of this scattered light is of unchanged wavelength. A small part, however, has wavelengths different from that of the incident light; its presence is a result of the Raman effect.
- **Raman's experiment:**
    - The violet light of the solar spectrum is isolated with a violet filter and passed through the liquid sample. Most of the light emerging from the liquid sample is the same color as the incident violet beam: the so-called Rayleigh scattered light (the scattering of light by particles in a medium, without change in wavelength. It accounts, for example, for the blue colour of the sky, since blue light is scattered slightly more efficiently than red).
    - However, Raman, along with K S Krishnan was able to show that some of the scattered light was a different color, which they could isolate by using a green filter placed between the observer and the sample.
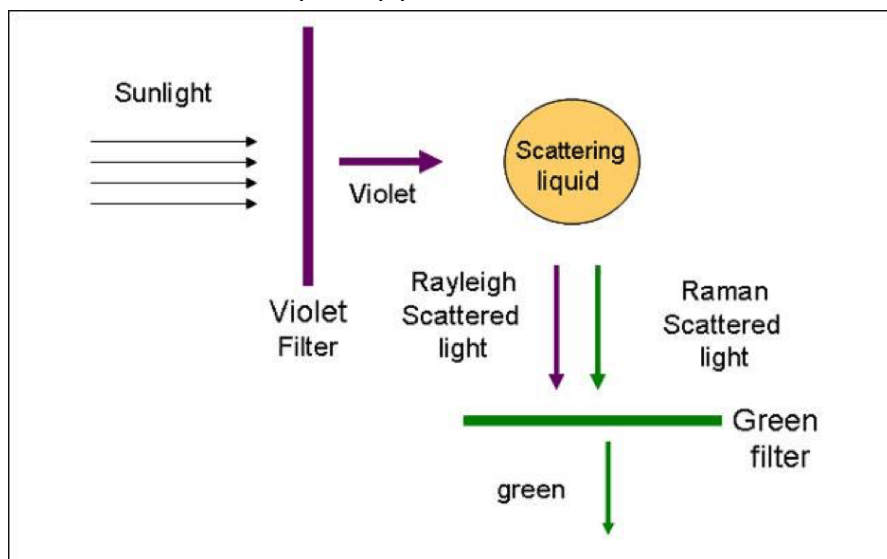
## 19. Atmospheric Water Generator (AWG)

- Navratna Defence PSU Bharat Electronics Ltd (BEL) has unveiled its new product, the *Atmospheric Water Generator (AWG)*, an innovative solution to meet the ever-increasing need for drinking water.
- The Atmospheric Water Generator is being *manufactured by BEL in collaboration with CSIR-IICT and MAITHRI*, a start-up company based in Hyderabad.
- **How it works?**
    - BEL's Atmospheric Water Generator employs a novel technology to **extract water from the humidity present in the atmosphere and purify it.**
    - *It uses heat exchange for condensing the atmospheric moisture to produce pure, safe and clean potable water*.
    - The AWG comes with *a Mineralisation Unit*, which is used to add minerals which are required to make the water potable.

## 20. Super-Efficient Air Conditioning Programme

- **Energy Efficiency Services Limited (EESL)** has launched its Super-Efficient Air Conditioning Programme for residential and institutional consumers in the BSES area.
- **Super-Efficient Air Conditioning Programme- key facts:**
  - Under the programme, Super-Efficient Air Conditioners are distributed. They are 40% more efficient than, but priced comparably with, the 3-star ACs currently available in the market (ISEER 3.8).
  - EESL is working towards making this programme and its benefits available to all consumers across the nation with the other DISCOMs likely to partner with EESL in future.
- **Funding:**
  - EESL's investment in the programme is partially supported by a grant from the **Global Environment Facility (GEF).**
  - Further, **Asian Development Bank (ADB)** is providing necessary grant support and loan while **United Nations Environment (UNEP)** is providing technical assistance support to the Super-Efficient AC programme.

