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Global Hunger Index 2022

- India ranks 107 out of 121 countries on the Global Hunger Index.
- Created in 2006, the GHI is a joint project of Welthungerhilfe and NGO Concern Worldwide.
- India ranks below Sri Lanka (64), Nepal (81), Bangladesh (84), and Pakistan (99).
- Afghanistan (109) is the only country in South Asia that performs worse than India on the index.

What Does GHI Indicate?

The global hunger index is a means of monitoring *whether countries are achieving hunger-related SDGs.* It can be used for international ranking.

- ✓ **Goal 2** of the SDGs aims to end hunger and all forms of malnutrition by 2030.
- ✓ It also commits to universal access to safe, nutritious and sufficient food at all times of the year.

How is GHI Defined?

- The GHI captures **three dimensions** of hunger –
  - ✓ Insufficient availability of food,
  - ✓ Shortfalls in nutritional status of children
  - ✓ Child mortality
- Accordingly, the **index includes the following 4 indicators (given in fig. beside):**
- Countries are ranked on a **100-point scale**, with 0 and 100 being the best and worst possible scores, respectively.
- A score between 20 and 34.9 is pegged in the "**serious**" category and this is where India finds itself with a total **score of 29.1**

Composition of the Global Hunger Index
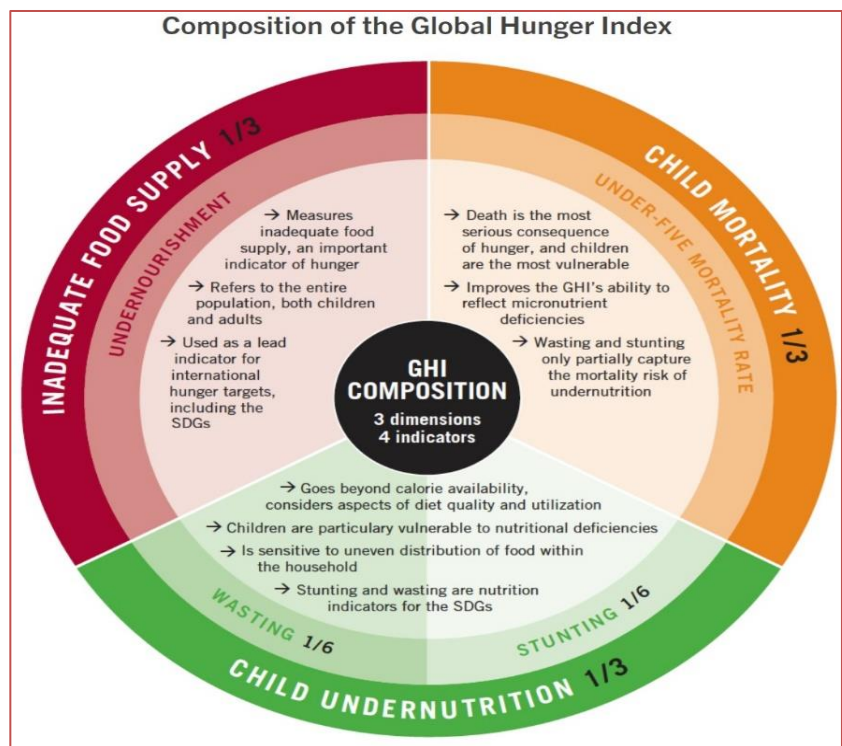
Consequences & Implications

- Hunger & undernourishment form a vicious circle, which is often "passed on" from generation to generation.
- The children of impoverished parents are often born underweight and are less resistant to disease; they grow up under conditions that impair their intellectual capacity for their whole lives.
- **Factors that contribute to a high global hunger index have been identified as –**

Low income and poverty	War and violent conflict	General lack of freedom	Low women's status	Poorly targeted health and nutrition programmes

Global Performance

- Globally, progress against hunger has largely stagnated in recent years. The 2022 GHI score for the world is considered "**moderate**".
- This is due to overlapping crises such as conflict, climate change, the economic fallout of the COVID-19 pandemic as well as the Ukraine war, which has increased global food, fuel, and fertiliser prices.

- It is expected to "worsen hunger in 2023 and beyond."

India's Performance

- **Child Wasting Rate –**
  - ✓ India's child wasting rate (low weight for height), at 19.3%, is worse than the levels recorded in 2014 (15.1%) and even 2000 (17.15%).
  - ✓ It is the highest for any country in the world and drives up the region's average owing to India's large population.
- **Undernourishment –**
  - ✓ Prevalence of undernourishment, which is a measure of the proportion of the population facing chronic deficiency of dietary energy intake, has also risen in the country from 14.6% in 2018-2020 to 16.3% in 2019-2021.
  - ✓ This translates into **224 million people in India considered undernourished out of the total 828 million people undernourished globally**.
- **Child Stunting & Mortality –**
  - ✓ Child stunting has declined from 38.7% to 35.5% between 2014 and 2022.
  - ✓ Child mortality has also dropped from 4.6% to 3.3% in the same comparative period.
- On the whole, India has shown a slight worsening with its GHI score increasing from 28.2 in 2014 to 29.1 in 2022.

Reasons For Backlash By Government

This is the second year running when the Indian government has criticised the GHI report. The government's contention is based on following reasoning:

- **Hunger Definition**: The GHI uses "an erroneous measure of hunger" as it defines hunger in terms of other variables beyond the lack of food.

- **Not Holistic:** The 3 out of the 4 variables used are related to children, and as such, cannot be representative of the entire population.

- **Insensitivity:** The government also argued that the report chooses to deliberately ignore efforts made by the Government to ensure food Security like additional free-of-cost food-grains to 80 crore Indians since March 2020, over and above the entitlements under the National Food Security Act (NFSA), 2013.

- **Small Sample Size**: The fourth indicator, i.e. the proportion of undernourished population rests on the Food and Agricultural Organisation's estimates which is in turn based on an opinion poll conducted on a very small sample size of 3000 (Gallup World Poll's survey).

- **Evaluating Sample Representativeness**: In addition to its small size, the Gallup sampling methodology does not follow the usual processes used in India.
  - ✓ Also, given that FAO has not released standard errors for their estimates, it is difficult to evaluate whether the growth in the proportion of households experiencing hunger in India, from 14.8% in 2013-15 to 16.3% in 2019-21, is statistically significant, given the difficulties in collecting data during the pandemic.
- **Lack Of Conceptual Clarity:** The index raises doubts if it is genuinely measuring hunger, or is it lumping together various indicators with only a weak relationship with hunger.

- **No Comprehensive Picture**: The problem with GHI is that it directs governmental attention to cross-national comparisons, sometimes resulting in the rejection of underlying issues and sidetracking the public discourse.

- **Indicators Not Essentially Hunger-Related:** While undernourishment could presumably identify the proportion experiencing hunger, but the latter three i.e. stunting, wasting and mortality are only partially related to hunger. It is demonstrated as follows:

Child Mortality	o It depends heavily on a country's disease climate and public health systems.
	o Today, 40 of 1,000 children in India die before their fifth birthday; 27 of these deaths occur in the first month of life.
	o This hints that many child deaths are associated with conditions surrounding birth, congenital conditions, or delivery complications and are not necessarily markers of hunger.
Stunting	o **UNICEF** notes in an article titled 'Stop Stunting, that there are stunted children even among the wealthiest households. Thus, poverty is not a clear cause of stunting.
	o Various factors contribute to stunting, such as infant and child care practices, hygiene, dietary diversity and cultural practices surrounding maternal diet during pregnancy.
Wasting	o **It** is associated with both illnesses and low food intake, not necessarily hunger. For example, children suffering from diarrhoea are less likely to eat, and poor nutritional status makes them more susceptible to disease

- **Different trends for different indicators:** Between 1998-99 and 2019-21, National Family Health Survey 2 and 5 show that the child mortality rate fell from 95 deaths per thousand to 40 per thousand. This is attributable to improved immunisation coverage and increased hospital delivery.
  - ✓ Child stunting decline was also substantial, from 51.5% to 35.5%, possibly due to improved water and sanitation systems.
  - ✓ Wasting has not changed, barely budging from 19.5% to 19.3%.

Way forward

- Apart from average caloric intake as a nutrition indicator, close attention needs to be paid to other aspects of food deprivation, such as the intake of vitamins and minerals, fat consumption, the diversity of the diet, and breastfeeding practices.

- Also, to ensure transparency, it is essential that international agencies only use data that are freely available in the public domain along with key characteristics such as education, residence and age of the respondents.

Palliative care

According to Health Ministry data analysis report, only 1-2% of the population who need palliative care have access to it in India compared to the global average of 14%. This report has been released by the health unit of Federation of Indian Chambers of Commerce & Industry (**FICCI**).

Why India's Palliative Care Is Lagging Behind?

- **Disease Focused Healthcare System:** With the advent of technology, healthcare has become disease-focused.

- **Lack of trained doctors and medical staffs-**
  - ✓ Palliative care needs extra training in pain management, care and empathy. However, absence of well-trained cadre is affecting Indian healthcare system.
  - ✓ It was only in 2010, that the Medical Council accepted palliative medicine as a medical specialty and announced an MD course in palliative care. Still, training at the nurse level is missing.

- **Political Apathy**
  - ✓ Morphine, critical to pain management, was extremely difficult to procure in India until Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985 was amended in 2014.

- ✓ In 2012, the Ministry of Health announced a National Programme for Palliative Care (NPPC) in the 12th Five-Year Plan. Unfortunately, the proposed budget allocation did not materialise.
- **Lack Of Awareness And Widespread Poverty**
  - ✓ Patients and their families remain unaware of the nuances of palliative care.
  - ✓ Also, most of the patients belong to poor section of the society who cannot afford such services.
- **Absence of community/home based palliative care** facilities
- **Role of medical insurance:** In most of the cases medical claims for such services are rejected.

- **Economic factors:** Patients suffering from critical illness often do not choose the options which they think would create burden for their families.
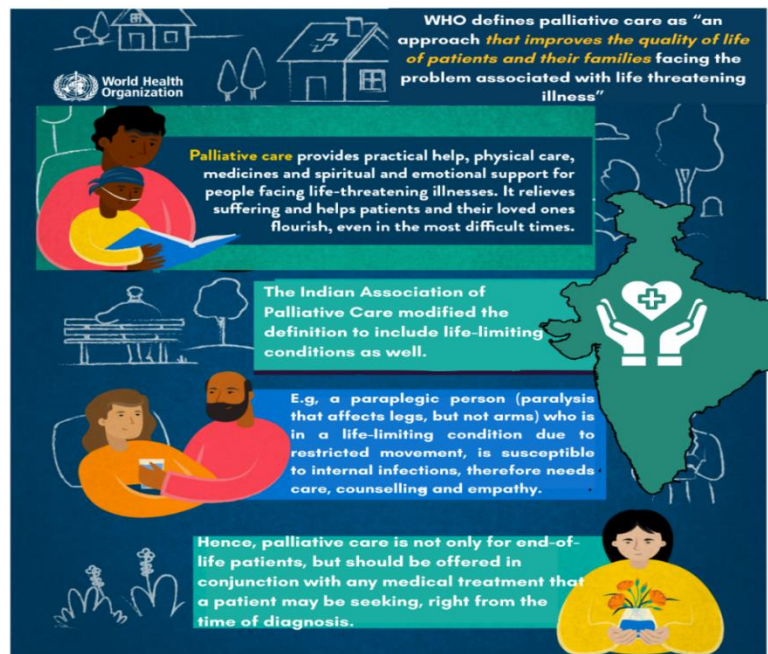
Key Highlights Of FICCI Report

- **Cancer Incidence In India**
  - ✓ The report notes that the cancer incidence in India is now estimated to be 19 to 20 lakhs, whereas real incidence is 1.5 to 3 times higher than the reported cases.
  - ✓ Kerala, Mizoram, Tamil Nadu, Karnataka, Punjab, and Assam report the highest overall crude incidence rates of cancers which is greater than 130 cases per lakh population.
  - ✓ As per the report, Cancer disease burden in India continues to be characterised by poor detection. Late-stage detection coupled with sub-optimal access to quality cancer treatment at affordable prices significantly impacts the outcomes.
- **Unaffordable Cancer treatment**

  The financial burden for cancer treatment is highest compared to all diseases, making it unaffordable for over 80% of the population.

- **Despite rise in cancer incidence in India, no coherent policy towards palliative care**
  - ✓ The analysis shows that India stands at number three in terms of cancer incidence in the world.
  - ✓ Despite this, most States in the country do not even have enabling legislation or policy to integrate palliative care with treatment offered to cancer patients.
- **Only three Indian states (**Kerala, Karnataka and Maharashtra) **have palliative policy**
- **Suggestions**
  - ✓ The need of the hour is training auxiliary nurses and Asha workers to provide counselling to cancer patients.
  - ✓ Also, govt needs to undertake efforts to include palliative care packages under reimbursement schemes of government as well as private insurance plans.

Health Ministry's Response

- A population-based initiative for prevention, control, and screening for diabetes, hypertension, and common cancers has been rolled out in the country under **National Health Mission (NHM).**

- Screening of common cancers is an integral part of service delivery under **Ayushman Bharat – Health and Wellness Centres**.

- Treatment for Cancer is also available under **Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana** (PMJAY).

- Besides, quality generic medicines are made available at affordable prices to all, under **Pradhan Mantri Bhartiya Janaushadhi Pariyojana** (PMBJP).

- **Affordable Medicines and Reliable Implants for Treatment** (AMRIT) Pharmacy stores have been set up in some hospitals/institutions, with an objective to make available <u>Cancer drugs at a substantial discount</u> vis-à-vis the Maximum Retail Price.

- Under the umbrella scheme of **Rashtriya Arogya Nidhi** (RAN), financial assistance is provided to families living below the threshold poverty line for their treatment, including treatment of Cancer in Government hospitals.

Global Innovation Index 2022

- World Intellectual Property Organization (WIPO) released the Global Innovation Index (GII) 2022.

- GII was launched in 2007 to find and determine methods that could **capture a picture of innovation in society**. WIPO started its association with the GII in 2011.

- A large number of countries use the GII to assess and improve their innovation ecosystems and use the index as a **reference in economic plans and/or policies**.

- This year the index includes **132 economies**, which represent **94.3% of the world's population** and **99 % of the world's GDP** in purchasing power parity (PPP).

- GII 2022 tracks the most recent global innovation trends against the background of an ongoing COVID-19 pandemic, slowing productivity growth and other evolving challenges.

Evaluation Framework

- GII is computed by taking an average of the scores in **two sub-indices:**

Innovation Input Index	Innovation Output Index.

- **Innovation Input Sub-Index** considers elements of the national economy that enable innovative activities. It includes **5 pillars**: Institutions; *Human capital and research; Infrastructure; Market sophistication; and Business sophistication.*

- **Innovation Output Sub-Index** provides information about outputs that are the result of the innovative activities of economies. There are **two output pillars**: *Knowledge and*

technology outputs; and Creative outputs.

- Each of the five input and two output pillars is divided into **three sub-pillars**, each of which is composed of individual indicators.

Key Findings

- **Switzerland** remains the world's leader in innovation for the 12th consecutive year. It leads globally in innovation outputs, and specifically in patents by origin, software spending, high-tech manufacturing and production and export complexity.

- The second position was secured by the United States (US) followed by Sweden, United Kingdom (UK) and Netherlands.

- The index shows that emerging economies including, India and **Turkey (37th)**, are showing consistently strong performance.

Findings From India

- India secured the **40th position out of 132 countries** in the Index. This is the first time the country entered the top 40. Last year, India was at the 46th position. India's rank has risen by 41 places since 2015, when it was at the 81st spot.

- India is the **innovation leader in the lower middle-income group**, and continues to lead the world in ICT (information and communications technology) services exports.

- The country also ranked high in venture capital received (6), finance for startups and scaleups (8), graduates in science and engineering (11), entrepreneurship policies and culture (12), cultural creative services exports (12), labour productivity growth and domestic industry diversification.

- However, India did poorly in environmental performance (130), new businesses (114), number of students from abroad studying in the country (109) and females employed with advanced degrees (103).

- Among the seven GII pillar ranks, India scored **best in market sophistication** (19), while it ranked its **lowest in infrastructure** (78).

Rise In IP Filings

- There has been a steady rise in intellectual property (IP) filings in India as the number of patents applications went up from 15,914 in 2011 to 37,880 in 2020.

- For trademarks, the figure rose from 194,796 to 418,560 during the same period.

- Foreign applicants lead when it comes to patent filings in India. In 2020, non-residents filed as many as 33,630 patent applications and were granted 21,373 patents.

- Meanwhile resident Indians made 23,141 patent applications and were granted 4,988 patents.

- Moreover, as many as 14,739 Indians filed for patents in other countries, and were granted 8,081 patents.

Initiatives Taken By India

- Incubation, handholding, funding, industry-academia partnership and mentorship have given a boost to entrepreneurial spirit across the country.

- India started its Digital India journey in 2015 and has set up a goal of a trillion-dollar digital economy in the next few years.

- **Digital technologies** are employed from mapping capital assets using Geographic information system (GIS) technology to revolutionizing payments through UPI. In fact, 40% of global real-time digital transactions happened in India last year.

- To further strengthen innovation, the **National Education Policy** has been introduced, which promotes the spirit of enquiry by setting up incubation & technology development centers.

- With over 9000 **Atal Tinkering Labs**, youth is encouraged to develop solutions to society's problems.

- India has taken up structural reforms to strengthen its **Intellectual Property Rights (IPR) regime** including modernization of IP office, reducing legal compliances and facilitating IP filing for start-ups, women entrepreneurs, small industries and others.

World Intellectual Property Organization (WIPO)
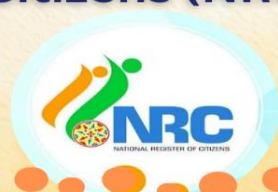
- WIPO is one of the 15 specialized agencies of the United Nations (UN). It acts as the global forum for intellectual property (IP) services, policy, information and cooperation.

- It was created in 1967 with a mission to lead the development of a balanced and effective international IP system that enables innovation and creativity for the benefit of all.

- WIPO currently has **193 member states** and is headquartered in **Geneva**, Switzerland.

- The predecessor to WIPO was the United International Bureaux for the Protection of Intellectual Property (BIRPI), which had been established in 1893.

Foreigners Tribunal

EDITOR'S CUT

There is cloud over **200 Foreigners Tribunals** of Assam as the state government has decided not to <u>extend the term of members appointed to these tribunals</u>.

National Register of Citizens (NRC)

1 At its core, the NRC is an official record of those who are legal Indian citizens. It is mandated by the 2003 amendment of the Citizenship Act, 1955 (governs conditions by which a person holds Indian citizenship).

2 It includes demographic information about all the legal citizens of India so that the illegal immigrants can be identified and deported.

3 So far, such a database has only been maintained for the state of Assam. However, the Home Minister of India recently declared during a parliamentary session that the register would be extended to the entire country.

Why Was NRC Updated For Assam?

- A writ petition had been filed before the Supreme Court (SC) of India demanding **the deletion of illegal migrants' names from voter lists in Assam.**

- In 2014, **the SC ordered the updating of the NRC**, in accordance with Citizenship Act, 1955 and Citizenship Rules, 2003 in all parts of Assam.

- The NRC in Assam targeted **illegal immigrants**. An individual had to demonstrate that they or their ancestors were in Assam on or before March 24, 1971.

- The process officially started in 2015 and the updated final NRC was released on August 31, 2019, **with over 1.9 million out of 3.3 crore applicants failing to make it to the NRC list.**

- Following concerns about the removal of numerous Hindus from the list, the Home Ministry said that the NRC would be conducted again in Assam.

What is a Foreigners Tribunal (FT)?

It is a *quasi-judicial body* established as per the *Foreigners Tribunal Order, 1964* and *the Foreigners Act, 1946* which determines whether a person staying illegally is a foreigner or not.

History

- The Foreigners Tribunal was established through the **Foreigners (Tribunals) Order, 1964** to help the State Administration make a decision about an individual doubted to be a foreigner.
- The Indira Gandhi led UPA Government legislated **The Illegal Migrants Act (IMDT) in 1983** to distinguish illegal immigrants (from Bangladesh) and to deport them from Assam. It was only for the State of Assam whereas, in other States, the distinguishment of foreigners was done under The Foreigners Act, 1946.

Features

- It is relevant to the entire nation.
- The last Amendment to the 1964 Act was done in May 2019 which stated that as the NRC work was carried out only in Assam, _Foreigners Tribunals will be established only in Assam and not in other states._
- The 2019 amendment stated that a FT can _decide on appeals_ made by persons not satisfied with the outcome of claims and objections filed **against** the NRC published in Assam. So, the people **left out of the final NRC list of Assam** or **marked as 'D'** meaning 'doubtful' can apply to the FT's.
- The amended Foreigners (Tribunal) Order, 2019 empowers individuals to approach the Tribunals. Earlier only the State administration could move the Tribunal against a suspect, but with the final NRC about to be published and to give adequate opportunity to those not included, this has been done.
- The time limit to appeal was increased to 120 days from 60 days after the 2019 amendment.

Powers

- It has the powers of a civil court while trying a suit under the Code of Civil Procedure, 1908.
  - ✓ **Code of Civil Procedure, 1908** is a procedural law related to the administration of civil proceedings in India.
- It can summon any person and examine them on oath.
- It can ask anyone to produce the required documents.
- It can issue commission for examining any witness.

Who Can Set-up Foreigner's Tribunal?