## 21. Repurpose Cooking Oil (RUCO) initiative

- Dehradun-based Indian Institute of Petroleum has successfully finished a pilot test to **convert used cooking oil into bio-aviation turbine fuel (Bio-ATF),** which can be blended with conventional ATF and used as aircraft fuel.
- The test assumes importance as the **Food Safety and Standards Authority of India (FSSAI) has launched the Repurpose Cooking Oil (RUCO) initiative to collect and convert used cooking oil into bio-fuel.**
- **About RUCO:**
  - Under this initiative, 64 companies at 101 locations have been identified to enable collection of used cooking oil. For instance: McDonald's has already started converting used cooking oil to biodiesel from 100 outlets in Mumbai and Pune.
  - FSSAI wants businesses using more than 100 litres of oil for frying, to maintain a stock register and ensure that UCO is handed over to only registered collecting agencies.
- **What are Total Polar Compounds (TPC)?**
  - In many countries, **TPC is used to measure the quality of oil**. The level of TPC increases every time oil is re-heated. Some of the studies show that TPC accumulation in oil without food is slower than that in oil frying with food.
  - **Higher level of TPC in cooking oil leads to health issues** like hypertension, atherosclerosis, Alzheimer's disease and liver disease. One of the studies also noticed high levels of glucose, creatinine and cholesterol with declined levels of protein and albumin in cooking oil.

## 22. International IP Index 2019

- The International IP Index 2019 has been released by the **U.S. Chamber of Commerce's Global Innovation Policy Center (GIPC).**
- Released by GIPC, the Index **evaluates the IP infrastructure in each economy** based on 45 unique indicators, which are critical to the growth of effective IP systems.
- The indicators **encompass 8 categories of IP protection**: patents, copyrights, trademarks, trade secrets, commercialization of IP assets, enforcement, systemic efficiency, and membership and ratification of international treaties.
- The 2019 Index demonstrates the close correlation between effective IP protection and economic growth, global competitiveness, and the creation of 21st century knowledge-based economies.
- India is placed at rank 36th this year.

## 23. Induced pluripotent stem cells (iPSCs)

- Induced pluripotent stem cells (iPSCs) are *adult cells that have been genetically reprogrammed to an embryonic stem cell–like state* by being forced to express genes and factors important for maintaining the defining properties of embryonic stem cells.
- iPSCs are already useful tools for drug development and modeling of diseases, and scientists hope to use them in transplantation medicine.
- **What are stem cells, and why are they important?**
    - *Stem cells have the remarkable potential to develop into many different cell types in the body during early life and growth*.
    - In addition, in many tissues they serve as a sort of **internal repair system**, dividing essentially without limit to replenish other cells as long as the person or animal is still alive.
    - When a stem cell divides, each new cell has the potential either to remain a stem cell or become another type of cell with a more specialized function, such as a muscle cell, a red blood cell, or a brain cell.
- **Stem cells are distinguished from other cell types by two important characteristics:**
    - First, **they are unspecialized cells** capable of renewing themselves through cell division, sometimes after long periods of inactivity.
    - Second, **under certain physiologic or experimental conditions, they can be induced to become tissue- or organ-specific cells with special functions**. In some organs, such as the gut and bone marrow, stem cells regularly divide to repair and replace worn out or damaged tissues. In other organs, however, such as the pancreas and the heart, stem cells only divide under special conditions.
- **What are the similarities and differences between embryonic and adult stem cells?**
    - *One major difference between adult and embryonic stem cells is their different abilities in the number and type of differentiated cell types they can become*. Embryonic stem cells can become all cell types of the body because they are pluripotent. Adult stem cells are thought to be limited to differentiating into different cell types of their tissue of origin.
    - *Embryonic stem cells can be grown relatively easily in culture. Adult stem cells are rare in mature tissues, so isolating these cells from an adult tissue is challenging*, and methods to expand their numbers in cell culture have not yet been worked out. This is an important distinction, as large numbers of cells are needed for stem cell replacement therapies.