The Ministry of Home Affairs (MHA) has amended the Foreigners (Tribunals) Order, 1964, and empowered the **District Magistrates** in all States and UTs to set up Foreigners Tribunals to decide whether a person staying illegally in India is a foreigner or not.

Composition

Advocates not below 35 years of age with at least 7 years of practice (or) Retired Judicial Officers (or) Retired IAS (not below the rank of Secretary/Addl. Secretary) having experience in quasi-judicial works.

Procedure for Disposal of Cases

- The Tribunal is supposed to serve a notice to the person in question along with a copy of reasons on grounds of which he has been alleged to be a foreigner and give him a reasonable opportunity to represent himself and defend his case with strong evidence.
- After considering the presented evidence and hearing the persons, the tribunal shall submit its decision to the authority specified.
- The tribunal has 60 days to dispose-off a case.

Appeal and Burden of Proof

According to **Section 9** of the Foreigners Tribunal Act, if a person is excluded from the NRC list or placed under the doubtful category, the _burden of proof lies on the accused_ and he will have the right to appeal to the FT.

Principle of "Res Judicata"

It means that once a matter has been decided, it **cannot be reopened** by the same party. Based on this principle, the Guwahati High Court ruled that once a person has been declared an "Indian Citizen" by the Foreigners Tribunal, he/she cannot be tried for the second time in the tribunal and declared a foreigner.

Extra Mile
National Population Register (NPR) is the register with detailed records of persons **residing in any rural or urban area of India**. In contrast, National Register of Citizens (NRC) is the register of details about **Indian citizens** residing in <u>India and outside India</u>. Moreover, demographic and biometric data are collected in the case of NPR.

{For more about Citizenship (Amendment) Act 2019, Refer The Recitals - September 2022}

Ban on PFI

The **Ministry of Home Affairs (MHA)** imposed a ban on PFI and its associate organizations for **five years** under The Unlawful Activities (Prevention) Act (UAPA), 1967 and termed it as an *unlawful association* with <u>immediate effect.</u>

Background
Massive searches and raids carried out by the National Investigation Agency (NIA) and the Enforcement Directorate (ED) across the country on the basis of allegations that PFI is involved in organizing terrorism camps and encouraging Muslim youth to join terror activities. This led to the ban on the organization.

What Is Popular Front of India (PFI)

- The PFI as it describes itself is an NGO and a neo social movement for empowering marginalized, deprived, and oppressed sections of the society.

- It was created in 2007 after the merger of three Muslim organizations of South- the National Democratic Front in Kerala, the Karnataka Forum for Dignity, and the Manitha Neethi Pasarai in Tamil Nadu.

- It emerged in the aftermath of the ban on the Students Islamic Movement of India (**SIMI**).

How Is An "Unlawful Association" Defined?

According **to Section 2(1)(p) of the UAPA**, an "*unlawful association*" is an association which is involved in activities *promoting enmity between different groups and making imputations, assertions that are prejudicial to national integration.*

Imposition of Ban

- When the Government imposes a ban on any association, the Ministry of Home Affairs (MHA) issues a ban notification and publishes it in the gazette.

- But this ban is temporary and to make the ban permanent, it needs to be ratified by a tribunal known as the ***Unlawful Activities Prevention Tribunal***.

  - ✓ However, in **exceptional**

The Unlawful Activities (Prevention) Act (UAPA), 1967

- Also known as the *"Anti-Terror Law"*, this act is aimed at the prevention of unlawful activities and associations in India.
- Its main objective is to prevent and deal with activities directed against the integrity and sovereignty of India.
- Section 3 of UAPA allows the Indian government (MHA) to declare any organization "unlawful association" or a "terrorist organization," which is often referred informally as a "ban."
- The Unlawful Activities (Prevention) Amendment Act, 2019 (UAPA 2019) has given the Union Government the power to designate individuals as terrorists without a due process of law.

circumstances, the notification can take effect **immediately** if the reasons for it are documented in writing. It can be approved or rejected by the tribunal.

Constitution Of The Tribunal

- The *Unlawful Activities Prevention Tribunal* is a body constituted by the central government to confirm a ban on a political organization after analyzing the allegations and evidence.
- The tribunal has **only one member**. Provided that no person shall be so appointed unless he is **a Judge of a High Court.**
- If there is a vacancy (other than a temporary absence) in the Tribunal, the Centre appoints another judge, and the proceedings resume from the point at which the vacancy is filled.
- The Centre is to provide the tribunal with the personnel it requires to carry out its functions.
- The **Consolidated Fund of India** bears all expenses incurred for a tribunal.

Tribunal's Powers

- The tribunal has the power to **regulate its own procedure**, including the location of its sittings.
- As a result, it can hold hearings in various states for allegations originating in those states.
- The tribunal has the same powers to conduct investigations as **a civil court under the Code of Civil Procedure, 1908.**
- These can be used to summon a witness, produce any document or other material object producible as evidence, obtain any public record from any court or office, and so on.
- **All proceedings before the Tribunal are considered judicial proceedings.**

Procedure To Declare An Association As "Unlawful"

- For this, the Ministry needs to notify the tribunal <u>within 30 days</u> of the gazette notification (under **Section 4** of UAPA).
  - ✓ The tribunal decides whether the ban should stay or not.
- In the notification to the tribunal, the Ministry needs to send all details of the cases registered by the NIA, ED, and State Police Forces against the association and its cadres across the country.
- The Tribunal then issues a show-cause notice to the alleged association asking it to reply in **writing** within <u>30 days</u> about why it should not be banned.
- After considering the cause, the Tribunal holds an inquiry.
- After hearing further arguments from both sides, the tribunal decides whether there is sufficient evidence to declare the association an "unlawful association" or not. This decision should be taken within **6 months.**
- These enquiries are conducted in areas where the association generally conducts its activities so that the general public can contribute its view.
  - ✓ For example, in 2019 Justice Mukta Gupta, then sitting judge of the Delhi High Court, held public hearings in Aurangabad, Pune, and other places to ascertain whether there was sufficient evidence to continue the ban on the SIMI which was first banned in 2001, then in 2014 and 2019.
- The ban is applicable for a period of **5 years** after it has been approved by the tribunal.
- SIMI, United Liberation Front of Asom (ULFA), National Democratic Front of Bodoland (NDFB) are some examples of associations termed as "unlawful" under Section 3 of UAPA.
- **Section 6 of UAPA**: The **Central Government** may cancel the ban notification either <u>*on its own motion or on application by the aggrieved person*</u>. Confirmation by the tribunal is **not** required for this cancellation.

What Happens When An Association Is Declared Unlawful?

- It has serious consequences and includes <u>criminalization of organization membership and forfeiture of its properties.</u>

- **Section 7** of UAPA: Prohibition on use of funds.

- **Section 8** of UAPA: All the places used by the unlawful association can be notified and seized.

- A person who is the member of such (unlawful) association or takes part in its meetings or contributes to, or receives or solicits any contribution for the purpose of such association or in any way assists its operations is punishable with imprisonment for a term which may be extended to two years, and shall also be liable to fine.

- The aggrieved person can make an application to the Court of the District Judge within 15 days of the date of the service of such order.

Analyzing Tribunal's Functioning

- The have **largely confirmed government notifications**, with a few exceptions. In the case of SIMI, for example, a tribunal temporarily lifted the ban in 2008.

- The tribunal's proceedings have been **criticized for being somewhat opaque.**

- Given the sensitivity involved, the UAPA allows for public non-disclosure of information on bans.

- It has been claimed that the government frequently provides evidence under sealed cover, **leaving no opportunity for an organization to defend itself.**

Extra Mile

Anti-National Activities

The J&K Government recently adopted a zero-tolerance policy towards anti-national elements taking refuge as government servants and sacked five of them taking action under **Article 311(2)(C)** of the Constitution. The activities of these employees had come to the adverse notice of law enforcement and intelligence agencies, as they were found involved in activities prejudicial to the security of the state.

Special sections under Article 311 were introduced in J&K after the abrogation of special status of J&K in 2019 under which <u>any trial or investigation by the department concerned is not required</u>, except for a report filed by the security agencies, to terminate the services of the employees. The only available remedy to terminated employees is to challenge the government's decision in the High Court.

Article 311(1): States that a civil servant cannot be dismissed or removed by any authority subordinate to the authority by which he was appointed.

Article 311(2): States that a civil servant cannot be removed or dismissed or reduced in rank unless given a reasonable opportunity to present his case against any action proposed to be taken against him.

Article 311(2)(C): States that-

- A person can be removed from his job without recourse to the normal procedure prescribed in Article 311 (2) if the President (or the Governor, as the case may be) is satisfied that the retention of that person in public service is prejudicial to the security of the State.

- No opportunity will be given to the employee concerned to present his case.

- President's satisfaction is not required in writing and his **power is unrestrained and cannot be made a justifiable issue.**

EDITOR'S CUT

Mediation Bill 2021

It aims to settle any **civil or commercial disputes** through mediation before seeking court or tribunal's intervention. This bill was introduced in the Rajya Sabha in December 2021 and was referred to Parliamentary Standing Committee on personnel, public grievances, law, and justice for review.

Background

Mediation is not a new concept in India, it was introduced back in 2002 by inserting **Section 89** of the Code of Civil Procedure 1908 (CPC). Several legislations such as the Companies Act 2013, Arbitration & Conciliation Act 1996, and Commercial Courts Act 2015 also provide for mediation. But according to National Judicial Data Grid, there are still around 40 million cases pending in the Indian courts and with the increasing number of cases being referred for mediation, certain challenges like *lack of dedicated legislation, reluctance of parties to mediate* etc. are hampering the growth of mediation as a viable Alternative Dispute Resolution (ADR) mechanism. Thus, the Central Government has come up with the draft Mediation Bill 2021.

Key Features of The Bill

- **Pre-litigation Mediation**
    - ✓ Parties "**must**" attempt to settle civil or commercial disputes by mediation before approaching any court or certain tribunals.
    - ✓ Even if they fail to reach a settlement through pre-litigation mediation, the court or tribunal may at any stage refer the parties to mediation if they request for the same.
- **Disputes Not Fit For Mediation**
    - ✓ The Bill contains a list of disputes which are not fit for mediation.
    - ✓ These include disputes: (i) relating to claims against minors or persons of unsound mind, (ii) involving criminal prosecution, and (iii) affecting the rights of third parties.
- **Applicability**
    - ✓ The Bill will apply to mediations conducted in India: (i) involving only domestic parties, (ii) involving at least one foreign party and relating to a commercial dispute (i.e., international mediation), and (iii) if the mediation agreement states that mediation will be as per this Bill.
    - ✓ If the central or state government is a party, the Bill will apply to: (a) **commercial disputes**, and (b) other disputes as notified.
- **Mediation Process**
    - ✓ Mediation proceedings will be "**confidential",** and must be completed within 180 days (may be extended by 180 days by the parties).
    - ✓ A party may withdraw from mediation after **two sessions.**
    - ✓ **Court annexed** mediation must be conducted as per the **rules framed by the Supreme Court or High Courts.**
- **Mediators**
    - ✓ Mediators may be appointed by: (i) the parties by agreement, or (ii) a mediation service provider (**institutional mediation**: an **institution** administering mediation).
    - ✓ They must disclose any conflict of interest that may raise doubts on their independence.
    - ✓ Parties may then choose to replace the mediator.
- **Mediation Council of India**
    - ✓ The central government will establish the Mediation Council of India.
    - ✓ The Council will consist of a chairperson, two full-time members (with experience in mediation or ADR (Alternative dispute resolution)), three ex-officio members (including Law Secretary, and Expenditure Secretary), and a part-time member from an industry body.
    - ✓ **Functions of the Council** include: (i) registration of mediators, and (ii) recognising mediation service providers and mediation institutes (which train, educate, and certify mediators).
- **Mediated Settlement Agreement**
    - ✓ Agreements resulting from mediation (*other than community mediation*) will be **final,** binding, and enforceable in the same manner as court judgments.
    - ✓ Section 29: They may be **challenged on grounds** of: (i) fraud, (ii) corruption, (iii) impersonation, or (iv) relating to disputes not fit for mediation.

✓ Mediation Settlement Agreement will be legally enforceable and can be registered with the State/ district/ taluk legal authorities within 90 days to ensure authenticated records of settlement.

- **Community Mediation**
  ✓ Community mediation may be attempted to resolve disputes likely to affect the peace and harmony amongst residents of a locality.
  ✓ It will be conducted by a panel of **three mediators** (may include persons of standing in the community, and representatives of resident welfare associations).

Pro's	Con's
• The bill recognizes mediation as a profession & acknowledges <u>mediator training institutes and service providers</u> • To solve the confusion between the word's "mediation" and "conciliation", it opts for using the word "mediation" in accordance with international practice. • It recognizes <u>online dispute resolution.</u> • It provides for enforcement of **commercial settlements** reached in international mediation as per the <u>Singapore Convention on Mediation</u> to which **India is a signatory.** ✓ **Singapore Convention on Mediation** facilitates <u>international trade and commerce</u> by enabling disputing parties to easily enforce and invoke settlement agreements across borders.	• **Gross Impropriety (illegitimacy)** - It allows challenging any settlement on this basis <u>without defining the term</u>. This can lead to long and pending litigations. • **Community Mediation**- It may be contradictory to **individual rights** in general and women rights in particular. • **Mandatory Pre-litigation Mediation**- The requirement of parties to attend **at least two mediation sessions** will force the parties not interested in mediation to attend it and burden them with additional costs as the _cost of mediation is required to be borne by the parties_. • **Section 29**- Under this, any settlement can be challenged on grounds of corruption, impersonation, and fraud but only within 90 days of the date of receipt of **mediation settlement agreement.** • **Approaching the Court**- It envisages approaching courts for interim measures "before the commencement of" or "during the continuation of" mediation proceedings and not "after the conclusion of mediation proceedings but prior to enforcement" of the mediation agreement. • **Lack of jurisdiction**- The Bill fails to specify the provisions under which international mediation will take place in India, related to <u>non-commercial dispute</u> arising under a foreign law. • **Consequences of Non-Registration of Settlement**- There is lack of clarity in this case.

Recommendations By The Standing Committee

- It recommended exploring the feasibility of designating other bodies like **State Mediation Council** to act as mediation service providers apart from the authority constituted under Legal Services Authority Act.

- Not to exclude government related disputes from the bill's ambit as **clause 2 (2)** of the bill has provisions to exclude the Central and State governments from <u>non-commercial disputes</u> with the government as one of the parties.

- The committee failed to understand how pre-litigation mediation will be implemented in matters pending before the tribunals, stated in **clause 6** of the bill. It suggested to make it _optional and to introduce it in a phased manner instead of introducing it with immediate effect for all civil and commercial disputes_. It also suggested to reconsider the compulsory provisions of pre-litigation mediation as it may result in delayed cases.

- Re-arrangement of clauses 6, 7, 8 and 9 for providing better clarity.

- ✓ **Clause 7** provides an indicative list of disputes/matters which **cannot** be referred for mediation except compoundable/matrimonial offences.
- ✓ **Clause 8** allows a party to file for _appropriate proceedings_ before a court/tribunal/competent authority for _interim measures before the commencement/during mediation._
- ✓ **Clause 9** provides court/tribunal can ask the parties at any stage of proceeding to undertake mediation if requested by them.
- It recommended to make _specific provisions_ about court annexed mediation in place of providing powers to court to make rules for "court annexed mediation" under clause 26.

- It recommended reducing the time limit of completing the mediation process from 180 days to 90 days and an extension period of 60 days instead of 180 days.

- It recommended the appointment of chairperson and members of the Mediation Council of India to be made by a _selection committee_ constituted by the central Government.

The government should take steps to promote mediation by creating general awareness in society. The first step in this direction would be to set a guideline in place for Public Sector Undertakings to resolve its disputes through mediation. Being the largest litigator, the government ought to set an example for the public.

Supreme Court Collegium

Justice D Y Chandrachud will take over as the next Chief Justice of India (CJI) and during his two-year tenure, the collegium headed by him will make as many as 18 recommendations for appointment as supreme court judges. This collegium will be an unusual one as it will consist of six members instead of five.

Supreme Court Collegium	High Court Collegium
It is a five-member body headed by the Chief Justice of India (CJI) and comprises of four other senior-most judges of the Supreme Court.	It is a five-member body headed by the High Court Chief Justice and comprises of four other senior-most judges of that High Court.
It recommends appointment of Supreme Court judges, Chief Justices of HC's and the transfer of HC judges.	It makes recommendations for appointments to HC.
Only the collegium system decides on the names of Judges of the higher judiciary and recommends it to the government.	Final decision on the recommendations for appointments to HC is taken by a collegium of the CJI

Process of Judicial Appointments

The CJI and the judges of the Supreme Court are appointed by the President under Article 124 (2) of the Constitution. Currently, Judges are appointed by Memorandum of Procedure (MoP) which fixes the protocol under which the collegium system works.

- **CJI**
  - ✓ The senior-most judge of the Supreme Court is often appointed as the CJI.
  - ✓ Union Law Minister **seeks the recommendation of the outgoing CJI** on his successor.
  - ✓ Once the outgoing CJI has recommended a name, the Law Minister forwards the communication to the Prime Minister who then advises the President on the appointment of next CJI.
  - ✓ After the recommendation process, once a new CJI is designated, as per convention, the **Collegium headed by the outgoing CJI also freezes.**
  - ✓ In other words, no new recommendations for judicial appointments are made when the appointment process for the next Chief Justice of India is on.

- **SC Judge**
  - ✓ When a vacancy arises at the Supreme Court, the collegium recommends a candidate to the Union Law Minister.
  - ✓ The CJI also consults the senior most judges of the SC hailing from the high courts from which the recommended person belongs.
  - ✓ Opinions of each collegium member and other judges are consulted **in writing** and are attached in the recommended candidate's file being sent to the government.
  - ✓ If the CJI has consulted any **non-judges**, then a memorandum containing the substance of consultation should be made and attached to the file.
  - ✓ After receiving the Collegium recommendation, the Law Minister forwards it to the Prime Minister, who then advises the President on the matter of appointment.

ABOUT COLLEGIUM SYSTEM

- The collegium system is a way by which judges of the Supreme Court (SC) and High Courts (HC) are appointed and transferred.
- It is not mentioned in the Indian Constitution and no specific law has been promulgated by the Parliament related to the collegium system.
- It has **evolved** through three significant verdicts of Supreme Court known as the Judges Case.
- The composition of the collegium keeps changing, and its members serve until they retire.
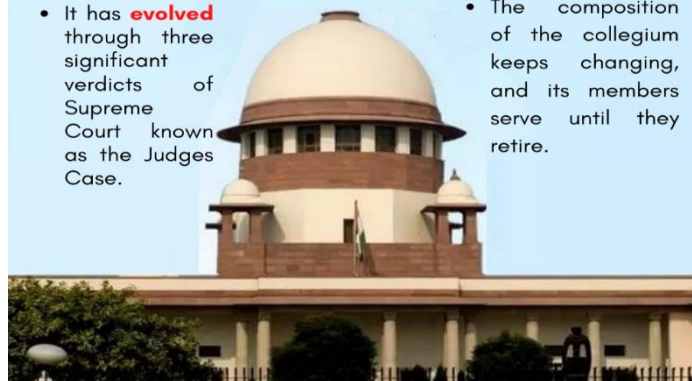
Role of the Government

- Government's role is limited to getting an inquiry conducted by the Intelligence Bureau (IB) if a _lawyer is to be elevated as a judge in a High Court or the Supreme Court_.

- The government can raise objections and seek clarifications regarding the choices of the collegium, but **if the collegium reiterates the same names, the government is bound to appoint them as judges**.

Evolution of the Collegium System

- **First Judges Case:**
  - ✓ In '**SP Gupta Vs Union of India', 1981**, it held that the term "**consultation**" used in Articles 124 and 217 did not mean "**concurrence**" and the decision of the President after consultation was not bound to be in concurrence with that of the recommending judges.
  - ✓ This case tilted the balance of power in appointments of judges of High Courts in **favour of the executive** and the situation prevailed for the next 12 years.
- **Second Judges Case**
  - ✓ In '**The Supreme Court Advocates-on-Record Association Vs Union of India', 1993**, a nine-judge Constitution Bench _overturned the decision_ taken in the 'SP Gupta' case and devised the 'Collegium System' consisting of the CJI and _two senior-most judges_ of SC for giving recommendations to the executive for the appointments and transfer of judges in the higher judiciary.
  - ✓ It ruled that the term "consultation" actually meant "concurrence".
- **Third Judges Case:**
  - ✓ Court gave primacy to the opinion of CJI in the matter of appointment of Judges.

RELATED CONSTITUTION PROVISIONS

Article 124(2):
- It is related to the appointment of Judges in the Supreme Court.
- It says that every Judge of the Supreme Court will be appointed by the President after consultation with the Judges of the Supreme Court and High Courts in the States as the President may deem necessary for the purpose.
- The term of office will be till the age of sixty-five years.
- It clarifies that in the case of appointment of a Judge other than the Chief Justice, the Chief Justice of India shall always be consulted.

Article 217:
- It is related to the appointment of Judges in the High Court.
- It says that every Judge of a High Court will be appointed by the President after consultation with the Chief Justice of India, the Governor of the State, and, in case of an appointment of a Judge other than the Chief Justice, the Chief Justice of the High Court will also be consulted.

- ✓ It held that the recommendation should be made by the CJI and **four senior-most judges** of the SC instead of two
- ✓ It also held that the SC judges who hailed from a High Court for which the proposed name has come for appointment should be consulted too.
- ✓ It was also held that the CJI will not send the recommendation to the government if even two judges gave an adverse opinion.

Criticism of the Collegium System

- **Non-Transparent System** as there is no official mechanism or secretariat involved for the appointments. There is no public knowledge of how and when the collegium meets, and how the decisions are taken.

- **No Place for an Outsider**: There is no seat in the collegium for any non-judge- neither from the executive nor the Bar or anywhere else i.e., here is no one to offer suggestions or raise questions or even to observe what is going on.

- **No Eligibility Criteria**: There are no prescribed norms regarding the eligibility criteria, or even the selection procedure for the appointments.

- **No Details:** There are no official minutes of collegium proceedings.

- **Red-Tapism**: No meetings held by the Collegium in the **last month of a Chief Justice's tenure** and slow pace of Judicial appointments results in red-tapism.

Extra Mile

5+1 Collegium

- Every Collegium must have a successor to the current CJI.

- But Justice Chandrachud's collegium would include Justices Sanjay K Kaul, S Abdul Nazir, KM Joseph and M R Shah and no successor to the CJI is a part of this collegium until the retirement of Justice M R Shah on May 15, 2023.

- This means that there won't be any judge to succeed the current CJI for a six-month plus period.

- So, to resolve this gap, the collegium headed by Justice Chandrachud that will begin on November 9, 2022 and go on till May 15, 2023, will have officially six members. As it would include Justice Sanjiv Khanna who would succeed Justice Chandrachud as the next CJI from Nov, 2024 as its sixth member. Therefore, the concept "5+1".

Recent Issue In SC Collegium

- An in-person meeting of the full collegium to finalise the appointment could not be convened on decided date because one of the four collegium members namely Justice D.Y. Chandrachud had engagements at the court.

- Chief Justice of India UU Lalit hence wrote letters to his four co-members (of the collegium) seeking their opinion in writing about the appointment of ten judges to the Supreme Court through circulation of letters.

- **Defying past norm:** The norm for the 25 years ever since the collegium was brought in was that **physical meetings** were held and that become customary law

- But when the current CJI sought an opinion by circulation, he acted differently from custom.

EDITOR'S CUT

COMPETITION COMMISSION OF INDIA

The CCI has **clubbed complaints** against Google by several news agencies like News Broadcasters & Digital Association (NBDA), Indian Newspaper Society (INS) and the Digital News Publishers Association (DNPA).

Key Points

- The NBDA filed a complaint against the tech giant Google under **Section 19(1)(a) of the Competition Act, 2002** before the CCI.

  - ✓ **Section 19(1)(a)** states that the Competition Commission may inquire into any alleged contravention of _anti-competitive agreements or abuse of dominant position_ either on its own motion or on receipt of any information.

- NBDA accused Google of:

  - ✓ Abusing its dominant position to dictate terms and conditions unilaterally favoring itself and resulting in inadequate and _unfair compensation for the content generated by the members._
  - ✓ _Free-riding on the news content_ submitted by its members in order to prioritize their web links in the Search Engine Result Page (SERP).
  - ✓ Exploiting its member's dependency on search engine for _referral traffic_ to build its services such as Google News, Google Discover and Google Accelerated Mobile Pages (AMP). For example, 'Snippets' in Google Search provide short headlines accumulated from a variety of news agencies/news organizations.
    - ○ AMP is a web component framework used to create user-first websites, stories, emails, and ads.

- **Composition:** It consists of a Chairperson and 6 Members appointed by the Central Government who shall be persons of ability, integrity, and:

  - ✓ Has been, or is qualified to be a judge of a High Court.
  - ✓ Has special knowledge of, and professional experience of not less than 15 years in international trade, economics, business, commerce, law, finance, accountancy, management, industry, public affairs, administration, or in any other matter which, in the opinion of the Central Government, may be useful to the Commission.

- Its **appellate authority is National Company Law Appellate Tribunal (NCLAT)** constituted under **section 410** of the Companies Act, 2013. Its functions are:

  - ✓ To hear and dispose-off appeals against any direction issued or decision made or order passed by the Commission.
  - ✓ To adjudicate on a **compensation claim** arising from Commission findings or Tribunal orders in an appeal against any findings of the Commission.

- It is a statutory body fully established in 2009 under the Competition Act, 2002.
  - ○ The Competition Act, 2002 **prohibits anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control and Mergers and acquisitions (M&A))** that cause or are likely to cause an appreciable adverse effect on competition within India.
  - ○ It **replaced the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act)** on the recommendations of the Raghavan Committee.

- CCI is a member of international organizations like **International Competition Network (ICN), BRICS Competition Authority** and **Organization for Economic Co-operation and Development (OECD).**

Challenges Faced

- Legal hurdles by companies in implementing the law.

- Emerging business models like digital economy and e-commerce.

- Cartelization threats. For example, the CCI recently closed an inquiry it initiated against global commodity traders due to lack of sufficient evidence to establish cartelization or action in concert by agro-companies in case of pulses cartel.

The Supreme Court recently dismissed a plea by Meta Platforms Inc, the parent company of social media platforms like Facebook and WhatsApp which challenged the probe ordered by the CCI into WhatsApp's updated privacy policy of 2021. The Court stated that CCI is an independent authority to consider any violation of the provisions of the Competition Act of 2002 and it cannot be dissuaded from its investigation.

Case Related To Android Mobile Device Ecosystem

- CCI) has imposed a penalty of Rs 1,337.76 crore on Google for abusing its dominant position in the Android mobile device ecosystem.

- CCI said that Google used its dominant position to make it mandatory that OEMs pre-install its entire **Google Mobile Suite** on their phones and place them prominently.

  ✓ The Mobile Suite includes Search, Chrome, YouTube, Google Play store, Maps, and Photos, among others.

- The CCI found that this mandate amounts to imposition of unfair conditions on the device manufacturers and thus was in contravention of the provisions of the Competition Act, 2002.

- It is also told to not restrict uninstalling of its pre-installed apps by the users.

- The Commission also said that Google will have to allow users to choose their default search engine during the initial device setup.

The Competition (Amendment) Bill, 2022

- Recently, the Competition (Amendment) Bill, 2022 was introduced in the Indian Parliament by the Ministry of Finance.

- The Bill seeks to amend the Competition Act, 2002, and to bring the Act in line with modern conditions, including the development of new digital technology**.**

- Later, the Bill was referred to the **Standing Committee on Finance** for further scrutiny.

The Key Amendment Includes

- **Expansion of scope of the combinations** to include transactions with a **value above Rs. 2000 crores.**

  ✓ Combinations imply mergers, acquisitions, or amalgamation of enterprises.

- **Reduction in the time period** for approval of combinations from 210 days to 150 days.

- **Modification in the definition of control** for the purpose of classification of combinations.

  ✓ The Act defines "control" as control over the affairs or management by one or more enterprises over another enterprise or group.

  ✓ The Bill **modifies the definition** of control as the ability to exercise material influence over the management, affairs or strategic commercial decisions.

- **Expansion of the scope of Anti-competitive agreements.**

  ✓ Under the Act, anti-competitive agreements include any agreement related to *production, supply, storage or control of goods/services*, which can cause an appreciable adverse effect on competition in India.

  ✓ The Bill adds that enterprises or persons **not engaged in identical or similar businesses** shall be presumed to be part of such agreements, if they actively participate in the furtherance of such

agreements.

- Provision with respect to **Settlement and Commitment** in anti-competitive proceedings.

  ✓ The Bill permits CCI to close inquiry proceedings if the enterprise offers - settlement (may involve payment), commitments (may be structural or behavioral in nature).

  ✓ The manner and implementation of settlement and commitment may be specified by CCI through regulations.

- **More scrutiny on Big Tech giants:**

  ✓ The Bill also seeks to introduce knowledge and experience in the field of technology as additional criteria for the members of the selection committee.

  ✓ This is a clear indication that the government is looking to add investigative strength and professional knowledge to the regulator's expanding monitoring of big tech companies.

EU's New Laws To Regulate Content Online

- The European Union (EU) has given final approval to online safety-focused legislation, known as the **Digital Services Act (DSA).**

- The law tightly regulates the way intermediaries, especially large platforms such as Google, Meta, Twitter, and YouTube, function in terms of **moderating user content.**

  ✓ Instead of letting platforms decide how to deal with abusive or illegal content, the DSA lays down *specific rules and obligations for these companies to follow.*

Key Features of Digital Services Act

1. **Faster Removals And Provisions To Challenge**

- Social media companies will have to *add new procedures* for faster removal of content deemed illegal or harmful.

- They will also have to explain to users how their content takedown policy works.

- The DSA also allows for users to **challenge** takedown decisions taken by platforms and seek out-of-court settlements.

2. **Bigger Platforms Have Greater Responsibility**

- Very Large Online Platforms and Very Large Online Search Engines, that is platforms, having more than 45 million users in the EU, will have more stringent requirements.

- Hence, the law avoids a one-size fits all approach and places increased accountability on the Big Tech companies.

3. **Direct Supervision by European Commission**

- These requirements and their enforcement will be centrally supervised by the European Commission itself.

- This is to ensure that companies do not sidestep the legislation at the member-state level.

4. **More Transparency On How Algorithms Work**

- Very Large Online Platforms and Very Large Online Search Engines will *face transparency measures and scrutiny of how their algorithms work.*

- They will be required to conduct systemic risk analysis to drive accountability about the society impacts of their products.

5. **Clearer Identifiers For Ads And Who's Paying For Them**

- Online platforms must ensure that users can easily identify advertisements and understand who presents or pays for the advertisement.

- They must not display personalised advertising directed towards minors or based on sensitive personal data.

6. **Safe Harbour to Intermediaries**

- The platforms and other intermediaries will **not be liable** for the unlawful behaviour of users. So, they still have 'safe harbour' in some sense.

- However, if the platforms are "aware of illegal acts and fail to remove them," they will be liable for this user behaviour.

How does the EU's DSA compare with India's online laws?

Information Technology Rules, 2021

- In February 2021, India had notified extensive changes to its social media regulations in the form of the *Information Technology Rules, 2021 (IT Rules)*.

- These rules placed significant due diligence requirements on large social media platforms such as Meta and Twitter.

- This included:
  1. Appointing key personnel to handle law enforcement requests and user grievances,
  2. Enabling identification of the first originator of the information on its platform under certain conditions,
  3. Deploying technology-based measures on a best-effort basis to identify certain types of content.

Amendments to the IT Rules

✓ In June 2022, with a view to make the Internet open, safe and trusted, and accountable, the IT Ministry proposed further amendments to the IT Rules.

✓ One of the most contentious proposals is the creation of government-backed grievance appellate committees which would have the authority to *review and revoke content moderation decisions taken by platforms.*

DIGITAL SERVICES ACT   HUMAN RIGHTS

Other laws
- India is also working on a complete overhaul of its technology policies and is expected to soon come out with a replacement of its IT Act, 2000.
- This law is expected to look at ensuring net neutrality and algorithmic accountability of social media platforms, among other things.

India-Russia Trade Soars To Record High

EDITOR'S CUT

According to the latest data available with the Department of Commerce, India's bilateral trade with Russia has soared to an **all-time high of $18,229.03 million** in just five months (April-August) of this financial year (2022-23). The total annual bilateral trade between the two countries stood at $13,124.68 million in 2021-22, and $8,141.26 million in 2020-21.

Key Highlights

- **Increase In Bilateral Trade**

  ✓ Of the total $18,229.03 million bilateral trade in April-August, India's imports from Russia accounted for $17,236.29 million.
  ✓ On the other hand, New Delhi's exports to Moscow were only worth $992.73 million, <u>leaving a negative trade balance</u>.

- **Russia Now Becomes India's Seventh Biggest Trading Partner**

  ✓ With the sharp spike in trade, Russia has now become India's **7 biggest trading** partner — up from its 25th position last year.
  ✓ The other the six countries include - US, China, UAE, Saudi Arabia, Iraq and Indonesia.

- **Reasons Behind This Record Level Of Bilateral Trade**

  ✓ It is mainly due to a sudden jump in imports from Moscow, which began to surge earlier this year.
  ✓ **Fertilisers and fuel** together account for over 91% of the total imports from Russia in April-August this year.
    o Petroleum oil and other fuel items accounted for 84% of India's total imports from Russia.
    o Fertilisers were second, with imports from Russia surging by 666.24% to $1,236.96 million.

- On the other hand, **pharmaceutical products** ($176.51 million) and **organic chemicals** ($117.29 million) were the two main items shipped to Moscow.
  - ✓ The decision to import from Russia is mainly driven by **India's own national interests** as the sanctions by the West have helped India get a better deal from Russian companies.
- **Trade Balance With Russia**
  - ✓ India had a positive trade balance with Russia from 1997-98 (the most recent year for which comparable data is available) to 2002-03.
  - ✓ But from 2003-04, New Delhi's trade balance with Moscow has remained negative.

India – Russia Bilateral Relation: In Brief

- Since the signing of "Declaration on the India-Russia Strategic Partnership" in October 2000 India-Russia ties have acquired a qualitatively new character.
- In 2010, the Strategic Partnership was elevated to the level of *Special and Privileged Strategic Partnership*.

Political Relation

- In 2019, Russia awarded PM Modi the **Order of St Andrew** the **Apostle**, the highest and the oldest Russian state decoration.
- The Annual Summit between the Prime Minister of India and the President of the Russian Federation is the highest institutionalized dialogue mechanism. The last Summit was held in December 2021 in New Delhi.

Multilateral Engagements

- Both the countries are active members of **SCO, BRICS, G-20** etc. India also participated in **Eastern Economic Forum** (EEF), hosted by Russia, on a regular basis.
- **India-Russia-Japan trilateral consultations**: The first ever trilateral consultations between India, Russia, and Japan at track II level on cooperation in the Russian Far East were held in January 2021.

Defence Cooperation

- India has longstanding and wide-ranging cooperation with Russia in the field of defence. This is evident from the joint manufacturing of **BrahMos missile**, production of **AK Rifles** in Amethi, **5th generation fighter jet programme** etc.
- Recently, India bought **S-400 Triumf missile defence system** from Russia.

Nuclear and Space Cooperation

- Russia is involved in the development of Kudankulam Nuclear Power Plant in India.
- India-Russia cooperation in the field of peaceful use of outer space dates back to about four decades.
- Currently, four Indian astronauts are being trained in Russia. These astronauts are part of India's Human Spaceflight Programme (HSP) – Gaganyaan Mission.

Factors Which Continue To Limit The Possibilities For The Bilateral Partnership

a) **Continuing Conflict Between The Kremlin And The West**

- New Delhi is more aligned towards USA, while Russia is inclined towards China.
- That the US and China are now at each other's throats makes the equation a lot more complicated for India and Russia.

b) **Ukraine Crisis**

- For India, the Ukraine crisis has introduced a new element of discomfort as it seeks to maintain its traditional relationship with Russia without spoiling its growing partnership with the US.

c) Absence of a Thriving Commercial Relationship

- Russia comprises <u>around 3.54% of India's total trade</u>, while India accounts for a <u>minuscule 1.2% of Russia's overall trade</u>.

- Intensifying the trade and economic relations has been identified as a priority area by both the sides as is clear by the revised targets of increasing bilateral investment to US $ 50 billion and bilateral trade to US $ 30 billion by 2025.

d) Russia's Rapprochement with Pakistan

- Russia's alignment with Pakistan has been a major cause of concern for India. Some of the important developments highlighting this trend are:
  - ✓ Russia is a member of **Trioka plus grouping** with **Pakistan.** It is actively deliberating on the current issue of Afghanistan. Other members include **USA and China**. In November 2021, 'Troika plus' group held conference on Afghanistan and India was not invited.
  - ✓ In April 2021, Russian Foreign Minister, for the first time ever, visited Pakistan after India, thereby signalling **hyphenation** to the bilateral relationship. Indian External Affairs Minister (EAM), in July 2021, visited Georgia. This was seen as a rare message to Russia given the hostile relation between Russia and Georgia.
  - ✓ In August 2018, Pakistan and Russia signed an agreement that allows for training of Pakistani troops at Russian military training institutes.
  - ✓ In 2016, Russia announced the first-ever mutual special drills in mountainous terrain with Pakistan. Russia-Pak Military Exercise "Friendship 2016" was also called "Druzhba.
  - ✓ In 2014 Russia removed its arms embargo against Islamabad and in 2015 it agreed to sell 4 Mi-35M helicopters to Pakistan.

e) Countering America's Adversaries through Sanction Act (CAATSA)

- In August 2017, CAATSA was signed into law by President Donald Trump which aims to counter the aggression by Iran, Russia and North Korea through punitive measures.

- Analysts feel that the CAATSA has the potential to affect the Indo-Russian military ties as India is a major importer of Russian arms and defence technologies

- Recently, US House of Representatives approved legislation recommending an India-specific waiver for CAATSA.

India-Russia relations today are very different precisely because we are very different countries today and the world is very different from the 1960-1990 phase of the India-Soviet strategic partnership. The cordiality and mutual trust of the past may be leveraged to fashion a new relationship but they cannot substitute for a lack of substantive drivers in the relationship.

'UN Peacekeepers Need 'Robust' Mandates

- UN Peacekeeping <u>fatalities due to malicious acts (not illness or accidents)</u> that were once on the decline, are rising — from 13 in 2020 to 25 in 2021 and this year as many as 26 till August.

- Against this backdrop, UN Peacekeeping chief **Jean-Pierre Lacroix** has said that Peacekeeping soldiers need more robust or proactive mandate, better equipment to be able to go after the armed groups'

- This is required to deal with deteriorating conditions in countries where UN Peacekeepers (often referred to as Blue Berets or Blue Helmets) are posted.

UN Peacekeeping

- The UN Charter gives the Security Council primary responsibility for the maintenance of international peace and security.
- In fulfilling this responsibility, the Council can establish a UN peace operation.

Peacekeeping Mandates

- UN peace operations are deployed on the basis of mandates from the **United Nations Security Council.**
- These mandates *differ from situation to situation, depending on the nature of the conflict and the specific challenges it presents.*
- Depending on their mandate, peace operations may be required to:

- Deploy to prevent the outbreak of conflict or the spill-over of conflict across borders
- Stabilize conflict situations after a ceasefire
- Assist in implementing comprehensive peace agreements
- Lead states or territories through a transition to stable government, based on democratic principles, good governance and economic development

Principles: There are three basic principles that continue to set UN peacekeeping operations apart as a tool for maintaining international peace and security. These are:

Consent of the parties	• In the absence of such consent, a peacekeeping operation **risks becoming a party to the conflict**; and being drawn towards enforcement action.
Impartiality	• Peacekeepers should be impartial in their dealings with the parties to the conflict, but *not neutral* in the execution of their mandate
Non-use of force	• **except in self-defence and defence of the mandate**

Successes

- Since 1948, the UN has helped end conflicts and foster reconciliation by conducting successful peacekeeping operations in dozens of countries, including Cambodia, El Salvador, Guatemala, Mozambique, Namibia and Tajikistan.
- UN peacekeeping has also made a real difference in other places with recently completed or on-going operations such as Sierra Leone, Burundi, Côte d'Ivoire, Timor-Leste, Liberia, Haiti and Kosovo.
- In other instances, however, UN peacekeeping has been challenged and found wanting (lacking), for instance in Somalia, Rwanda and the former Yugoslavia in the early 1990s.
- Overall, UN Peacekeeping Forces have an impressive record of peacekeeping achievements, including winning the Nobel Peace Prize (1988).

UN Peacekeeping Operations & India

Contribution with troops

- India has been a pioneer in UN Peacekeeping, deploying *more than a quarter of a million troops* over the years in as many as **49 of 71 UN Peacekeeping Missions**.

- ✓ Currently, India is Fifth largest troop contributor with around 5,500 personnel across 9 missions. India's contribution to the peacekeeping budget stands at 0.16%.
  - ✓ India has a long tradition of sending women on UN peacekeeping missions. In 2007, India became the first country to deploy an all-women contingent to a UN peacekeeping mission.
- It has been actively participating in peacekeeping right from 1950 when it supplied medical personnel and troops to the **UN Repatriation Commission in Korea.** It has troop deployment in Lebanon, Golan Heights, Congo and South Sudan in addition to staff officers in other missions.
- Nearly 80% of the Indian peacekeepers are deployed in hostile regions such as **Central African Republic and South Sudan in various sections**.
- So far, **174 gallant Indian soldiers have made the supreme sacrifice** over the years, the largest number among troop contributing countries.
- In April 2019, 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.

Raising the issue of safety & security of peacekeepers at multilateral institutions

- In August 2021, the United Nations Security Council (UNSC) organised a high-level open debate (**theme** - "*Protecting the protectors*") on United Nations Peacekeeping Operations under the Indian Presidency.
  - ✓ During this, India, in collaboration with the UN launched **UNITE AWARE platform**.
  - ✓ It is a technology platform to ensure the safety and security of peacekeepers.
- India has also proposed a 10-point plan, including making those targeting UN peacekeepers more accountable.
- India has also suggested building a memorial wall to honour peacekeepers.

Training and Capacity Development

- **Centre for United Nations Peacekeeping (CUNPK)** was set up in September 2000 in New Delhi, to oversee the training of contingents earmarked for peacekeeping operations.
- These courses have now been formally **endorsed by the Department of Peacekeeping Operations at UN HQ**.
- In 2016, **India and the USA** began a joint annual initiative "**UN Peacekeeping Course for African Partners**".
- In August 2021, an MOU was signed between CUNPK (India) and C4ISR Academy for Peace Operations (UN) for new training modules for UN peacekeepers.
  - ✓ C4ISR: Command, Control, Communications, Computers (C4) Intelligence, Surveillance and Reconnaissance (ISR).