## 24. Combat casualty drugs

- DRDO's medical laboratory has come up with a range of *'combat casualty drugs'* that can extend the golden hour of gravely wounded security personnel till the trooper is shifted to hospital.
- It has been developed at the *Institute of Nuclear Medicine and Allied Sciences*, a laboratory of the Defence Research and Development Organisation.
- *The spectrum includes* bleeding wound sealants, super absorptive dressings and glycerated salines, all of which can save lives in the event of warfare in jungle and high-altitude areas as well as in terror attacks.

# Social Issues

## 1. Sentinelese

- **Steps taken to ensure the protection of Sentinelese:**
  - The entire North Sentinel Island along with 5 km coastal sea from high water mark is notified as *tribal reserve*.
  - The Government respects their way of life style, therefore, has adopted *an 'eyes-on and hands-off' practice to protect and safeguard the Sentinelese tribe*.
  - *A protocol of circumnavigation of the North Sentinel Island has been notified*. The ships and aircrafts of Coast Guard and boats of Marine Police make sorties around North Sentinel to keep surveillance.
- **They have been protected under:**
  - A &N Islands (PAT) Regulation 1956.
  - Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.
  - Restrictions under Foreigner (Restricted Area) Orders, 1963.

## 2. Visa Manual Conditions/Passport Act 1920, Indian Forest Act,Candida Auris Infection

- **ICMR** releases guidelines for candida auris infection and treatment.
- The **killer germ**, a **fungus** called **Candida auris**, has showed up in countries as far apart as Australia and Canada, Venezuela and Japan, over the past few years. It is often resistant to multiple anti-fungal drugs.
- **What is Candida auris and why is it worrisome?**
  - Candida auris is **an emerging fungus, multidrug-resistant yeast that presents a serious global health threat**.
  - Patients can remain colonised with C. auris for a long time and C. auris can persist on surfaces in healthcare environments. This can result in spread of C. auris between patients in healthcare facilities. Public health authorities in several countries have reported that C. auris has caused severe illness in hospitalized patients.
  - Infections caused by C. auris often do not respond to commonly used antifungal drugs, making them difficult to treat.
  - C. auris is **difficult to identify** with standard lab methods.
  - Patients who have a long stay in an intensive care unit, have serious medical conditions, and who have previously received antibiotics or antifungal medications, appear to be at highest risk of infection.
- Spread:
  - C. auris can be spread in healthcare settings through contact with contaminated surfaces or equipment, or from physical contact with a person who is infected or colonized.
  - Basically, C. auris can spread in hospitals, targetting people with weakened immune systems.
  - Healthy people usually don't get infected with the fungus. Yet, more research is required to further understand how it spreads.
- How can the spread of C. auris be prevented?
  - Meticulous attention to infection prevention and control, including good hand hygiene (either hand washing with soap and water or hand sanitizing with an alcohol-based hand rub), is critical for everyone including healthcare personnel and healthcare facility visitors.

- o It is important that healthcare personnel strictly follow infection prevention and control measures, such as the proper use of gowns and gloves. When visiting a healthcare facility, visitors must follow facility directions to prevent the spread of infection.
  - o Finally, appropriate and effective environmental cleaning and disinfection by the healthcare facility is a key part of infection prevention and control.

- Is C. auris treatable?
  - o Most C. auris infections are treatable with antifungal drugs. However, some C. auris infections have been resistant to all three main classes of antifungal medications, making them more difficult to treat.

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**Why is multidrug resistance a problem?**

- The increase in resistant organisms is fueled by overuse of antimicrobial drugs, not just in healthcare settings but also in agriculture. As more microorganisms evolve ways to survive commonly used drugs, treating infections becomes more difficult. This increases the risks associated with hospitalizations and surgeries.