Other Contributions

- India provided **2,00,000 doses of COVID-19 vaccines** for UN Peacekeeping personnel worldwide in March 2021.
- During the pandemic, **India upgraded its hospitals** in United Nations Mission in South Sudan (**UNMISS**) and United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (**MONUSCO**).

India's Grievances with UN Peacekeeping Operations

- One of the criticisms in New Delhi is that they do not get enough of a say in the kind of missions that the UN Peacekeepers take part in.
- India has complained that the *mandate is for UN peacekeeping*, but when soldiers actually go to the ground, it quickly becomes a mandate for peace enforcing, something they are not actually prepared for.
  - Hence, India wants the UNSC to address these issues rather than burden peacekeeping missions beyond their mandate.
- India believes that the peacekeeping missions cannot be a long-term response to what are fundamentally political problems.

Conclusion

- Acknowledging India's contribution, UN secretary general Antonio Guterres had said that it would be **an understatement** to say that India's contribution to global peace has been remarkable.

- India's spontaneous and unreserved participation in UN peacekeeping operations is a clear demonstration of the country's commitment to the objectives set out in the UN Charter.

EDITOR'S CUT — Nuclear-powered INS Arihant Carries Out Successful Launch Of SLBM

India's Strategic Strike Nuclear Submarine INS Arihant carried out a successful launch of a **Submarine Launched Ballistic Missile (SLBM).** This trial was significant to prove crew competency and validate the **SSBN (Ship Submersible Ballistic Nuclear Submarine) program.**

INS Arihant

- INS Arihant, a 6,000-tonne submarine is the lead ship of India's Arihant class of nuclear-powered ballistic missile submarines built under the Advanced Technology Vessel (ATV) project.
  - ✓ Under the Rs 90,000 crore top secret ATV project, India is currently building *three more SSBNs to follow INS Arihant*.
  - ✓ The second such submarine, **INS Arighat**, is slated to become fully operational next year.
  - ✓ The vessel will be followed by **two** 7,000-tonne SSBNs under the ATV project.
  - ✓ There is also plan to build 13,500-tonne SSBNs with more powerful 190MW reactors.
- It is India's first indigenous nuclear submarine that has been inducted in the Indian Navy. Launched in 2009, INS Arihant was commissioned in 2016.

Features

- **Power source:** It is propelled by an 83 MW **pressurised light-water reactor** at its core with enriched uranium fuel.

- **Builder**
  - ✓ Shipbuilding Centre (SBC), Visakhapatnam. It's India's first indigenously built nuclear submarine.
  - ✓ Its design is based on the Russian *Akula-1 class submarines* and its 83mw pressurised water reactor has been built with significant Russian assistance.
- **SSBN (Ship Submersible Ballistic Nuclear Submarine)**: SSBN's are that class of submarines which can go deep beneath the ocean making them virtually undetectable for months.

- **Armament**
  - ✓ It is capable of carrying ballistic missiles with nuclear warheads.
  - ✓ It is armed with the K-15 Sagarika missiles with a range of 750 km.
  - ✓ Later, it will also be armed with **K-4 missiles,** being developed by the DRDO, which are capable of striking targets at a distance of up to 3,500 km.
    - o These 'K' series of missiles are named after former President APJ Abdul Kalam.

Significance

- **Nuclear Triad:** With INS Arihant, India completed its 'nuclear triad'.
  - ✓ I.e., India can launch nuclear missile from all three key defence bastions — land, air and sea.
  - ✓ Triad is important because in an enemy strike, even if the other wings are destroyed, the third can launch a retaliatory strike thus providing a guaranteed 'second strike' capability to the country.

- **Stealth Capability**
  - ✓ Due to satellites, other legs of our nuclear triad (missile sites and air-bases) remain exposed to enemy attack.
  - ✓ However, being a SSBN, it can stay deep inside the ocean making them virtually undetectable for months.
- **Part of Elite Club:** INS Arihant places India in the league of select group of five Countries — US, Russia, France, UK and China — which can design, construct and operate <u>Strategic Strike Nuclear Submarines.</u>
- **Credible Minimum Deterrence**: While India remains committed to the doctrine of <u>Credible Minimum Deterrence and No First Use</u>," the success of INS Arihant gives a fitting response to those who indulge in Nuclear Blackmail.

INDIA'S N-TRIAD	Nuclear Command Authority set up in 2003. Its Political Council, chaired by PM, is the sole body that can authorise use of nuclear weapons	Strategic Forces Command (SFC) to handle nuclear arsenal set up in 2003

LAND VECTOR
Prithvi-II (350km), Agni-I (700km), Agni-II (2,000km) & Agni-III (3,000km) missiles inducted
Agni-V (over 5,000km) in process of induction

AIR VECTOR
Sukhoi-30MKI, Mirage-2000, Jaguar fighters & Rafales can deliver nuclear gravity bombs

SEA VECTOR
➤ Only 1 nuclear-powered ballistic missile submarine (SSBN), the 6,000-tonne INS Arihant. Became fully operational in Nov 2018. Armed with 750-km range K-15 nuclear missiles

6,000-TONNE INS Arighat to be commissioned soon. Will be followed by two 7,000-tonne SSBNs (called S-4 & S-4*) being built at Vizag. Over 13,000-tonne S-5 class SSBNs to be built later

➤ Induction of K-4 SLBMs (3,500km range) underway after completion of developmental trials
➤ Development of K-5 (5,000km) and K-6 (6,000km) SLBMs in progress

- **Maritime Security:** INS Arihant will strengthen India's position in the Indian Ocean region where it has to face challenges from Chinese submarines.
- **Boost of defence manufacturing:** The Arihant is a live manifestation of Government's Make in India vision as it is India's first indigenously built nuclear submarine.

E-waste

International e-Waste Day is held on October 14 every year as an opportunity to reflect on the impacts of e-waste.

E-Waste and India

- India is the 5th largest E-waste producing country in the world.
- There are 10 States that contribute to 70% of the total e-waste generated in the country.
  - ✓ Among the e-waste generating States, *Maharashtra ranks first followed by Tamil Nadu, Andhra Pradesh.*

E WASTE
- It consists of all waste from electrical appliances which no longer are fit for their original intended use and are destined for recovery, recycling or disposal.
  - It is divided into 21 types under 2 broad categories:
    ○ Information technology and communication equipment: Like - cell phones, desktop computers, laptops, circuit boards etc.
    ○ Consumer electrical and electronics: Like - microwaves, heaters, electrical cords, lamps, smartwatches etc.

- According to a 2020 report by the Central Pollution Control Board, India generated 10,14,961 tonnes of e-waste in FY 2019-2020 – up 32% from FY 2018-2019.
- Of this, <u>only 3.6% and 10% were actually collected in the country in 2018 and 2019, respectively</u>.
- The **informal sector controls more than 90% of e-waste collection** and handling processes
- The main sources of e-waste are the government, public and private (industrial) sectors, which account for almost **70% of total waste generation.**

- The contribution of individual households is relatively small at about 15%, the rest being contributed by manufacturers.

Step Taken to Tackle e-waste

- India's **1st e-waste clinic** for segregating, processing and disposal of waste from household and commercial units has been set-up in **Bhopal, Madhya Pradesh.**

Concerns Related to e-waste

- The presence of elements like lead, mercury, arsenic, cadmium, selenium, hexavalent chromium, and flame retardants beyond threshold quantities make it hazardous in nature.
- It contains over 1,000 toxic materials, which contaminate soil and groundwater.
- Some of the major health effects such as lung cancer, respiratory problems, brain damage, etc are due to inhalation of toxic fumes, exposure to heavy metals.

- In **2016, the E-waste (Management) Rules**, was enacted which replaced the e-waste (Management and Handling) Rules, 2011 and was eventually amended in 2018.

- Ministry of Electronics and Information Technology, MeitY, has initiated an E-waste Awareness programme under Digital India initiatives, along with industry associations from 2015.

- Recently Union environment ministry unveiled the **draft of the Electronic Waste Management Rules.**

E-waste Management Rules, 2016

- The Central Government, in the exercise of the powers provided under the **Environment (Protection) Act, 1986,** had notified e-waste management rules in 2016.

- These rules supersede the E-waste (Management and Handling) Rules, 2011. However, 2011 rules did not set collection targets.

- For the first time, the 2016 rules brought the producers under **Extended Producer Responsibility** (EPR), along **with targets.**

- Producers have been made responsible for the collection of E-waste and for its exchange.

- Manufacturers, dealers, e-retailers, and refurbishers have been brought under the ambit of these rules

- The urban local bodies have been assigned the responsibility of collecting back the e-waste arising from the orphan products and channelizing it to authorized dismantler or recycler.

- The EWM Rules 2016, have prescribed strict criteria for achieving effective collection, transportation, storage, channelization, and disposal of the e-waste in an environmentally sound manner.

Amendment To EWM Rules, 2016

- The new E-Waste (Management) Amendment Rules, **2018** has the provision of introduction of **Producer Responsibility Organisation** (PRO) registration.

- PRO is defined as a professional organization which can take the responsibility for collection, dismantling, recycling and channelization of e-waste to ensure environmentally sound management of such e-waste.

- PROs are now required to register with CPCB (Central Pollution Control Board) under the new Rules.

- PROs will also have to prove that all collection is legitimate and share proofs for such collection.

- Earlier, PROs were **not able** to procure waste from private and government institutions.

- The Rules address this lack of acknowledgement of legitimate PROs by asking them to register with CPCB.

Draft Rules To Replace EWM Rules, 2016: Proposed Changes include –

- **Addition of new items**: The scope of the e-waste management rules be expanded to include more electronic products, from 21 covered in the current framework to 95 in total.

- **Doing Away With PROs**:
  - ✓ Under the current framework, brands must take back a fraction of their products at the end-of-life stage and send it to **authorised dismantlers and recyclers**.
  - ✓ The new draft rules propose doing away with PROs, dismantlers, and collection centres and vests all responsibility of recycling with **authorised recyclers**.
  - ✓ It also proposed to revise the definition of EPR to shift the burden away from brands.
  - ✓ Draft rules aim to incentivise registered electronic waste recyclers by introducing **EPR certificates** (which was not part of 2016 Rules).
  - ✓ Recyclers on processing a certain quantity of waste would be given a certificate verifying this number by the **CPCB.**
  - ✓ Electronics goods companies can buy these certificates **online from CPCB** to meet their annual targets.
  - ✓ An organisation may sell surplus quantities to another company to help it meet its obligations.
- **Imposition of Fine**:
  - ✓ Among the changes listed in the draft proposal is the introduction of fines that violators, from brands to recyclers, will have to pay if they fail to comply.
  - ✓ It also suggests that recyclers and brands be asked to upload information on how much e-waste they have managed to recycle on an online portal.
- **Recycling Target**: The recycling target has been set at 80% for FY2024 onward.

Criticism

- Under the proposed definition of EPR, brands would no longer be responsible for the collection of e-waste, and can **purchase certificates** from recyclers to show they have met their targets under the rules.

- With brands no longer responsible for a take-back system, collection will become the responsibility of recyclers, and that the concept of EPR will be reduced to just purchasing certificates from recyclers.

- There are also worries that the rules will enable recyclers to engage further with the informal sector when it comes to collection and dismantling.

- The increase in product types that will have to be recycled could also pose a problem for the ecosystem's capacity to process e-waste.

- This massive jump in product types and categories (from 21 to 95) will only make recycling that much harder.

Challenges Associated with E-waste Management in India

- **Involvement of child labour:** In India, about 4.5 lakh child laborers in the age group of 10-14 are observed to be engaged in various E-waste related activities.

- **Ineffective legislation**: There is absence of any public information on most SPCBs (State Pollution Control Boards) /PCC (Pollution Control Committees) websites.
  - ✓ 15 of the 35 PCBs/PCC do not have any information related to E-waste on their websites, their key public interface point.
  - ✓ Even the basic E-waste Rules and guidelines have not been uploaded.

- **Lack of awareness & sensitization**: Only 2% of individuals think of the impact on environment while disposing off their old electrical and electronic equipment.

International Places In News

01	Galapagos Islands	According to a recent study, cold ocean currents have sheltered the Galapagos Islands from global warming. These are an archipelago of volcanic islands. They are distributed on <u>each side of the equator in the Pacific Ocean,</u> surrounding the centre of the Western Hemisphere. These are part of the **Republic of Ecuador.** 97% of the total emerged surface (7,665,100 ha) was declared National Park in 1959. These islands and the surrounding marine reserve have been called a unique 'living museum and showcase of evolution'.
02	Tunisia	Political protests have erupted in Tunisia's capital against the President. It is the northernmost country in Africa. It is bordered by <u>Algeria, Libya, and the Mediterranean Sea</u>. It is Known for its ancient architecture, souks and blue coasts. It contains the eastern end of the Atlas Mountains and the northern reaches of the Sahara desert; much of its remaining territory is arable land. Its capital and largest city is Tunis.
03	Moldova	Moldova said that Russian cruise missiles targeting Ukraine had crossed its airspace. Moldova is a landlocked country lying in the north eastern corner of the Balkan region of Europe. It is bordered by Romania and Ukraine. It's capital and largest city is Chisinau. This region was an integral part of the Romanian principality of Moldavia until 1812, when it was ceded to Russia by its suzerain, the sultan of the Ottoman Empire. Upon the collapse of the Soviet Union in August 1991, this republic declared its independence and took the name Moldova. It became a member of the United Nations in 1992.
04	Kerch Bridge	It caught fire due to an explosion sparked by a truck bomb. It is also known as the Crimean Bridge. It is a pair of parallel bridges, spanning the Kerch Strait between the Taman Peninsula of Krasnodar Krai in Russia and the Kerch Peninsula of Crimea.
05	Sapta Kosi high	India and Nepal have agreed to take forward the Sapta Kosi high dam

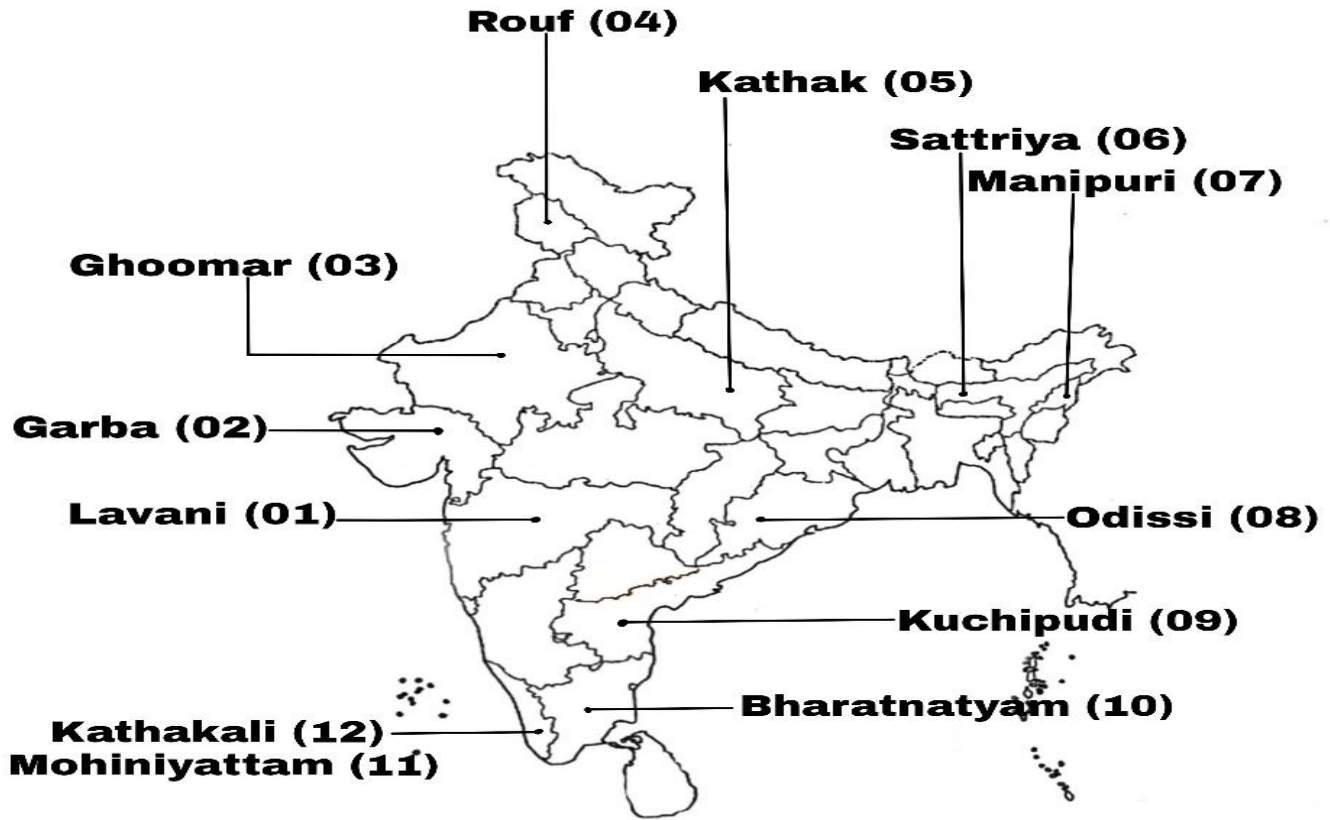|	dam	project through further studies. It is a multipurpose project proposed to be constructed on the Saptakoshi River of Nepal (Known as Kosi River in India). The project is primarily aimed to control floods in south-east Nepal and northern Bihar and to generate hydropower. The project will provide irrigation, control floods and generate 3,000 MW of electricity.
06	Pitt Island	Over 400 whales have died after being stranded on Pitt Island. It is the 2nd largest island in the Chatham Archipelago, New Zealand. The island is hilly. The Island was originally inhabited by the Moriori, the indigenous peoples of the Chatham Islands, who called it Rangiaotea or Rangihaute
07	Lebanon	Israel and Lebanon have signed a maritime agreement to resolve a long-running maritime border dispute over Mediterranean waters. Lebanon is a country in Western Asia. It is located between Syria and Israel, while Cyprus lies to its west across the Mediterranean Sea. Its location at the crossroads of the Mediterranean Basin and the Arabian hinterland has contributed to its rich history and shaped a cultural identity of religious diversity.
08	Algeria	India is in talks with Angola and Algeria to procure **liquefied natural gas (LNG)** on long-term contracts. Algeria is a country in North Africa. It is bordered by Tunisia, Libya, Niger, Mali, Mauritania, and Western Sahara, Morocco and the Mediterranean Sea. It has a semi-arid geography, with most of the population living in the fertile north and the Sahara dominating the geography of the south. The capital and largest city is Algiers, located in the far north on the Mediterranean coast.
09	Burkina Faso	It witnesses the 2nd coup of the year. It was formerly known as the Republic of Upper Volta, but was renamed "Burkina Faso" in August 1984. It is a landlocked country in West Africa, bordered by Mali, Niger, Benin, Togo, Ghana and Ivory Coast. The largest ethnic group in Burkina Faso is the Mossi people, who settled the area in the 11th and 13th centuries.
10	Atacama Trench	Scientists have recently discovered a new species of Paraliparis selti or Blue Atacama snailfish in the Atacama Trench. It is also known as the Peru–Chile Trench. It is an oceanic trench in the eastern Pacific Ocean, about 160 kilometres off the coast of Peru and Chile. The trench delineates the boundary between the subducting Nazca Plate and the overriding South American Plate.

National Places In News

Mana Pass (05)
Turtuk (04)
Shivalik Elephant Reserve (06)
Sariska Tiger Reserve (03)
Deesa (02)
Bhavnagar (01)
Hyderabad (10)
Vijayawada (07)
Kolar Fields (09)
Karaikal Port (08)

01	Bhavnagar	The Prime Minister of India laid the foundation stone for the "world's 1st CNG (Compressed Natural Gas) terminal" at Bhavnagar, Gujarat. It was a princely state before it was merged into the Indian Union in 1948. During pre-independence era, it was the main and the largest state in the region erstwhile known as Gohilwad. **Alang Ship Breaking Yard,** world's largest ship breaking yard responsible for dismantling approximately half of all ships salvaged around the world, is located on the Gulf of Khambhat in Alang, Bhavnagar.
02	Deesa	The Prime Minister of India laid the foundation stone for Indian Air Force (IAF)'s new airbase at Deesa, Gujarat. It is situated on the east bank of the river Banas. It expanded significantly in recent times due to growth in the agricultural produce business of potatoes and other commodities. Many Rajput clans like Gohil, Rathod, Raja, Galsar etc. reside here after migration from Rajasthan.
03	Sariska Tiger Reserve	With the aim of increasing the tiger population in Sariska, tigers are relocated from the Ranthambore Tiger Reserve (RTR) to the Sariska Tiger Reserve (STR). STR is located in Alwar, Rajasthan. It comprises scrub-thorn arid forests, dry deciduous forests, grasslands, and rocky hills. This area was declared a wildlife sanctuary in 1958. It was given the status of a tiger reserve in 1978.
04	Turtuk	The Prime Minister of India salutes the people of Turtuk for their passion and vision towards Swachh India. It is a village in Ladakh. It is sandwiched between Karakoram Range and Himalayas Mountains. It is one of the northernmost villages of India, close to the Line of Control between India and Pakistan.
05	Mana Pass	The Prime Minister of India laid the foundation of a connectivity project from Mana Village to Mana Pass. It is located within the Nanda Devi Biosphere Reserve, Uttarakhand. It is one of the highest vehicle-accessible passes in the world. It is the source of the Saraswati River, the longest stem of the Alaknanda River.
06	Shivalik Elephant Reserve	Uttarakhand government announce repeal of the decision to denotify the Shivalik Elephant Reserve to expand the airport in Dehradun. It was notified in 2002 under the 'Project Elephant'. The Kansora-Barkot Elephant Corridor is located near it. It encompasses the forest divisions of Dehradun, Haridwar, Lansdowne, Haldwani, Tanakpur, and Ramnagar, plus part of the Corbett Tiger Reserve and Rajaji National Park.
07	Vijayawada	Kuchipudi dance festival was organised in Vijayawada, Andhra Pradesh. It lies on the banks of Krishna River surrounded by the hills of Eastern Ghats, known as Indrakeeladri Hills. It has been described as the commercial, political, cultural and educational capital of Andhra Pradesh. It is considered to be a sacred place, due to Kanaka Durga Temple.
08	Karaikal Port	It defaulted on loans and was taken up for insolvency proceedings. It is located near the town of Karaikal in Union Territory of Pondicherry. It is an all-weather deep-water port developed in a build, operate and transfer format and was commissioned in 2009.
09	Kolar fields	Centre has decided to revive gold mining at the Kolar fields in Karnataka. It was nationalized in 1956, and provided a total of over 900 tonnes of gold. It was closed by the Indian government in February 2001 for environmental and economic reasons; food, water and shelter were scarce, and production did not justify the investment.
10	Hyderabad	Hyderabad city won the overall 'World Green City Award 2022' and 'Living Green for Economic Recovery and Inclusive Growth' award. It is the capital and largest city of Telangana, along the banks of the Musi River. Muhammad Quli Qutb Shah established Hyderabad in 1591 to extend the capital beyond the fortified Golconda. In 1687, the city was annexed by the Mughals. Hyderabad served as the imperial capital of the Asaf Jahi

		from 1769 to 1948. As capital of the princely state of Hyderabad, the city housed the British Residency and cantonment until Indian independence in 1947. Hyderabad was merged in India in 1948.

Classical Indian Dance Forms and Their States of Origin

S. No.	Dance Form	State	Details
01	**Lavani**	**Maharashtra**	It is originated from the state of the Maratha empire. It is a **female-oriented** dance, which is a blend of traditional music and tales of deities. It has two forms; One that's _philosophical - Nirguni Lavani_ and the other that's _sensual- Shringar Lavani_. The stories or subjects this dance is based on revolves around topics of religion, politics, society and mostly romance.
02	**Garba**	**Gujrat**	It is a traditional dance form dedicated to Goddess Durga. It is performed by a duet on Gujarati music. It is performed around a lantern, a vessel which represents the human body carrying the soul within. As dancers revolve around it in concentric circles, just how Hinduism depicts that time is a cycle, Garba showcases the infinite nature of birth, death and reincarnation.
03	**Ghoomar**	**Rajasthan**	It was the **Bhil tribe** who performed it to worship Goddess Sarasvati which was later embraced by other Rajasthani communities. The dance is chiefly performed by veiled women

			who wear flowing dresses called ghaghara. It includes the intriguing circular movements complemented by the hand gestures.
04	**Rouf**	**Kashmir**	It is a soothing dance form generally performed by the female dancers on the traditional Kashmiri music. <u>Kashmiri Women line up in two rows facing each other & perform this beautiful dance with simple footwork, called 'Chakri'.</u> It is celebrated for the good weather of the spring season & also for merriment in the various festivals.
05	**Kathak**	**Uttar Pradesh**	Kathak comes from the word 'Katha' which means story. It is often referred to as the dance of love, and it can be performed both by the male and female dancers together. Under the patronage of Wajid Ali Shah, the last Nawab of Awadh, it grew into a major art form. The focus is more on footwork; the movements are skillfully controlled and performed straight legged by dancers wearing ankle-bells (ghunghroo). Some prominent dancers include Birju Maharaj, Sitara Devi.
06	**Sattriya**	**Assam**	Mahapurusha Sankaradeva, a Vaishnava saint and reformer of Assam, introduced Sattriya dance in the 15th century AD. This dance form was preserved in the Sattras or the Vaishnava Maths; therefore, it remained a living tradition. This dance was an artistic way of presenting mythological teachings. The Sattriya dance form can be placed under 2 categories; Paurashik Bhangi, which is the masculine style and 'Stri Bhangi', which is the feminine style. Traditionally, it is performed only by **bhokots** (male monks) in monasteries. Today, it is also performed on stage by men and women.
07	**Manipuri**	**Manipur**	This dance form is performed to narrate the romantic relationship between the Hindu gods Radha and Krishna. It is performed in a team with the traditional Manipuri costumes and makeup to narrate the tale of the two gods. The dance is performed on the narrative chanting and the music created by the Indian classical instruments. The dancers *do not wear ankle bells to stamp out the rhythms in a theatrical display*, as this interferes with the delicate body movements.
08	**Odissi**	**Odisha**	This traditional dance has been derived from the Hindu temples in Odisha. The major subjects of performance are lores of incarnations of Lord Vishnu and verses of **Jayadeva's Gita Govinda**. Odissi dance form can be broken down to the movement of <u>the head, bust and torso</u> and the accompanying gestures and expressions.
			The techniques of movement are built around the two basic postures of the Chowk and the Tribhanga. The chowk is a position imitating a square - a very masculine stance with the weight of the body equally balanced. The tribhanga is a very feminine stance where the body is deflected at the neck, torso and the knees. Sonal Mansingh and Kelucharan Mohapatra are the eminent performers.

09	Kuchipudi	Andhra Pradesh	It is probably the toughest form of classical dance in India. It includes both singing and dancing by the performer. This dance is a combination of **Tandava** (the majestic, masculine) and and **Lasya** (lyrical graceful and feminine energy). A distinctive feature of this dance is the <u>execution on a brass plate</u> and moving the plate to the accompaniment of Carnatic music. In the earlier period, it was only performed by the male dancers in the temples, specifically the Brahmins but with the passage of time, it became famous amongst the women. Yamini Krishnamurthy and Raja Reddy are prominent dancers.
10	Bharatnatyam	Tamil Nadu	It is performed on the celestial tunes of Carnatic music. The origins can be traced back to 1000 BC, and it is performed by the women of the classical period. This dance is known to be **ekaharya**, where one dancer takes on many roles in a single performance. The dance involves transitional movements of the leg, hip and arm. Expressive eye movements and hand gestures are used to convey emotions. It encompasses Bhav, Rag, Ras and Taal.
11	Mohiniyattam	Kerala	This classical solo dance form roots from the age-old Sanskrit text - **Natya Shastra**. It is traditionally performed by women following a repertoire of Carnatic music, singing and acting. At times, the song, a typical hybrid of <u>Malayalam and Sanskrit</u> also called **Manipravalam**, is sung by the performer herself. Sunanda Nair and Pallavi Krishnan are the notable artists.
12	Kathakali	Kerala	It originates from the tales of Ramayana and Shiva stories. It is a blend of dance, music and acting and dramatizes stories, which are mostly adapted from the Indian epics. Different facial colours indicate different characters, like green – nobility, black – wicked, red patches – combining royalty & evil, broadly divided into satvika, rajasika and tamasika. The main feature of the dance form, that it combines four aspects of abhinaya – Angika, Aharya,Vachika, Satvika. The Nritta, Nritya and Natya are combined perfectly. Hand gestures, facial expressions and eye movements are important. The music which includes only the vocals is called **Soppanam**. Ramankutty Nair and Kalamandalam Gopi were the prominent artists.

School Students To Be Part Of Unified Credit System

- Union Ministry of Education (MoE) unveiled the draft **National Credit Framework**.

- Students will soon be able to earn credits for both classroom learning and extracurricular activities through a unified credit system, which will be deposited in a credit bank - a system that is already in place at the higher academic level.

National Credit Framework (NCrF)

- Based on the **inter-ministerial committee** (led by Nirmaljeet Singh Kalsi, chairperson of National Council for Vocational Education and Training) report, the MoE recently unveiled the draft NCrF and started a national level public consultation on it.

- NCrF aims to bring **all school students** under **a unified credit system.**
  - ✓ Aside from class tests, activities such as festival celebrations and school cleaning will earn credits that will be stored in the **Academic Bank of Credit** (ABC), just like in higher education.
  - ✓ There will be no hard and fast distinction between curricular and extracurricular or co-curricular activities, or between vocational and academic tracks.
  - ✓ The framework's goal is to develop a unified credit *accumulation and transfer* system for general and vocational education from school to higher education.

- Aadhaar will be used for student registration, and **each candidate will be assigned an academic bank account number**, where degrees and credits will be accumulated.

- At the school level, the draft National Credit Framework proposes that the credit regime be divided into **five levels -**

Pre-school to class II	Classes III to V	Classes VI to VIII	Classes IX to X	Classes XI and XII

  - ✓ It proposes credit levels from class 5 onward itself - which will be credit level 1, going up to credit level 7 and 8 with post-graduation and a doctorate, respectively.
  - ✓ Credit levels will increase by 0.5 for every year of learning.
  - ✓ A student who clears class XII will be at credit level 4

- Under the draft framework, the credit points will be carried over to the graduation level, and further.

- A student will have to earn **at least 40 credits** (annual "notional learning" duration to earn at least 40 credits has been fixed at 1,200 hours - time spent in classrooms + a range of extracurricular activities and sports) for completing each year of school, besides clearing the exams.

Proposed Benefits of NCrF for Various Stakeholders

Students	• Establishing multidisciplinary and holistic education with **flexible curricula.**
	• Removing the distinction between arts, science, social sciences, commerce, etc.
	• Giving student credits for every academic/skill/experience.
	• Enhancing the scope of core learning to include foundational and cognitive both.
Institutions	• Promoting stronger collaboration between institutions.
	• Making credit mechanisms simpler and uniform.
	• Increasing focus on research and innovation.
	• Leveraging the institutional infrastructure.
Government	• NCrF is expected to assist the government to **increase the enrolment of students.**

| Industry | • NCrF will allow students to attain **National Skills Qualification Framework** (NSQF)-approved foundational skills developed by industry and be **more employable.** |
| | • The provision of micro-credentials will allow integration of quick educational upgradation/up-skilling. |

Significance: So far, the credit system has been out of reach for the general public.

- Now, someone who works in the farms and has studied up to class VI will now be credited for his/her experience.

- S/he will be able to take Class X through **National Institute of Open Schooling** (NIOS) after earning credits for four years.

- Taking the vision of the new National Education Policy (NEP) 2020, NCrF **will enable the integration of academic and vocational domains** to ensure flexibility and mobility between the two. Thus, mainstreaming skilling and vocational education.

- NCrF will also enable students who have dropped out of mainstream education **to re-enter the education ecosystem.**

- It will also promote **Recognition of Prior Learning** for workers who have acquired knowledge and skills informally through traditional family inheritance, work experience, or other means.

National Curriculum Framework (NCF)

- The National Curriculum Framework for foundational stage (NCF-FS) (children aged 3 to 8 years) education was recently released by the Union Ministry of Education.

  ✓ With the government unveiling the first NCF for the foundational stage, pre-primary school children have entered the formal schooling system in India for the first time.

- Dedicating the NCF for **early childhood care and education** (**ECCE**), the Minister also launched **'Balvatika'** at Kendriya Vidyalayas.

Background

- Early childhood lays the groundwork for life-long learning and development, as experts have proved that 85% of the brain development happens by the age of 7 or 8.

- As a result, the new 5+3+3+4 curricular structure, which integrates ECCE for all children aged 3 to 8, was included in the National Education Policy (NEP) 2020.

  ✓ ECCE under the Anganwadi system primarily focused on nutrition of a child, while in the private sphere - the playschool system has

Types of National Curriculum Framework

National Curriculum Framework for School Education → National Curriculum Framework for Early Childhood Care and Education → National Curriculum Framework for Teacher Education → National Curriculum Framework for Adult Education

4 Stages: NEP has created a 4-stage '5+3+3+4 curricular and pedagogical structure'.

01 Foundational Stage — First five years of education from ages 3 to 8

02 Preparatory Stage — Then ages 8-11

03 Middle Stage — Age 11-14

04 Secondary Stage — Age 14-18

been unregulated.

- Against this backdrop, the Ministry of Education had constituted the **National Steering Committee** (chaired by **K Kasturirangan**) in 2021, for the development of NCF.
  - ✓ The recently released NCF is based on the recommendations of the above committee.
- The NCF for the foundational stage will be followed (in future) by its editions for higher classes, as well as teacher and adult education.

Previous NCFs

- NCF serves as a guideline for syllabus, textbooks and teaching practices for the schools in India.
- Previously, four NCFs (1975, 1988, 2000 and 2005) have been published by the **NCERT** in India.
- **Language teaching is a complex issue in a multilingual country** like India, where teachers may be required to cope with a number of languages in a classroom.
  - ✓ According to the NCF 2005, the language of interaction and communication in ECCE would normally be the child's first or home language.
  - ✓ However, in light of socio-political realities, English must be introduced as a second language as early as Class I or as early as preschool.

About The New NCF

- The new framework includes the 'panchakosha' concept for education of children aged 3 to 8, with five components -
  - ✓ **Physical development (sharirik vikas),**
  - ✓ **Development of life energy (pranik vikas),**
  - ✓ **Emotional and mental development (manasik vikas),**
  - ✓ **Intellectual development (bauddhik vikas),**
  - ✓ **Spiritual development (chaitsik vikas).**
- It provides for the holistic overall transformation of the curriculum of the ECCE that will enable positive transformation of the school education system of India, including pedagogy.
  - ✓ *It uses 'play' at the core of the approaches to curriculum organisation, as children learn best through play.* Hence, NCF will enable the achievement of Foundational Literacy and Numeracy for all children.
  - ✓ The NCF will deal with the role of teachers as well as parents and communities to achieve developmental outcomes that are sought during this stage.
- Thus, NCF do not just refer to curricular content and pedagogy, but also include school environment and culture, since the word 'curriculum' encapsulates the overall experiences that a student has in school.
- It is not so much about revision of textbooks, but about changes in teaching and learning process**.**
- The National Council of Educational Research and Training (NCERT) is expected to complete the new syllabus and textbooks for the foundational level soon.

Recommendations/Observations Made In The New NCF

- Currently there is a learning crisis in India, as children are enrolled in primary school but are failing to attain basic skills such as foundational literacy and numeracy.
  - ✓ Only 50.9% of the 19,344,199 students admitted to Grade 1 in 2020-21 had prior pre-school experience.
- **Mother tongue will be the primary medium** of instruction in both public and private schools for children up to the age of 8, because learning a new language reverses the entire learning process in the early years.
- English could be one of the second language options. However, it avoids providing any specific timetable for introducing English.
- A **natural, communication-focused approach**, supporting their primary medium of instruction is required for young children to acquire skills of speaking fluently in other languages (which could also be English).

- The children in this age group should not be burdened with textbooks.

NAAC's Scores Under Lens

- A deemed-university in Bhubaneshwar outperformed the distinguished Indian Institute of Science (IISc) Bengaluru, in terms of its NAAC score.

- However, according to the National Institute of Ranking Framework (NIRF) 2022 score, IISc Bengaluru is the best university in India.

  - ✓ However, seven institutes, all in the private domain, presently have a NAAC score that is higher than the IISc Bengaluru.

- This puts the accreditation and the ranking system in contradiction with one-another.

What is Accreditation?

- **Accreditation** is certification of quality for a fixed period, which in the case of NAAC is 5 years.

- The University Grants Commission (UGC) through a gazette notification in January 2013, has made it mandatory for Higher Educational Institutions (HEIs) to undergo accreditation.

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)

- NAAC is an autonomous body established by the University Grants Commission (UGC).
- It was established in **1994** on the basis of recommendations made under the National Education Policy (1986).
- Headquarters: Bengaluru.

Objectives of NAAC –
  - To arrange for **periodic assessment and accreditation of institutions of higher education** or units thereof, or specific academic programmes or projects;
  - To **stimulate the academic environment for promotion of quality** of teaching-learning and research in higher education institutions;
  - To encourage self-evaluation, accountability, autonomy and innovations in higher education;
  - To undertake quality-related research studies, consultancy and training programmes.

Benefits of Being NAAC-Accredited

- Through a multi-layered process steered by the NAAC, a HEI gets to know whether it meets certain standards of quality set by the evaluator in terms of curriculum, faculty, infrastructure, research and financial well-being among others.

- Based on these parameters, the NAAC gives institutions grades ranging from A++ to C. If an institution is graded D, it means it is not accredited.

- Apart from recognition, being accredited also helps institutions attract capital as funding agencies look for objective data for performance funding.

- It helps an institution know its strengths, weaknesses, and opportunities through an informed review process.

- NAAC accreditation helps students going for higher education abroad as many global higher education authorities insist on recognition and accreditation of the institution where the student has studied.

What is National Institute Ranking Framework (NIRF)?

- It is a methodology adopted by the **Ministry of Education**, *to rank institutions of higher education in India*.

- In July 2022, the Ministry released the 7th edition of NIRF.

- The ranking framework judges educational institutions under five broad generic groups of parameters of –

  i.   Teaching, Learning and Resources (TLR),
  ii. Research and Professional Practice (RP),
  iii. Graduation Outcomes (GO),
  iv. Outreach and Inclusivity (OI)
  v.   Perception (PR).

NAC Accreditation vs NIRF Rankings

- Accreditation is a comprehensive assessment that takes place as a one-time (5 year) event.
- **Ranking on the other hand is a yearly event** (since 2015).
- Despite both being an assessor of educational institutes, <u>both have considerable differences in terms of specific criteria, metrics used to prepare the qualitative and quantitative reports</u>.
- Chairman of the NAAC's executive committee has said that <u>there are some discrepancies in the scores and current system needs to be reviewed and improved upon</u>.

Govt. Amends Key Part Of Metrology Law

- The government has amended a key provision in the Legal Metrology Rules, which previously empowered officers to initiate prosecution against directors of companies even for minor offences relating to weights and measures.
- **Section 49** of the Legal Metrology Act allows the companies to *nominate any of its directors as a person responsible for the business of the company*.

Rationale Behind This Amendment

- This was amended with an aim:
  - ✓ To end the inspector raj;
  - ✓ To improve ease of doing business;
  - ✓ To stop harassment of top directors or owners of the companies for small violations in weights and measures.
- The earlier provision had become a tool for harassment as the inspectors in state legal metrology departments would slap notices on the directors and owners.
- The change will also reduce compliance burden.

{For more about Legal Metrology Act/ Rules and recent amendments, refer The Recitals - July 2022}

Indore Bags Cleanest City Award For 6th Year

- Indore was awarded the cleanest city in India for the sixth year in a row and Madhya Pradesh awarded the cleanest state in the country.
- The awards were given by the President of India as part of the **Azadi@75 Swachh Survekshan 2022**, hosted as part of the Swachh Bharat Mission (SBM).
- President also released an audio-visual song (the theme of the song was Garv (pride). The song captures the SBM's journey and the road ahead.

Swachh Survekshan

- It is an annual survey of cleanliness, hygiene and sanitation in cities and towns across India, launched as part of the **Swachh Bharat Abhiyan** (specifically under SBA-Urban)**.**
- It was launched by the **Ministry of Housing and Urban Affairs (MoHUA)** with **Quality Council of India (QCI)** as its implementation partner.
  - ✓ The SBA was launched (on 2nd October 2014) <u>to make India clean and free of open defecation</u> by 2nd October 2019.
  - ✓ The SBA was split into two - rural (SBA-Gramin, monitored by the **Department of Drinking Water and Sanitation** under the **Ministry of Jal Shakti**) and urban (SBA-Urban, overseen by the MoHUA).
  - ✓ **SBM-U 2.0** was launched on 1st October, 2021, focused on ensuring complete access to sanitation facilities for all.
    - o The vision of a **Garbage Free India** is an initiative under SBM-U 2.0.

- **The first survey** was undertaken in 2016 (covering 73 cities), which had grown to cover 4242 (by the 2020 survey).

Swachh Survekshan 2022 - Seventh Edition

Overview:

- It has emerged as an effective tool for transforming the urban landscape**.**

- India celebrated 8 years of SBM and the first anniversary of SBM-U 2.0 by felicitating the awardees of the cleanest States and cities at the award ceremony of Azadi@75 Swachh Survekshan 2022.

  ✓ It is hosted as part of SBM-U 2.0 by MoHUA.
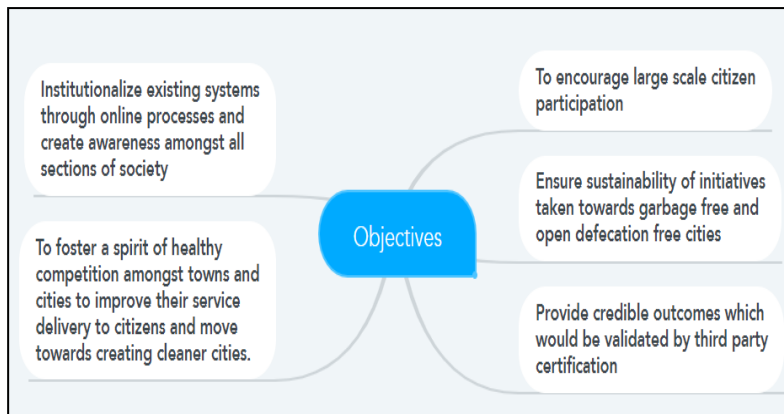
- The vision of a Garbage Free India under SBM-U 2.0 was given further impetus by announcing the results of 7-star and 5-star rated cities under the **Star Rating Protocol** of Garbage Free Cities.