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  - o C. auris infection often goes unnoticed and its resistance to drugs makes it even more difficult to treat. Moreover, it is difficult to identify with standard laboratory tests, increasing the risk of mismanagement or misidentification if not diagnosed properly.
  - o As per CDC, more than 90 per cent of C. auris infections are resistant to at least one drug, and 30 per cent are resistant to two or more antibiotics. And other prominent strains of the fungus Candida have not developed significant resistance to drugs, said the CDC. Finding a cure for the infection is now a matter of urgency.

- Precautions, treatment:
  - o The key is to prevent the fungus from spreading, so the management of the infection is hinged on isolation of the patient, ideally in a single room, with strict hand hygiene.
  - o Everyone who has come in contact with a patient should be screened for the fungus, and all equipment used for the care of the patient should be cleaned every day in accordance with clinical care recommendations.
  - o Guidelines for treatment say that only when there are symptoms of an infection should the patient be given anti-fungals such as Caspofungin and Micafungin.

- What are the signs and symptoms of C. auris infection?
  - o Symptoms may not be noticeable, because patients infected with C. auris are often patients in the hospital with another serious illness or condition.
  - o Symptoms can vary greatly depending on the part of the body affected and can cause different types of infection such as bloodstream infection, wound infection, and ear infection, etc. Doctors say symptoms can include fever, body aches, and fatigue.

- How fatal can C. auris infection be?
  - o Nearly half of patients die within 90 days of being diagnosed with the fungus. In most cases, patients who have died with C. auris had other serious conditions that increased their risk of death.
  - o Infection prevention and control measures for C. auris:
  - o Placing the patients with C. auris in single rooms and using Standard and Contact Precautions.
  - o Increasing emphasis on hand hygiene.
  - o Cleaning and disinfecting patient care environment and reusable equipment with recommended products.
  - o Inter-facility communication about patient's C. auris status – when a patient is being transferred to another healthcare facility.
  - o Conducting surveillance for new cases to detect ongoing transmission.

o   Screening patients to identify C. auris colonisation is a vital part of infection prevention and control.

o   1927 and Wildlife (Protection) Act, 1972.

## 3.  Nilavembu kudineer

- The Tamil Nadu government has distributed nilavembu kudineer (a Siddha medicine) concoction to treat people infected with dengue during the outbreak.
- *Nilavembu kudineer:*
  - o   Under in vitro conditions, nilavembu kudineer (a Siddha medicine) was found to provide protection against chikungunya virus while it was effective as a treatment during acute phase of dengue infection.

## 4.  Candida Auris Infection

- **ICMR** releases guidelines for candida auris infection and treatment.
- The **killer germ**, a **fungus** called **Candida auris**, has showed up in countries as far apart as Australia and Canada, Venezuela and Japan, over the past few years. It is often resistant to multiple anti-fungal drugs.
- **What is Candida auris and why is it worrisome?**
  - o   Candida auris is **an emerging fungus, multidrug-resistant yeast that presents a serious global health threat**.
  - o   Patients can remain colonised with C. auris for a long time and C. auris can persist on surfaces in healthcare environments. This can result in spread of C. auris between patients in healthcare facilities. Public health authorities in several countries have reported that C. auris has caused severe illness in hospitalized patients.
  - o   Infections caused by C. auris often do not respond to commonly used antifungal drugs, making them difficult to treat.
  - o   Patients who have a long stay in an intensive care unit, have serious medical conditions, and who have previously received antibiotics or antifungal medications, appear to be at highest risk of infection.
- **Spread:**
  - o   C. auris can be spread in healthcare settings through contact with contaminated surfaces or equipment, or from physical contact with a person who is infected or colonized.
  - o   Basically, C. auris can spread in hospitals, targetting people with weakened immune systems.
  - o   Healthy people usually don't get infected with the fungus. Yet, more research is required to further understand how it spreads.
- **How can the spread of C. auris be prevented**?
  - o   Meticulous attention to infection prevention and control, including good hand hygiene, is critical for everyone including healthcare personnel and healthcare facility visitors.
  - o   Appropriate and effective environmental cleaning and disinfection by the healthcare facility.
- **Is C. auris treatable?**
  - o   Most C. auris infections are treatable with antifungal drugs. However, some C. auris infections have been resistant to all three main classes of antifungal medications, making them more difficult to treat.
  - o   C. auris infection often goes unnoticed and its resistance to drugs makes it even more difficult to treat. Moreover, it is difficult to identify with standard laboratory tests, increasing the risk of mismanagement or misidentification if not diagnosed properly.
- **What are the signs and symptoms of C. auris infection?**