  ✓ The revised Star Rating Protocol of Garbage Free Cities was launched in 2021 to holistically evaluate cities across solid waste management parameters.

Awards

- **In the State Awards**

  ✓ Madhya Pradesh was named the Cleanest State in the category of "more than 100 Urban Local Bodies," displacing Chhattisgarh, the previous three years' cleanest state, to second place. Maharashtra was named the third cleanest state.

  ✓ Similarly, **Tripura** won the cleanest State award in the "less than 100 urban local bodies category," unseating Jharkhand, which had won the previous two years in a row.

  ✓ Uttarakhand finished third.
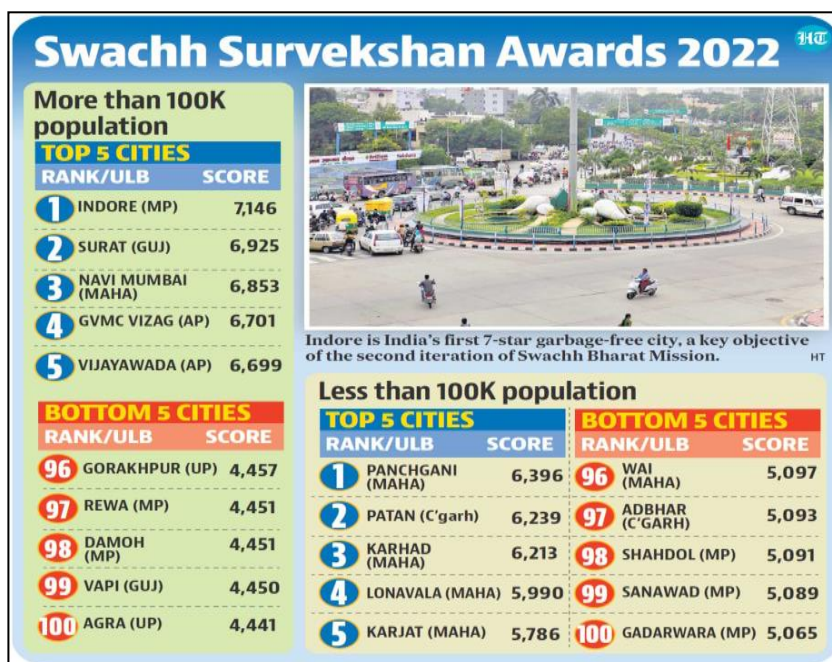
- **Winners In Other Categories:**

  ✓ **Indore** strengthened its position by becoming **India's first 7-star Garbage Free city,** while Surat, Bhopal, Mysuru, Navi Mumbai, Vishakhapatnam, and Tirupati received 5-star Garbage Free designations.

  ✓ **Tirupati** was named the best city in the Safai Mitra Suraksha category, while **Haridwar** in Uttarakhand was named the best Ganga town among cities with more than one lakh inhabitants.

  ✓ **Shivamogga** in Karnataka was named a fast-moving city.

Success Story of Indore

- **The municipal waste** was one of the major problems of Indore. Indore Municipal Corporation (IMC) launched a massive campaign to make Indore a garbage free city in 2016.

- IMC removed garbage containers and started **door-to-door garbage collection**.

  ✓ In 2017, this door-to-door collection played a key role in fetching its first cleanest city tag for Indore.

- Indore went one step ahead and <u>started segregation of wet and dry waste at source</u>. With this, Indore retained the top rank in 2018.
- By freeing 100 acres of land from waste (in just six months), Indore made a hat-trick of being cleanest city in 2019 rankings.
- In 2019, <u>Indore banned single use plastic</u> thus becoming <u>the first city in the country to do so</u>. Also, it installed big machines at the trenching ground to segregate 15 types of dry waste.
  - ✓ These steps guided Indore to fetch cleanest city tag for 4th time in a row in 2020.
- For Swachh Survekshan-2021, Indore did nullah (nalla) tapping ensuring that sewerage water does not flow into Kanh and Saraswati rivers.
  - ✓ It created five zero waste generating wards and started constructing Asia's biggest plant for converting garbage into bio-CNG and compost.

Swachh Survekshan Gramin (SSG) 2022

- According to the Swachh Survekshan Gramin (SSG) 2022, <u>Telangana, Haryana and Tamil Nadu</u> emerged the cleanest among all large states on parameters of rural sanitation.
- On the other hand, Assam, Bihar and Jammu and Kashmir were the three worst performers.

Swachh Bharat Mission (Gramin)

- The SBM-G was implemented as a jan andolan which aimed at eliminating open defecation in rural areas during the period 2014 to 2019 (Phase I) through -
  - ✓ Mass scale behaviour change,
  - ✓ Constructing over 100 million household-owned & community-owned toilets in rural India
  - ✓ Establishing mechanisms for monitoring toilet construction and usage.
- It is monitored by the <u>Department of Drinking Water and Sanitation</u> under the Ministry of Jal Shakti.
- To ensure that open defecation-free behaviours are maintained, no one is left behind and that solid and liquid waste management facilities are accessible, the Mission is progressing to the Phase II of SBM-G, namely ODF-Plus**.**
  - ✓ ODF Plus activities under Phase II of SBM-G will reinforce ODF behaviours and focus on providing interventions for safe management of solid and liquid waste in villages.
  - ✓ Phase II is implemented from 2020-21 to 2024-25.

Performance of SBM-G

- According to the Sub-Group of Chief Ministers (2015), more than half of India's 25 crore households did not have access to toilets close to places where they live.
  - ✓ Notably, during the 2015-19 period, a major portion of expenditure under the Department of Drinking Water and Sanitation was towards SBM-G.
- As per the Department of Drinking Water and Sanitation, 43.8% of the rural households had access to toilets in 2014-15, which increased to 100% in 2019-20.
- However, the 15th Finance Commission (2020) noted that the <u>practice of open defecation is still prevalent</u>, despite access to toilets and highlighted that there is a <u>need to sustain the behavioural change of people</u> for using toilets.

Swachh Survekshan Gramin (SSG)

- The Department of Drinking Water and Sanitation had commissioned SSG earlier in 2018 and 2019**.**
- It is pertinent to mention that SSG is not just a ranking exercise but has been a vehicle for creating a jan andolan (people's movement).

- A detailed protocol has been developed to guide the ranking of states and districts on the basis of their performance attained on <u>qualitative and quantitative parameters</u> and <u>engagement of the rural community</u> in improvement of their sanitation status.

SSG 2022

- The 2022 survey was recently released by the President of India on the occasion of Gandhi Jayanti, which is now also celebrated as Swachh Bharat Diwas.

  - ✓ Golagha**t** district of Assam finished at the bottom of 709 districts, ranked in this survey. The two other worst performers were from **Bihar** - Banka and Katihar.
  - ✓ Since **Delhi and Chandigarh are fully urbanised** UTs, these were not ranked.

- On the occasion, the President also released the status report on "Functionality Assessment of Tap Connections" under the **Jal Jeevan Mission (JJM)**.

  - ✓ **Burhanpur** (Madhya Pradesh) receives a special award for being the first "Har Ghar Jal" certified district.

SANITATION SURVEY RESULTS (RURAL) 2022

CATEGORY	1st	2nd	3rd
Big states	Telangana	Haryana	Tamil Nadu
Small states/ UTs	A&N Islands	DNH & Daman & Diu	Sikkim
Districts	Bhiwani (Haryana)	Jagtial (Telangana)	Nizamabad (Telangana)

Other highlights

➤ 84% respondents sanitation improved since 2014
➤ 68.4% satisfied with solid & liquid management in village
➤ 88% have access to

household toilets
➤ Observers found 95.4% have access to household toilets
➤ Observers found 74.6% public places have access to toilets

Jal Jeevan Awards
(overall functionality of water from household taps)

| More than 60% coverage category | Puducherry (1st) & Goa (2nd) | Less than 60% coverage category | Tamil Nadu (1st) & Meghalaya (2nd) |

➤ Burhanpur (MP) 1st Har Ghar Jal certified district

Non-traditional Livelihoods Skilling Included In BBBP

- An inter-ministerial conference on non-traditional livelihoods (NTLs) for adolescent girls was held on the occasion of the International Day of the Girl Child.

- At the event, to expand the mandate of BBBP scheme, the Central government announced the <u>inclusion of skilling of girls in NTL under its flagship programme</u>.

  - ✓ NTLs- Sectors and jobs where participation of women is and has historically been conventionally low or absent. Like STEM (Science, Technology, Engineering, Mathematics) subjects due to gender-based categorization of the work, in the society

Need For Beti Bachao Beti Padhao Scheme

- The scheme was launched in 2015 after the revealed detraction in key gender metrics – **Child Sex Ratio** (CSR) and **Sex Ratio at Birth** (SRB).

  - ✓ CSR is defined as the number of girls per 1,000 boys aged 0-6 years.
  - ✓ This ratio has showcased a steady decline, from 945 in 1999 to 927 in 2001.
  - ✓ This declined further to <u>918 girls for every 1,000 boys in 2011</u>.

- Dip in these ratios is a significant indicator of gender discrimination and women disempowerment.

  - ✓ It also reflects both pre-birth discrimination through gender-biased, sex selective abortion and post-birth discrimination by neglecting health, nutrition, and educational needs of the girl child.

BETI BACHAO BETI PADHAO SCHEME

- The name Beti Bachao, Beti Padhao translates to 'Save the girl child, educate the girl child'.
- **The scheme aims to achieve the following goals –**
  - Improve the child sex ratio
  - Ensure gender equality and women empowerment
  - Prevent gender-biased, sex selective elimination
  - Ensure survival and protection of the girl child
  - Encourage education and participation of the girl child
- **Nodal Ministries** – It is a tri-ministerial effort of –
  - Ministry of Women and Child Development (MoWCD)
  - Ministry of Health & Family Welfare
  - Ministry of Education
  - Budgetary control and administration of the BBBP falls under the MoWCD's purview.

- Research concluded that the strong socio-cultural and religious preference for boys was the root cause of the problem and this provided impetus for launch of the BBBP initiative.

Progress/Achievements of the Scheme

- The National SRB Index has shown an upward trend from **918** (2014-15) to **934** (2019-20), an improvement of 16 points in five years.

- 422 districts out of the 640 districts covered under BBBP have shown improvement in SRB from 2014-15 to 2018-19.

- The National Gross Enrolment Ratio (GER) of girls in secondary schools improved from 77.45 (2014-15) to 81.32 (2018-19).

- Proportion of schools with separate functional toilets for girls rose from 92.1% in 2014-15 to 95.1% in 2018-19.

- Institutional deliveries rate soared from 87% in 2014-15 to 94% in 2019-20.

Changes Introduced To The Scheme

- The scheme will now also focus on increasing the enrolment of girls in secondary education, particularly in STEM (Science, Technology, Engineering, Mathematics) subjects.
  - ✓ Women have been historically under-represented in areas such as technology.

- **Some of the new aims for the scheme include –**
  - ✓ Ensuring 1% increment in enrolment at the secondary level and skilling of girls and women every year,
  - ✓ Raising awareness about safe menstrual hygiene
  - ✓ Promulgating elimination of child marriages.

- A national committee headed by the Secretary, Ministry of Women and Child Development, formed under the larger **Mission Shakti mandate**, will be the apex committee to review the implementation of the BBBP scheme at regular intervals.

Mission Shakti

Ministry of Women and Child Development
Government of India

- 'Mission Shakti' is a scheme in mission mode aimed at strengthening interventions for women safety, security and empowerment.
- The scheme seeks to make women economically empowered, exercising free choice over their minds and bodies in an atmosphere free from violence and threat.
- It also seeks to reduce the care burden on women and increase female labour force participation by promoting skill development, capacity building, financial literacy, access to micro-credit etc.
- 'Mission Shakti' has two sub-schemes - '**Sambal**' and '**Samarthya**' -
  - "Sambal" sub-scheme is for safety and security of women,
  - "Samarthya" sub-scheme is for empowerment of women.

UNDP Praises & Cautions India In Poverty Report

As many as **415 million people exited multidimensional poverty in India in 15 years** (2005/06 to 2019/21), as per the Global Multidimensional Poverty Index 2022.

About Multidimensional Poverty

- A person who is poor can suffer multiple disadvantages at the same time – for example they may have poor health or malnutrition, a lack of clean water or electricity, poor quality of work or little schooling.

- Focusing on one factor alone, such as income, is not enough to capture the true reality of poverty.

- Multidimensional Poverty is a measure of poverty that captures deprivations in education and access to basic infrastructure in addition to income or consumption at the **USD 1.90 international poverty line**.

Global Multidimensional Poverty Index

- It is a key international resource that measures **acute multidimensional poverty** across more than 100 developing countries.

- The MPI is published by the Oxford Poverty and Human Development Initiative (OPHI) and the UNDP's Human Development Report Office.

- The Index tracks deprivation across the following **3 dimensions and 10 indicators**

- The MPI ranges from **0 to 1**, and higher values imply higher poverty.

- By identifying who is poor, the nature of their poverty (their deprivation profile) and how poor they are (deprivation score), the global MPI complements the international **USD 1.90/day poverty rate**.
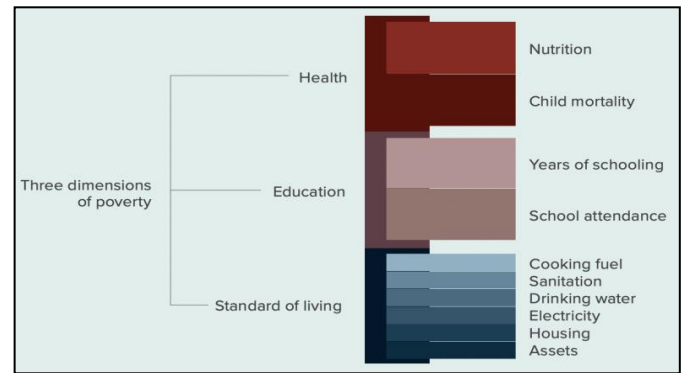
Global Multidimensional Poverty Index 2022

- The 2022 global Multidimensional Poverty Index (MPI) uses the most recent comparable data available for 111 countries — 23 low-income countries, 85 middle-income countries and 3 high-income countries.

- These countries are home to **6.1 billion people**, 1.2 billion (or 19.1%) of whom live in poverty.

- The global MPI shows who they are, where they live and what deprivations hold them back from achieving the wellbeing they deserve.

Major Findings Of The Report

- Across 111 countries, **1.2 billion people** live in acute multidimensional poverty.

    ✓ Half of these people (593 million) are children under age 18.
- The developing region where the largest number of poor people live is **Sub-Saharan Africa** (nearly 579 million), followed by **South Asia** (385 million).

- **India's Performance –**

    ✓ India continues to house the largest number of poor people worldwide (228.9 million) in 2020
    ✓ In India, **415 million people** exited poverty between 2005/06 and 2019/21. The incidence of poverty fell from 55.1% in 2005/06 to 16.4% in 2019/21 in the country.
    ✓ The relative reduction from **2015/2016 to 2019/21** was faster: 11.9% a year compared with 8.1% from 2005/2006 to 2015/2016.
    ✓ Across states and UTs the fastest **poverty reduction in relative terms** was in Goa, followed by J&K, Andhra Pradesh, Chhattisgarh and Rajasthan.
    ✓ Bihar, the poorest state in 2015-16, saw the fastest reduction in MPI value in **absolute terms.**
    ✓ **Poverty Region Wise:** The incidence of poverty fell from 36.6% in 2015-2016 to 21.2% in 2019-2021 in rural areas and from 9.0% to 5.5% in urban areas

- **Impact of Covid-19 Pandemic –**

    ✓ Simulations in 2020 suggested that the Covid-19 pandemic could set back the progress made in poverty reduction globally by **3–10 years**.
    ✓ Updated data indicate that the setback at the global level is likely to be on the high end of those projections.

- The report makes it clear that the most recent data for MPI were collected pre-pandemic, so the effect of Covid-19 and subsequent impact on poverty in India cannot be assessed yet.

National Multidimensional Poverty Index:

- On the lines of Global MPI, the NITI Aayog started publishing India-specific MPI in 2021.
- **Purpose:** A national MPI statistic for a country is tailored to the national priorities and therefore, countries choose their own set of dimensions, indicators, weights, and cut-offs, according to their plans and contexts.
- The report presents an in-depth analysis of the headcount ratio and intensity of multidimensional poverty at the national, State/UT, and district levels.
- The index is based on the reference period of 2015-16 of the National Family Health Survey (NFHS)- 4.

ECONOMY AND INFRASTRUCTURE

Vande Bharat Express 2.0

- The Prime Minister recently flagged off the <u>new and upgraded version</u> of the Vande Bharat Express which will run from **Gandhinagar to Mumbai.**

- This is the **3ʳᵈ** Vande Bharat Express in the country and comes with several additional features to enhance passenger comfort as well as safety.

- The first Vande Bharat train was manufactured by the Integral Coach Factory (ICF), Chennai, as part of the 'Make in India' programme.

Vande Bharat trains

- It is an indigenously designed and manufactured semi high speed, self-propelled train set that does not require an engine.
- They are based on a propulsion system called **distributed traction power technology**, by which each car of the train set is powered. This technology is increasingly becoming the norm around the world for passenger operations.
- Distributed power gives the train **higher acceleration and deceleration** compared to locomotive hauled trains, which take a much longer time to reach top speed or to gradually come to a halt.
- Due to faster acceleration and deceleration, it can achieve a maximum speed of 160 kmph, reducing journey time by 25% to 45%.
- It also has an **intelligent braking system** with power regeneration for better energy efficiency thereby making it cost, energy and environment efficient.
- The trains have fully sealed gangways for a dust-free environment, modular bio-vacuum toilets, rotating seats in Executive Class, personalized reading lights, automatic entry/exit doors with sliding footsteps, diffused LED lighting, mini pantry and sensor-based interconnecting doors in each coach.

Significance

- In Budget 2022-23, the Finance Ministry had announced the <u>manufacture of **400** Vande Bharat train sets in the next **3 years**</u>.

  ✓ It comes in addition to the current plan of running <u>75 such trains</u> by the Independence Day in 2023. Two Vande Bharat train sets (originally called **Train 18**) are currently running in the country (Delhi-Varanasi and Delhi-Katra)

Vande Bharat Express 2.0

- It is an indigenously designed and manufactured semi high speed, self-propelled train that is planned as the next major leap for the Railway Sector under 'Make in India' Programme.
- Vande Bharat Express 2.0 between Gandhinagar and Mumbai, will boost connectivity between the two business hubs of India.

Lighter at 392 tons (previously was at 430 tons)

It also has a photo-catalytic ultraviolet air purification system installed in the Roof-Mounted Package Unit (RMPU) for air purification.

Aircraft-like travelling experience and advanced safety features including Kavach technology, an indigenously developed Train Collision Avoidance System

- The current train sets are being made at Rs 106 crore per train set of 16 cars, at 2018 pricing. The future ones will cost slightly more, because of different specifications and inflation.

- This carries a <u>potential investment of Rs 50,000 crore</u> over the next 3 years along with additional <u>employment generation of 10,000-15,000</u>.

- Pumping in around Rs 50,000 crore into the country's **rolling stock** industry, will give a big boost in the sectors of component manufacturing, supplies etc.
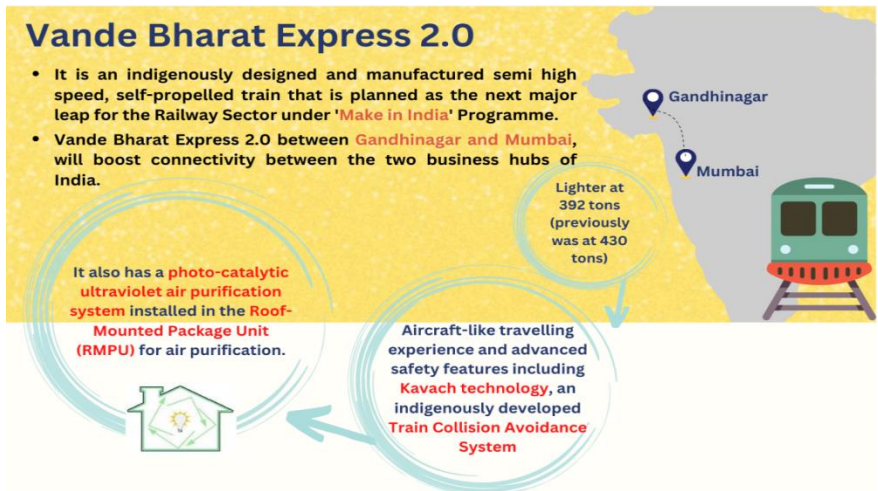
PM PRANAM

- The Union government is planning to launch a new scheme — PM PRANAM — to reduce the use of **chemical fertilisers** by incentivising states.

- The proposed scheme, short for **PM Promotion of Alternate Nutrients for Agriculture Management** Yojana, also aims to bring down the subsidy burden on chemical fertilisers.

- The **fertilizer subsidy** is estimated to reach **Rs 2.25 lakh crore in 2022-23** — 39% higher than last year's figure of Rs 1.62 lakh crore.

Details of PRANAM

- The scheme will **not have a separate budget** and will be financed through the savings of existing fertiliser subsidy under schemes run by the **Department of Fertilizers.**

- 50% of subsidy savings will be passed on as a grant to the state that saves the money.

  - ✓ 70% of the grant provided can be used for **asset creation** related to technological adoption of alternate fertilisers and alternate fertiliser production units at *village, block and district levels*.

  - ✓ The remaining 30% grant money can be used for rewarding and encouraging farmers, panchayats, farmer producer organisations (FPOs) and self-help groups (SHGs) that are involved in the reduction of fertiliser use and awareness generation.

- The government will compare a state's increase or reduction in urea in a year, to its average consumption of urea during the last 3 years.

- Data available on a fertiliser Ministry dashboard, **iFMS (Integrated fertilisers Management System)**, will be used for this purpose.
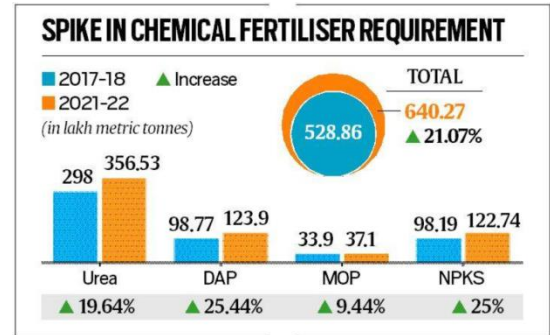
Codex Committee on Spices and Culinary Herbs

- The Codex Committee on Spices and Culinary Herbs (CCSCH) recently held its 6th session.

- In the session, CCSCH has finalized and recommended quality standards for nutmeg, saffron, chilli-peppers and paprika.

- The recommendations for these four spices will be forwarded to **Codex Alimentarius Commission** for final adoption as Codex standards.

- These standards will join the earlier adopted spices and herbs, to

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form a body of reference for world spice trade and for member countries to align their national regulations.

Codex Standards

- The <u>collection of food standards</u> adopted by the Codex Alimentarius Commission is known as the Codex Alimentarius. The term **Codex Alimentarius** is Latin and means **food code**.

- Codex standards are **international food texts** i.e. standards, codes of practice, guidelines and other recommendations.

- Codex Standards cover all the main foods, whether processed, semi-processed or raw.

- They include provisions covering food hygiene, food additives, residues of pesticides and veterinary drugs, contaminants, labelling and presentation, methods of analysis and sampling, and import and export inspection and certification.

- They are **not a substitute for, or alternative to national laws**. Every country's laws and administrative procedures contain provisions with which it is essential to comply.

herStart Platform

- The **President** recently launched **herStart**, a start-up platform of Gujarat University for women entrepreneurs.

- The initiative aims to <u>boost the innovation & startup efforts of women entrepreneurs</u>

- Through the digital platform, women entrepreneurs can <u>easily connect with various private and government enterprises</u> that will support their startup venture.

- It is also designed to <u>provide resources and training modules</u> to women entrepreneurs free of cost.

- It will also publish success stories of women entrepreneurs to inspire other women.

Scheme For Special Assistance To States for Capital Investment for 2022-23

Recently the government has launched a **Scheme for Special Assistance to States for Capital Investment for 2022-23**. Under the Scheme, financial assistance will be provided to the States Governments in the form of **50-year <u>interest free loan</u>** for **capital investment projects**.

Background

- The scheme for Special Assistance to States for Capital Expenditure was <u>announced in the financial year 2020-21, as part of AatmaNirbhar Bharat package</u>. An amount of Rs 12,000 crore was allotted to the scheme.

- The scheme was continued in FY 2021-22, with an allocation of Rs 15,000 crore.

- Considering the requests of the State Governments, a **redesigned and expanded scheme** has been launched for **FY 2022-23**, with an allocation of **Rs 1 lakh crore**.

- The loans provided under the scheme will be *above the normal borrowing ceiling* allowed to the States for FY 2022-23 and should be spent in the same year.

Eligibility of the Scheme

- New or ongoing projects or for settling pending bills in ongoing capital projects.

- States may submit projects of *higher value than the funds allocated*, indicating their preference/priority

- **Exclusion:** Projects with capital outlay of less than 5 crore (2 crore for North East) and repair and maintenance projects irrespective of capital outlay

The Scheme for Special Assistance to States for Capital Investment for 2022-23 has 7 parts.

1. Special Assistance to States has been allocated amongst States in proportion to their share of central taxes and duties, as per the award of the 15th Finance Commission.

2. It is aimed at facilitating PM Gati Shakti related investment in the States.

3. It is meant for supplemental funding for priority segments of PM Gram Sadak Yojana (PMGSY), including support for the States' share.

4. Under this part, States will be given incentives for achieving several targets of digitization.

5. The amount under this will be available to States for capital projects on Optical Fibre Cable (OFC) network.

6. This amount will be available to States as incentive for undertaking reforms related to *building bye-laws, town planning schemes, transit-oriented development, and transferable development rights.*

7. It aims at providing incentives to States for privatization/disinvestment of the State Public Sector Enterprises (SPSEs) and monetisation/recycling of assets.

Credit Guarantee Scheme for Startups

- The Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry recently notified the **Credit Guarantee Scheme for Startups (CGSS).**

- It will **provide credit guarantees** to loans extended by member institutions (MIs) to finance eligible borrowers (startups). Thus, it will help to provide the much-needed **collateral-free loans** to startups.

- MIs include financial intermediaries [*banks, financial institutions, Non-Banking Finance Companies, Alternative Investment Funds (AIFs)*] engaged in lending/investing.

Credit Guarantee Provisions

The credit guarantee under the scheme will be **transaction based** and **umbrella based**.

Transaction-based Guarantees	Umbrella-based Guarantee Cover
• It will promote lending by banks/ NBFCs to eligible startups. • In respect of a transaction-based guarantee cover, the guarantee cover is obtained by the MIs on a *single eligible borrower basis.* • The exposure to individual cases would be capped at **Rs. 10 crore per case** or the *actual outstanding credit amount*, whichever is less. • The extent of transaction-based cover will be: ✓ 80% of the amount in default if the original loan sanction amount	• The umbrella-based guarantee cover will provide guarantee to **venture debt funds (VDFs)** registered under AIF regulations of Sebi. • The extent of umbrella-based cover will be the *actual losses* or up to a maximum of 5% of

is up to Rs 3 crore;	**pooled investment** on which cover is being taken, whichever is lower, subject to a maximum of Rs 10 crore per borrower.
✓ 75% of the amount in default if the original loan sanction amount is above Rs 3 crore; and Up to Rs 5 crore,	
✓ 65% of the amount in default if the original loan sanction amount is above Rs 5 crore (up to Rs 10 crore per borrower).	

Eligibility

- Recognized startups that have reached the stage of stable revenue stream, as assessed from audited monthly statements over a 12-month period; and

- Startups that are not in default to any lending/investing institution and **not** classified as non-performing asset (NPA).

Institutional Setup

- **National Credit Guarantee Trustee Company Limited (NCGTC)** will operate the scheme.

- DPIIT will be constituting a **Management committee (MC)** and a **risk evaluation committee (REC)** for reviewing, supervising and operational oversight of the scheme.

Significance

- The scheme reiterates the government's focus towards promoting innovation and entrepreneurship in order to give a strong boost to Indian startup ecosystem.

- It will address the issue of unavailability of collateral-free loan and enable flow of financial assistance to innovative startups through their journey to becoming full-fledged business entities.

- CGSS will complement the existing schemes under Startup India initiative viz. **Fund of Funds for Startups and Startup India Seed Fund Scheme.**

{For more about Startups in India, refer The Recitals –September 2022}

NHAI InvIT bonds

- The Ministry of Road and Transport shared that it is planning to issue its **Infrastructure Investment Trusts (InvIT) bonds**.

- Through this, the **National Highways Authority of India** Infra Trust (NHAI InvIT) is looking to raise around Rs 3,800 crore.

- These InvIT bonds will be listed on Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) and will offer an effective return of **8.05% per annum.**

- The issue will enable NHAI to monetise its completed National Highways that have a toll collection track record of at least one year.

- NHAI InvIT support the government's National Monetisation Pipeline (NMP).

Infrastructure Investment Trusts

- Infrastructure investment trusts are institutions similar to mutual funds. Its objective is to facilitate investment into the infrastructure sector in India.

- InvITs pools investment from **various categories of investors** and *invest them into completed and revenue-generating infrastructure projects.*

- InvITs help infrastructure developers to free-up capital by monetising completed assets.

- The infrastructure developer can transfer a part of its revenue-generating assets to an InvIT, which can then issue units to its holders

- It thus enables investment of money from individual and institutional investors in infrastructure projects to earn a small portion of the income as return.

- InvITs are <u>regulated by Securities and Exchange Board of India (SEBI)</u>. SEBI had notified the SEBI (Infrastructure Investment Trusts) Regulations, 2014 for registration and regulation of InvITs in India.
- NHAI's InvIT will be a Trust established by NHAI under the **Indian Trust Act, 1882** and SEBI regulations.

Structure of InvITs

- There are four important parties to an InvIT:

| sponsors | investment managers | project managers | trustee |

- **Sponsors** are <u>promoters of the company that set up the InvIT</u>. In case of public–private partnership (PPP) projects, it refers to the infrastructure developer or a Special purpose vehicle (SPV) developing the project.
- The **investment manager** is given the <u>task of supervising the assets and investments of the InvIT</u> and the **project manager** is <u>responsible for the execution of the project</u>.
- The **trustee** (certified by Sebi) has the responsibility to ensure that the <u>functions of the InvIT, investment manager and project manager comply with SEBI rules</u>.

Special Purpose Vehicle (SPV)

- SPV is an entity which is <u>formed for a single, well-defined purpose</u> and <u>can be formed for any lawful purpose</u>.
- It is, primarily, a business association of persons or entities eligible to participate in the association. Technically, an **SPV is a company** and has to follow the rules of formation of a company laid down in the **Companies Act**.

India's InvIT Market

- The Indian InvIT market is <u>not yet mature</u> and has <u>supported formation of 15 InvITs</u> till date — in roads, power transmission, gas transmission and telecom towers sectors.
- From the 15 InvITs **registered with SEBI**, <u>only 7 InvITs are listed on the stock exchange</u>.

Reasons For The Launch of NHAI's InvIT

- In 2017, the Centre had launched Bharatmala Pariyojana, its flagship highway development programme, for development of 24,800 km of roads at a total investment of Rs 5,35,000 crore.
- In order to complete the projects, NHAI needs adequate funds and one of the options is to monetise the completed and operational National Highway assets.
- NHAI's InvIT offer, is a way for the government to <u>attract alternative sources of financing</u> to <u>boost public spending in the roads and infrastructure sector</u>.

NATIONAL HIGHWAYS AUTHORITY OF INDIA (NHAI)

- NHAI was constituted by the **National Highways Authority of India Act, 1988** under the Ministry of Road Transport and Highways
- It became operational in 1995 and was formally made an autonomous body.
- It has been set up as a Central Authority to *develop, maintain and manage the National Highways* for which the responsibility is given to it by the Union Government.
- The NHAI reserves the right to levy toll on identified highways.

- At a time when private sector investment in the economy has declined, fund-raising by NHAI and spending on infrastructure will not only <u>give a boost to the economy</u>, but will also <u>attract private sector investment</u>.

Benefits of InvITs for Investors

- A retail investor or even large financial investors may not be able to invest in infrastructure projects such as roads, power, energy etc. <u>InvITs **enable these investors** to buy a **small portion** of the units being sold by the fund</u>.

- Since such trusts mostly include *completed and operational projects* with positive cash flow, the risks of investments are low.
- Unit holders also benefit from **favourable tax norms**, including **exemption on dividend income** and **no capital gains tax** if units are held for more than **three years**.
  - ✓ A **capital Gains tax** is a tax on the profit from the sale of an asset. The most common capital gains are realized from the sale of stocks, bonds, precious metals, real estate, and property.

PM Kisan Samman Sammelan 2022

- The Prime Minister recently inaugurated the **PM Kisan Samman Sammelan 2022**. The event brought together more than 1 crore farmers from across the country and around 1500 Agri Startups.
- It also witnessed the participation of researchers, policy makers and other stakeholders.

Key Developments At The Event

- A total of 600 **Pradhan Mantri Kisan Samruddhi Kendras** (**PMKSK**) under the **Ministry of Chemicals and Fertilisers** were inaugurated.
  - ✓ PMKSK will address a wide variety of farmer needs and provide *agri-inputs like fertilizers, seeds, implements; testing facilities for soil, seeds, fertilisers.*
  - ✓ They will also generate awareness among farmers; provide information regarding various government schemes and ensure regular capacity building of retailers at block/ district level outlets.
  - ✓ Extension services such as crop advisories or good farming practices will be provided by Krishi Vigyan Kendras (KVKs) or agriculture universities.
  - ✓ More than *3.3 lakh retail fertiliser shops* in the country are planned to be **converted into PMKSK in a phased manner**.
- The **Bhartiya Jan Urvarak Pariyojana – One Nation One Fertiliser** was also launched at the event.
  - ✓ Under the scheme, **Bharat Urea Bags** were launched, which will help companies to market fertilizers under the single brand name **Bharat**.
- The 12th instalment amount of Rs. 16,000 crores under the **Pradhan Mantri Kisan Samman Nidhi** (PM-KISAN) was also released at the event.

PM KISAN

- PM Kisan is a **central sector scheme**, with 100% funding from the Union Government.
- It is implemented by the Ministry of Agriculture and Farmers Welfare
- The scheme was started to increase the income of the farmers by providing income support to eligible landholding farmers' families across the country.
- It aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health, appropriate yields as well as to meet *domestic needs*.
- Under the scheme, which became effective from December 2018, the Centre provides **Rs 6,000 per year** to eligible farmers in **three equal instalments of Rs 2,000.**
- The state governments and UT administration identify the farmers who are eligible for the scheme and share the list with the Centre.
- The central government then directly transfers the fund to the bank accounts of the beneficiaries.
- Since its launch, more than Rs 2 lakh crore has been transferred to the bank accounts of farmers.

Eligible Farmers

- The Scheme initially provided income support to all Small and Marginal Farmers' families across the country, holding cultivable land up to **2 hectares**.

- In June, 2019, the scheme was **extended to cover all farmer families** in the country irrespective of the size of their land holdings.

Exclusion Criteria

However, the following categories of people holding cultivable land have been excluded from the scheme:

- Institutional landholders.
- Present or retired officers and employees of state/central government as well as PSUs and government autonomous bodies.
- Income Tax payers in last assessment year.
- Farmer families holding constitutional posts.
- Professionals like doctors, engineers and lawyers.
- Retired pensioners with a monthly pension of over Rs 10,000.
- Former and present Ministers/ State Ministers, MPs, MLAs, MLCs, Mayors of Municipal Corporations, Chairpersons of District Panchayats.

Issues

- India's poverty line is ₹32 per person/day in rural areas and ₹47 in urban areas, according to **Rangarajan Committee**. PM-KISAN support of ₹17 a day for a household is largely insufficient for even bare minimum sustenance.
- Due to volatility of markets and price fluctuations in different regions, it is important to **index (link) the cash transfers to local inflation**.
- The scheme does not provide a clear framework for effective **grievance redressal**.

Pokkali Rice

- This year's Pokkali rice cultivation cycle concluded with a **harvest festival**.
- Pokkali is a heritage heirloom (belonging to several generations) rice crop cultivated in the coastal regions of **Kerala**, including Ezhikkara, Ernakulam, and supported by Palliyakal Cooperative Service Bank (PCSB).
- In Malayalam Pokkali translates as the **one who grows above all**. As the name suggests, Pokkali grass grows up to 6 feet in height.
- Pokkali is an ancient farming practice where one season of rice farming is alternated with another season of prawn culture.
- The prawn seedlings, which **swim in** from the sea and the backwaters after the rice harvest, feed on the leftovers of the harvested crop.
- The rice crop, which gets no other fertiliser or manure, draws nutrients from the prawns' excrement and other remnants. Thus, rice farming and prawn farming are mutually complementary.
- Pokkali rice is known for its **saltwater resistance** and can **withstand brief flooding** during the rainy season ahead of which the fields are sown.
- Farmers in Kerala have reported that the Pokkali fields were relatively unaffected by the floods of 2018 that destroyed paddy cultivation of short rice varieties.
- This farming system withstands climate change with efficient **carbon sequestration** and **decreasing methane production**.
- Pokkali has **medicinal properties** and its higher value of *antioxidants and low carbohydrate content* makes it preferable to those on a low sugar diet.

- The uniqueness of the rice has brought it the Geographical Indication (**GI**) **tag** and is the subject of continuing research.

History of Pokkali

- The story of Pokkali begins with a great flood that washed the seeds of this prolific grain from the Western Ghats to the low-lying saline plains.

- Pokkali is one the oldest varieties of rice in Kerala. It is also among the oldest known crops cultivated by **organic farming methods** in the world.

- Pokkali is also grown in Sri Lanka. It could have reached Sri Lanka via the Buddhist missionaries or vice versa.

Farmers in West Bengal are experimenting with the pokkali variety of rice to tide over severe seawater incursion into paddy fields in Sundarbans. **Vyttila-11** varieties of pokkali seedlings were brought from Kerala.

First Aluminium Freight Rake

- The Ministry of Railways recently inaugurated **India's first aluminium freight rake** - 61 BOBRNALHSM1.

- The aluminium rake has been developed to modernise freight transportation and enable significant carbon savings for Indian Railways.

- This is a dedicated effort for Make in India program as it has been **fully designed and developed indigenously** in collaboration with RDSO, HINDALCO and Besco Wagon.

Significance Of Aluminium Rakes

- The aluminium-made rakes are **180 tonnes lighter** than existing steel rakes. They can **carry 5-10% more load**, while **consuming less energy**.

- This will have a transformative impact on the Railways' **logistics and operational efficiency**.

- Moreover, they are **corrosion resistant**, with relatively negligible wear and tear to rolling stock and rails. They are **100% recyclable** and even after 30 years, they will be as good as new.

- It is estimated that for every 100 kg weight reduction of the wagon, the CO_2 saving is 8-10 tonnes. This translates to saving more than **14,500 tonnes of CO_2 for a single rake**.

- With the Railways planning to deploy more than one lakh wagons in the coming years, the potential annual CO_2 reduction could be to the tune of over **25 lakh tonnes** – a notable contribution to the country's sustainability goals.

- The freight sector in India is expected to grow at more than 7% CAGR to 15-billion tonnes by 2050. With the energy-efficient and eco-friendly Railways it is expected to notably increase its volume share from the current 18%.

- Iron industry consumes a lot of Nickel and Cadmium which comes from import. So, growth of Aluminum wagons will result in less import. At the same time, this is good for local aluminum industry.

Importance of Aluminium

- Aluminium trains form a majority share in the United States, Europe and Japan because of attributes such as sleek, aerodynamic designs and their ability to tilt at high speeds without going off the rails.

- Aluminium is the preferred choice for metro trains worldwide for their durability and most importantly - passenger safety, as it has improved crashworthiness or superior crash absorption capability.

- Indian Railways have already announced their plans to make aluminium-bodied Vande Bharat train sets.

- The Ministry of Commerce and Industry released the fourth edition of **Logistics Ease Across Different States** (LEADS) 2022 survey report. Launched in 2018, it is an indigenous data-driven index to <u>assess logistics infrastructure, services, and human resources across all 36 States and UTs</u>.

- It is an **indicator of efficiency of logistical services** necessary for promoting exports and economic growth.

- By engaging with various end-user stakeholders, it acts as a feedback mechanism on the existing logistic capacities and draws recommendations for further improvement.

Methodology

- Unlike the previous versions of LEADS which were based on ranking systems for all states, LEADS 2022 has adopted a **classification-based grading**.

- States have been now classified under four categories viz coastal states, hinterland/landlocked states, north-eastern states, and Union Territories.

- It includes **three performance categories** viz

  ✓ **Achievers**: States/UTs achieving **90% or more** percentage;
  ✓ **Fast Movers**: States/UTs achieving percentage scores **between 80% to 90%**; and
  ✓ **Aspirers**: States/UTs achieving percentage scores **below 80%** have been made.

Gradings

- Andhra Pradesh, Maharashtra and Gujarat are among the 15 States and UTs categorised as **achievers**.

  ✓ The other States and UTs in the achievers category include Chandigarh, Delhi, Haryana, Himachal Pradesh, Karnataka, Assam, Odisha, Punjab, Tamil Nadu, Telangana, Uttar Pradesh and Uttarakhand.

- Kerala, MP, Rajasthan, Puducherry, Sikkim and Tripura are categorised as **fast movers** in the ranking.

- The 15 States and UTs ranked in the **aspirers** category include Bihar, Chhattisgarh, Goa, Mizoram, Andaman and Nicobar Islands, Lakshadweep, Ladakh, Nagaland, Jammu and Kashmir, and Arunachal Pradesh.

Significance

- The report would assist PM GatiShakti National Master Plan (PMGS-NMP) and National Logistics Policy.

- It will help to perform a **network mapping** of logistics infrastructure, services, and regulatory environment enabling State Governments to identify and fill the gaps and achieve data-driven multimodal connectivity.

Quarterly Employment Survey

- The Ministry of Labour and Employment recently released the report of the **fourth round** (January-March, 2022) of Quarterly Employment Survey (QES), which is a part of the **All India Quarterly Establishment based Employment Survey (AQEES)**.

- The AQEES has been taken up by the **Labour Bureau** to provide quarterly estimates about the employment and related variables of establishments in both <u>organized and unorganized segments.</u>

- It takes into account **9 selected sectors** of Manufacturing, Construction, Trade, Transport, Education, Health, Accommodation& Restaurant, IT / BPO and Financial Services.

- These 9 sectors account for a majority of the total employment in the non-farm establishments.

- AQEES has **two components**:

|	
Quarterly Employment Survey (QES)	• It relates to the establishments employing **10 or more workers**.
Area Frame Establishment Survey (AFES)	• It relates to the establishments **employing 9 or less workers**.