- o Symptoms may not be noticeable, because patients infected with C. auris are often patients in the hospital with another serious illness or condition.
- o Symptoms can vary greatly depending on the part of the body affected and can cause different types of infection such as bloodstream infection, wound infection, and ear infection, etc. Doctors say symptoms can include fever, body aches, and fatigue.

## 5. World Haemophilia Day

- April 17 is World Haemophilia Day.
- **What is it?**
  - o Haemophilia is a medical condition, **mostly inherited,** in which **the ability of blood to clot is severely reduced, so that even a minor injury can cause severe bleeding**.
  - o **It is a rare disorder worldwide** — one type, called **Haemophilia A**, occurs in about 1 in 5,000 births, while **Haemophilia B** is even rarer at about 1 in about 20,000 births.
- **Treatments for haemophilia:**
  - o There's **no cure for haemophilia**, but treatment usually allows a person with the condition to enjoy a good quality of life.
  - o **Genetically engineered clotting factor medicines** are used to prevent and treat prolonged bleeding.
  - o In milder cases, injections are usually only given in response to prolonged bleeding. More severe cases are treated with regular injections to prevent bleeding.

> - **Why men are more vulnerable?**
>
>   - Because of the **genetics involved in the way the sex of a child is determined, men are more vulnerable to haemophilia than women**.
>   - **Haemophilia is caused by a defect in the X chromosome**. If a girl is born with one defective X chromosome, her other X chromosome can compensate for it. In such a case, she is a carrier of haemophilia but will not suffer from the condition herself. Only if both her X chromosomes are defective will she suffer from haemophilia herself. On the other hand, if a boy is born with a defective X chromosome, he does not have the second X chromosome to compensate for it, and will suffer from haemophilia. **That is the reason haemophilia is more common among men**.

## 6. Mosquirix: World's First Malaria Vaccine

- African Nation, **Malawi** will be undertaking large scale pilot tests for the experimental malaria vaccine in a bid to prevent the disease. The vaccine has been **recommended by WHO** for **pilot introduction** in selected areas of 3 African countries- **Ghana, Kenya and Malawi**.
- **About Malaria:**
  - o **Caused by a Plasmodium Parasites** that is transmitted from one human to another by the bite of infected Anopheles mosquitoes.
  - o In humans, the parasites (called sporozoites) migrate to the liver where they mature and release another form, the merozoites.
  - o The majority of Malaria symptoms are caused by the **massive release of merozoites into the bloodstream** such as anaemia is caused by the destruction of the red blood cells.
  - o There are five parasites that can cause Malaria in humans and the deadliest of all is **Plasmodium Falciparum.**
  - o Children under the age of 5 and pregnant women are

> **World's first vaccine against a parasitic disease: Mosquirix:**
>
> - **RTS,S** known by its trade name **Mosquirix**, **uses antibodies to target proteins presented by sporozoites** (such as the circumsporozoite protein of falciparum)to enhance the immune system and help prevent the parasite from infecting the liver.
> - Mosquirix is **also engineered using a hepatitis B viral protein and a chemical adjuvant to further boost the immune response for enhanced effectiveness**.

**most susceptible to the disease**.

## 7. Malaria Elimination Research Alliance (MERA) India

- The Indian Council of Medical Research (**ICMR**) has launched the '**Malaria Elimination Research Alliance (MERA) India**' – a conglomeration of partners working on malaria control – in order to prioritise, plan and scale up research to **eliminate the disease from India by 2030**.
- **Key facts:**
  - o The **principal activity of the alliance is to** prioritise, plan, conduct, scale up and translate relevant research in a coordinated and combinatorial way in order to have a tangible impact on the population who are at risk of malaria.
  - o The alliance will **facilitate trans-institutional coordination and collaboration** around a shared research agenda which responds not only to programmatic challenges and addresses gaps in available tools, but also proactively contributes to targeted research.
  - o It aims to harness and reinforce research in coordinated and combinatorial ways in order to achieve a tangible impact on malaria elimination.

## 8. Bubble boy Disease

- US scientists claim that they used HIV to make a gene therapy that cured eight infants of severe combined immunodeficiency, or "bubble boy" disease.
- **What is Bubble boy disease?**
  - o The **inherited immune system disorder** is technically called X-linked severe combined immunodeficiency (**SCID**), and it affects **mostly boys**. Bubble boy disease is the most common SCID condition, and the frequency of the illness isn't known.
- **Why is X-linked SCID nicknamed "bubble boy disease"?**
  - o If a child tests positive for the disease at birth, they can't necessarily do activities that other children can do.
  - o A child with X-linked SCID can't fight off infections the way a healthy child can because their immune system doesn't function properly.
  - o They have to live inside a "bubble" to keep from coming into contact with germs that wouldn't hurt a healthy person but could kill someone whose immune system doesn't work.

## 9. WHO Strategy to fight Flu Pandemics

- The World Health Organization has launched a strategy to protect people worldwide over the next decade against the threat of influenza, warning that new pandemics are "inevitable".
- The strategy meets one of **WHO's mandates to improve core capacities for public health, and increase global preparedness**.
- **Need:**
  - o **Influenza epidemics, largely seasonal**, affect around one billion people and kill hundreds of thousands annually. WHO describes it as **one of the world's greatest public health challenges.**
- **Pandemic influenza:**
  - o An influenza pandemic is a global epidemic caused by a new influenza virus to which there is **little or no pre-existing immunity in the human population**.
  - o Influenza pandemics are impossible to predict; and they may be mild, or cause severe disease or death.
  - o Severe disease may occur in certain risk groups, which may correspond to those at risk of severe disease due to seasonal influenza. However, healthy persons are also likely to experience more serious disease than that caused by seasonal influenza.
  - o The most recent pandemic occurred in 2009 and was caused by an **influenza A (H1N1) virus**.

- o As an influenza pandemic may last months or even years, this requires a sustained response in the health sector but also in other sectors providing essential services, such as energy and food production.

## 10. West Nile Virus (WNV)

- West Nile Virus (WNV) is a **member of the flavivirus genus** and belongs to the Japanese encephalitis antigenic complex of the family Flaviviridae.
- West Nile Virus (WNV) can cause **neurological disease and death in people**. WNV is commonly found in **Africa, Europe, the Middle East, North America and West Asia.**
- WNV is maintained in nature in a cycle involving **transmission between birds and mosquitoes.** Humans, horses and other mammals can be infected.
- **Transmission:**
  - o Human infection is most often the result of **bites from infected mosquitoes**. Mosquitoes become infected when they feed on infected birds, which circulate the virus in their blood for a few days. The virus eventually gets into the mosquito's salivary glands. During later blood meals (when mosquitoes bite), the virus may be injected into humans and animals, where it can multiply and possibly cause illness.
  - o The virus may also be transmitted **through contact with other infected animals**, their blood, or other tissues. A very small proportion of human infections have occurred **through organ transplant, blood transfusions and breast milk**. There is one reported case of transplacental (mother-to-child) WNV transmission.
  - o **Horses, just like humans, are "dead-end" hosts, meaning that while they become infected, they do not spread the infection**. Symptomatic infections in horses are also rare and generally mild, but can cause neurologic disease, including fatal encephalomyelitis.
- **Signs and symptoms**:
  - o Infection with WNV is either **asymptomatic** (no symptoms) in around 80% of infected people, or can lead to West Nile fever or severe West Nile disease.
  - o About 20% of people who become infected with WNV will develop **West Nile fever.** Symptoms include fever, headache, tiredness, and body aches, nausea, vomiting, occasionally with a skin rash (on the trunk of the body) and swollen lymph glands.



West Nile Virus Transmission Cycle

  - o The symptoms of severe disease (also called neuroinvasive disease, such as West Nile encephalitis or meningitis or West Nile poliomyelitis) include headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, and paralysis.
- **Treatment and vaccine:**
  - o Treatment is supportive for patients with neuro-invasive West Nile virus, often involving hospitalization, intravenous fluids, respiratory support, and prevention of secondary infections.
  - o **No vaccine is available for humans.**
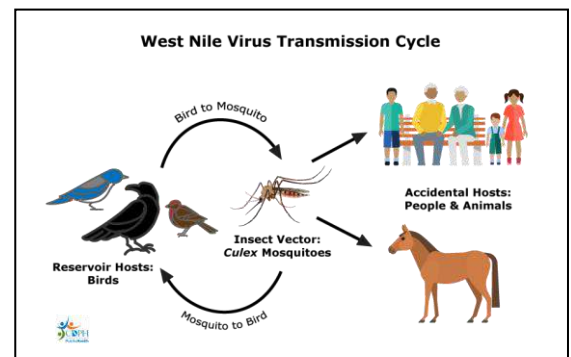
## 11. World Happiness Report- 2019

- The **United Nations has released the World Happiness Report- 2019.**
- The list is topped by Finland for the second year in a row.
- The US ranks at 19th place despite being one of the richest countries in the world.

- India figures at 140th place, seven spots down from last year.
- People in war-torn South Sudan are the most unhappy with their lives.
- **About World Happiness Report:**
  - The World Happiness Report is a landmark survey of the state of global happiness that ranks 156 countries by how happy their citizens perceive themselves to be.
  - It is released by the **Sustainable Development Solutions Network for the United Nations by the UN General Assembly.**
  - It ranks the countries of the world on the basis of questions primarily from the Gallup World Poll.
- **How is it measured?**
  - It is based on a questionnaire which measures 14 areas within its core questions: (1) business & economic, (2) citizen engagement, (3) communications & technology, (4) diversity (social issues), (5) education & families, (6) emotions (well-being), (7) environment & energy, (8) food & shelter, (9) government and politics, (10) law & order (safety), (11) health, (12) religion and ethics, (13) transportation, and (14) work. The results are then correlated with other factors, including GDP and social security.

## 12. Dard Aryans

- A seminar was held recently in New Delhi that extensively discussed the need to preserve the legacy of Dard Aryans.
- *Who are they?*
  - Some 200 km from Leh are the villages of Dha, Hanu, Garkone and Darchik on both sides of the Indus River, inhabited by the **Buddhist Dard Tribes**. The villages are together called the "Aryan valley". The word 'Dard' is derived from a Sanskrit word, 'Daradas', which *means people who live on hillsides*.
  - *They might have descended from soldiers in Alexander's army* who had come to the region over 2,000 years ago. The Dard Aryans, however, do not document their history. These tribals are *mainly dependent on agriculture*.

## 13. Swayatt

- It is an initiative to promote Start-ups, Women and Youth Advantage Through **eTransactions on Government e Marketplace (GeM).**
- This will bring together the key stakeholders within the Indian entrepreneurial ecosystem to Government e-Marketplace, the national procurement portal.

## 14. Nari Shakti Puraskars

- To acknowledge Women's achievements, the Government of India confers *Nari Shakti Puraskars on eminent women and institutions in recognition of their service towards the cause of women empowerment*. The Nari Shakti Awards were initiated in the year 1999.
- *The Ministry of Women and Child Development announces* these national level awards for eminent women, organisations and institutions.