- The QES as a part of the AQEES was launched in **April, 2021**.

- In each quarter information is being collected from about 12,000 establishments. The first such report for the period April-June, 2021 was released in the month of September, 2021.

Figure 1: Overall Employment

Key Findings

- Around **3.18 crore workers** were employed in about **5.31 lakh establishments**, during the 4th round, compared to a total of 3.14 crores in the third quarter.

- <u>Education, manufacturing, trade and financial services</u> together accounted for **84%** of the total estimated units.

- Manufacturing sector accounts for the largest percentage (38.5%) of the total number of workers, followed by education sector with 21.7%, IT/BPO sector with 12% and Health sector 10.6%.

- Almost 80% of the establishments engaged 10 to 99 workers. About 12% of the establishments reported fewer than 10 workers.

- Only 1.4% of the establishments surveyed reported at least 500 workers. Such large establishments were mostly in the IT/ BPO sector and in the health sector.

- The participation of **women workers** witnessed a marginal increase from **31.6%** in the third quarter to **31.8%** in the fourth quarter report.

- However, women workers constituted about 52% of the workforce in the health sector, while the corresponding percentages in education, financial services and IT/ BPO sectors stood at 44%, 41% and 36%, respectively.

- **86.4%** of the workers were **regular employees**, and 8.7% were contractual employees followed by casual employees (2.3%) and self-employed (2%).

- The share of fixed term employees in the establishments was found to be the least (0.7%) over all.
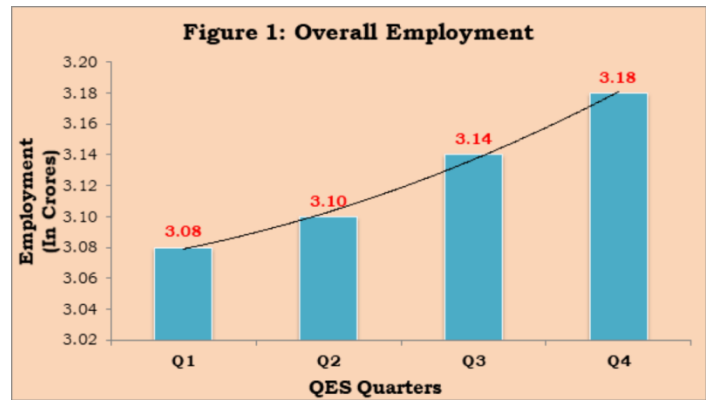
Telecom Technology Development Fund

- The Universal Service Obligation Fund (USOF) recently launched **Telecom Technology Development Fund (TTDF) scheme.**

- TTDF aims to fund R&D in **rural-specific communication technology applications**.

- It intends to form synergies among academia, start-ups, research institutes, and the industry to build and develop the telecom ecosystem.

- Additionally, the scheme aims to promote _technology ownership and indigenous manufacturing, create a culture of technology co-innovation, reduce imports,_

MINISTRY OF COMMUNICATIONS

Universal Service Obligation Fund
Department of Telecommunications

Eligibility: Only the following Indian entities are eligible for support from TTDF:
- **Domestic Companies with focus on telecom R&D, Use case development;**
- **Start-ups / MSMEs;**
- **Academic institutions;**
- **R&D institutions, Central & State government entities / PSUs /Autonomous Bodies/Special Purpose Vehicles / Limited liability partnerships- with focus on telecom R&D;**
  - **Collaborative consortium of above entities**

TELECOM TECHNOLOGY DEVELOPMENT FUND

boost export opportunities and creation of Intellectual Property.

- Under it, USOF is also targeting to **develop standards** to meet countrywide requirements and create the ecosystem for <u>research, design, prototyping, use cases, pilots, and proof of concept testing, among others.</u>
- It provides grants to Indian entities to encourage and induct indigenous technologies tailor-made to meet domestic needs.

Universal Service Obligation Fund

- Established in 2002, USOF is a body under the Department of Telecommunications.
- It was established under the **Indian Telegraph (Amendment) Act, 2003**, giving it a **statutory** status, with the fundamental objective of providing access to 'basic' (landline) telecom services to people in the rural and remote areas at affordable and reasonable prices.
- Subsequently, the Indian Telegraph Act was amended in 2006 to repeal the term 'basic'.
- The amendment widened its scope to **provide subsidy support for enabling access to all types of telecom services**, including mobile services, broadband connectivity and creation of infrastructure like optical fiber cable (OFC) in rural and remote areas.
- The resources for implementation of USO are raised by collecting a **universal service levy (USL)**, which is 5% of the **Adjusted gross revenue (AGR)** of telecom operators.
- It is a **non-lapsable fund** and the levy amount is credited to the **Consolidated Fund of India**.

Global Food Security Platform

- International Finance Corp. (IFC) recently launched the **Global Food Security Platform (GFSP)**.
- The war in Ukraine and an uneven global recovery from the COVID-19 pandemic have added to rising levels of hunger and malnourishment.
- GFSP is a **$6 billion financing facility** to <u>strengthen private sector's ability to respond to the crisis and help support food production</u>.
- It will supplement the World Bank's commitment of **US$30 billion** in response to the food crisis.

Application Of The Fund

- The fund will be used to **support private sector companies along the food value chain** by leveraging IFC's sectoral expertise in agribusiness, manufacturing, infrastructure, and technology, as well as the financial sector and trade finance.
- A **core part of the financing** will support *sustainable production and delivery of food stocks to countries affected by food instability.*
- It will facilitate trade of food commodities, delivery of inputs to farmers, support efficient production in major origins, including Ukraine, and effective distribution of food products in destination countries.
- It will also focus on long-term actions to <u>improve the resilience of the global food system and lessen its climate and ecological footprint</u>.
- This includes investing in increasing efficient crop production, improving access to fertilizers, greening fertilizer production and use, reducing crop loss and food waste, improving supply chain efficiency, and mitigating infrastructure bottlenecks.

International Finance Corporation (IFC)

- Established in 1956, IFC is the **private-sector arm of the World Bank Group** and is headquartered in **Washington, D.C.**, United States.
- It is an **international finance institution** that aims to advance economic development by <u>investing in for-</u>

> profit and commercial projects for poverty reduction.

- It is a corporation whose **shareholders are member governments** that provide <u>paid-in capital</u> and have the <u>right to vote</u> on its matters

- It advises governments on building infrastructure and partnerships to further support private sector development.

- It also offers advice to companies on making decisions, evaluating their impact on the environment and society, and being responsible

Sveriges Riksbank Prize in Economic Sciences

- The Royal Swedish Academy of Sciences recently awarded the 2022 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel to **Ben S Bernanke, Douglas W Diamond and Philip H Dybvig**.

- The award is popularly (although incorrectly) referred to as the Nobel Prize for Economics.

- Unlike the other Nobel prizes, the economics award wasn't established in Alfred Nobel's will of 1895 but by the **Swedish Central Bank** in his memory. The first winner was selected in 1969.

- The trio's main work focused on **understanding the role of banks in the economy**, particularly during financial crises and how banking failures can amplify and self-perpetuate a crisis.

- Their work has been crucial to subsequent research that has led to **enhanced understanding of banks, bank regulation, banking crises and how financial crises should be managed**.

Ben Bernanke's contribution

- Former Federal Reserve chairman Ben Bernanke, analysed the Great Depression of the 1930s, the worst economic crisis in modern history.

- Among other things, he showed how **bank runs** were a decisive factor in the crisis becoming so deep and prolonged.

    ✓ A **bank run** may happen where many savers try to withdraw their money at once, which can lead to a bank's collapse.

- He found factors that were directly linked to failing banks accounting for the lion's share of the downturn.

Diamond and Dybvig's contribution

- Diamond and Dybvig developed theoretical models that explain why banks exist, how their role in society makes them vulnerable to rumours about their impending collapse and how society can lessen this vulnerability.

- According to the Royal Swedish Academy of Sciences, these insights "**form the foundation of modern bank regulation**."

- The duo presented a solution to bank vulnerability, in the form of **deposit insurance** from the government.

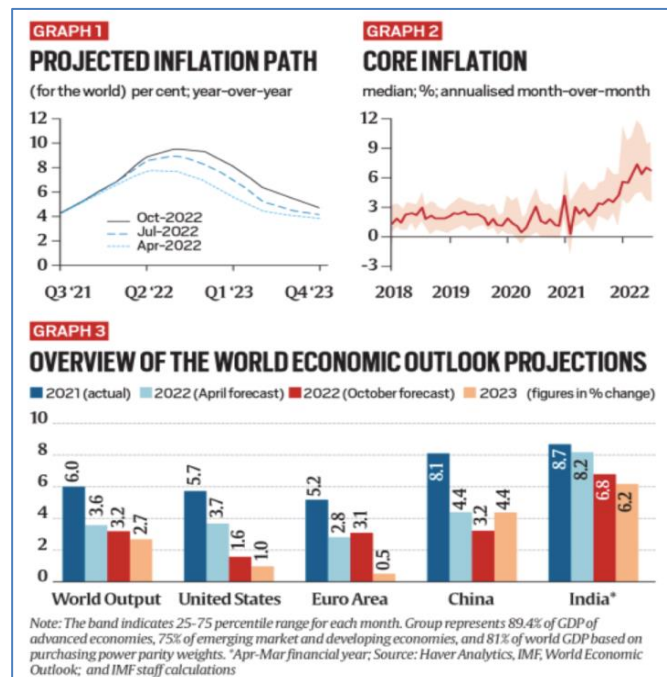## World Economic Outlook

- The IMF recently released the World Economic Outlook report. The WEO is **released twice every year** — April and October.

- It presents an <u>analysis of global economic developments</u> during the near and medium term.

- It gives an overview as well as detailed analysis of the world economy, by considering issues affecting industrial countries and developing economies.

Highlights Of The Report

- The central message of the WEO, is that "the worst is yet to come" for the world economy. Global growth is forecast to **slow from 6.0% in 2021 to 3.2%** in 2022 and **2.7%** in 2023.

- Except the global financial crisis of 2008 and the sharp fall immediately after the Covid pandemic in 2020, this is the <u>weakest growth profile for the world since 2001</u>.

- The global economy continues to face **steep challenges**, shaped by cost-of-living crisis, tightening financial conditions in most regions, Russia's invasion of Ukraine and the persisting Covid-19 pandemic.

- U.S. is expected to grow at 1.6% this year followed by a slowing down to 1.0% growth next year.

- The Euro Area at 3.1% this year and 0.5% next, while China is forecast to grow at 4.4% next year, followed by a projected 3.2 % this year.

- **Global inflation** is now expected to peak at 9.5% in late 2022. It is expected to remain elevated for longer than previously imagined and is likely to decline to 6.5% in 2023 and to 4.1% by 2024.

Indian Scenario

- India is projected to **grow at 6.8%** in the current fiscal year, following 8.7% growth in the fiscal year that ended March 31. The forecast for the next fiscal year remains unaltered at ~6.1%.

- **Inflation** in India was above the RBI's target and the report has projected **6.9% consumer price inflation this year** and 5.1% next year.

- The threat to India comes from at least **four sources**:
  - ✓ **Higher crude oil and fertiliser prices** will push domestic inflation higher;
  - ✓ **Global slowdown** will hurt exports, dragging down domestic growth and worsening the trade deficit;
  - ✓ A **strong dollar** will put pressure on the rupee's exchange rate, which will likely result in reducing India's forex reserves and reducing the capacity to import goods.
  - ✓ Also, given the **low demand** among most Indians, the government might be forced to spend more towards providing basic relief in the form of food and fertiliser subsidies. This will worsen the government's financial health.

GRAPH 1
PROJECTED INFLATION PATH
(for the world) per cent; year-over-year
Oct-2022
Jul-2022
Apr-2022

GRAPH 2
CORE INFLATION
median; %; annualised month-over-month

GRAPH 3
OVERVIEW OF THE WORLD ECONOMIC OUTLOOK PROJECTIONS
2021 (actual) 2022 (April forecast) 2022 (October forecast) 2023 (figures in % change)

Note: The band indicates 25-75 percentile range for each month. Group represents 89.4% of GDP of advanced economies, 75% of emerging market and developing economies, and 81% of world GDP based on purchasing power parity weights. *Apr-Mar financial year; Source: Haver Analytics, IMF, World Economic Outlook; and IMF staff calculations

Way Ahead

- Monetary policy should continue to <u>focus on restoring price stability</u>, and fiscal policy should aim to <u>reduce the cost-of-living pressures</u> while maintaining a sufficiently tight position aligned with monetary policy.

- **Structural reforms** can further support the fight against inflation by improving productivity and easing supply constraints.

- Moreover, **multilateral cooperation** is necessary for fast-tracking the green energy transition and preventing fragmentation.

Urban vs Rural inflation

- A deeper look into the inflation numbers this year reveals another trend — **higher inflation in rural areas than in the urban areas**.

- **Consumer Price Index (CPI)** in rural areas — 7.15% — was higher compared to 6.72% in urban markets.
- Cereals, milk, fruits and spices showed higher inflation rates in rural markets, compared to urban ones.
- **Consumer Food Price Index (CFPI)** for rural areas — 7.60% — was also higher than 7.55% for urban ones.

Reason For High Rural Inflation

- CPI in essence measures the movement in prices of a bundle of goods, which are assigned weights based on their importance.
- The goods are further classified into broader categories — food and beverage, clothing and footwear, housing, fuel and light, 'pan, tobacco and toxicants' and miscellaneous.
- The key difference between rural and urban inflation rate calculations lies in the **weightage attached to certain groups of commodities.**
- In rural areas, the food and beverage sector alone makes up about 54.18% of the CPI basket. The same sector carries a weight of 36.29% for urban areas.
- The reason for this lower weightage is that price trends in housing are incorporated in the CPI index for urban areas, but not for rural areas.

	Weightage in rural inflation	Weightage in urban inflation
Food and beverages	54.18%	36.29%
Pan, tobacco and intoxicants	3.26%	1.36%
Clothing and footwear	7.36%	5.57%
Housing	--	21.67%
Fuel and light	7.94%	5.58%

- This means that rural consumers are more susceptible to food inflation than their urban counterparts — and that's exactly what has happened.

Past Trends

- Higher inflation rates in rural areas were the norm before 2018, according to an article, 'Rural-Urban Inflation Dynamics in India', published by the RBI in December 2020.
- The growth in average annual inflation rates in rural India was generally higher than that of urban India from the financial year 2012-13 till 2017-18.
- It was from the financial year 2018-19 onwards the urban India's inflation rate started rising faster, and it's possible that the 2022 numbers reflect a return to the earlier status quo.
- The crux of the RBI analysis was that in terms of following patterns or trends, rural and urban India's inflation rates don't diverge significantly.

Foreign Direct Product Rule

- The US Department of Commerce has imposed export controls under the **Foreign Direct Product Rule (FDPR)** to restrict China's ability to make high-end semiconductors.
- These restrictions are aimed at the Chinese manufacturing of advanced computing chips, supercomputers, and advanced semiconductors.
- The US administration has claimed that China is using *high-end chips for military systems and AI for surveillance on the United States* and therefore these export controls are a national security priority.

Background

- FDPR, was first introduced in **1959** to **control trading of US technologies**. It essentially says that if a product was made using American technology, the US government has the power to stop it from being sold – including products made in a foreign country.
- The rule took centre stage in 2020, when it was used against China telecom company Huawei Technologies.

- American officials had tried to cut off Huawei's supply of semiconductors but found that companies were still shipping to Huawei, chips made in factories outside the United States.
- Eventually, US regulators found a way around: Almost all chip factories contain critical tools from US suppliers. So, they expanded the FDPR to control trade of chips made using US technology or tools.
- It was a big blow to Huawei's smart phone business, and US regulators used it on Russia and Belarus after the invasion of Ukraine to cut off chips.

Impact

- The current move would ban any semiconductor manufacturing firm that uses American tools – which most do – from selling advanced chips to China.
- They will have to develop their own manufacturing technologies and processor technologies to replace the missing US or Western technologies, currently in use. In that case, it could take China five to 10 years to catch up to today's technology.
- Since the ban applies to all nations and companies using US equipment. Non-compliance will restrict a company's access to US technology and those not cooperating will have to **face sanctions**.
- It would also lead to **global supply chain disruptions** related to RAM modules, components of modems, mobile phones, and laptops.
- Indian imports of electronic sub-assemblies and modules from China will run into trouble in the short run. However, in the long run, it could help India with companies looking for alternate manufacturing destinations.

Banking as a Service

- Banking as a Service (BaaS) is a fintech innovation that is enabling bank and fintech collaborations.
- It is an end-to-end approach that facilitates fintech companies and other third-party organizations to connect with a bank's system employing APIs.
- This helps organizations build innovative financial services, upon the provider bank's regulated infrastructure while enabling open banking services.

- Thus, banks are trying to catch up to the speed of fintech companies. Or, banks are partnering with fintech companies to innovate financial services.
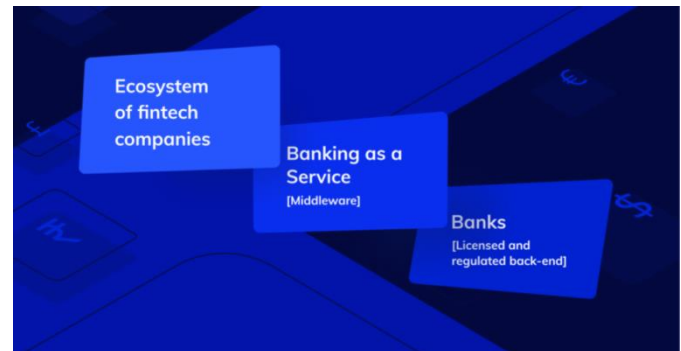
Application Programming Interface (API)

- It is a software intermediary that allows two applications to talk to each other.
- Whenever someone uses an app like Facebook, sends an instant message, or checks the weather on the phone, they are using an API.
- When someone uses an application on their mobile phone, the application connects to the Internet and sends data to a server.
- The server then retrieves that data, interprets it, performs the necessary actions and sends it back to the phone. The application then interprets that data and presents the required information in a readable way. All of this happens via API.

POLITY & GOVERNANCE

YUVA 2.0 Scheme

YUVA 2.0 (Young, Upcoming and Versatile Authors) scheme was launched by the Ministry of Education. Based on Prime Minister's vision of **mentoring** young authors, this programme aims to promote *reading, writing and book culture among the young generation* of the country by training the young and budding authors (below 30 years of age).

Background

66% of India's population is young which can be tapped for capacity and nation building. The National Education Policy (NEP), 2020 emphasized on empowering these young minds and creating a learning environment in order to make this young generation ready for leadership roles in the future.

YUVA	YUVA 2.0
Launched in May, 2021.	Launched in October, 2022
Theme: **National Movement of India** with focus on Unsung Heroes, little known facts about the Freedom Struggle, Role of various places in National Movement, Entries bringing out new perspectives related to political, cultural, economic, or science related aspects of national movement etc.	Theme: **Democracy** with focus on Institutions, Events, People, and Constitutional Values as part of the India@75 Project (Azadi Ka Amrit Mahotsav).
Book proposal with a word limit of 5000 words allowed.	Book proposal with a word limit of 10,000 words allowed.
Youth under 30 years of age eligible.	Youth under 30 years of age eligible except winners of YUVA scheme 2021-22.

Vision

Mentoring the young generation of creative writers under the flagship scheme "**Ek Bharat Shrestha Bharat**" and help them develop their writing skills on a broad spectrum of subjects like fiction, non-fiction, drama, poetry, thriller etc. to promote Indian heritage and culture at the international level.

Implementation and Execution: The **National Book Trust (NBT)**, India under the Ministry of Education will be the implementing agency for this scheme and will ensure its phase-wise execution.

Selection Procedure	Rewards
• A committee constituted by **NBT** will select **75 candidates** through an All-India Contest hosted by http://mygov.in • The contest period will be for two months i.e., from 2nd October to 30th November 2022. • A book proposal of 10,000 words is required to be submitted. • Evaluation will be done between 1st December 2022 to 31st January 2023. • Selected names will be announced by last week of February 2023. • Mentorship duration will be six months starting from 1st March 2023. • On October 2, 2023, the first batch of books will be released	• Books of the selected candidates will be **published** by the NBT and translated into other languages, thus promoting the concept of "Ek Bharat Shrestha Bharat". • A consolidated scholarship of Rs. 50, 000 per month for a period of six months (50,000 x 6 = Rs. 3 Lakh) per author will be paid under the Mentorship Scheme. • A royalty of 10% will be payable to the authors on successful publications of their books at the end of the six-month Mentorship

under the supervision.	Program.

Outcome

- The scheme will prepare a pool of authors ready to represent the *Indian culture and literature globally in English as well as Indian languages.*
- It will lead to proficiency in genres like fiction, non-fiction, drama, poetry etc.
- It will encourage the youth to take up reading and authorship as a profession.
- It will provide a positive mindset to the youth.
- It will provide boost to India's publishing industry.

ABOUT National Book Trust (NBT) nbt.india एक सूत्र सकलम

It is an apex body established by the Government of India (Department of Higher Education, Ministry of Human Resource Development) in the year 1975.
- Under the NEP 2020, the name of the Ministry of Human Resource and Development (MHRD) was changed to Ministry of Education (MoE)
- It promotes the habit of reading by organizing book fairs and exhibitions throughout the country.
- It takes part in international book fairs and showcases Indian books.
- It provides financial assistance to authors.

Objectives:
- To produce and encourage quality literature in English, Hindi and other Indian languages.
- To make books available to general public at affordable rates.
- To arrange book fairs for promoting books.

About "Ek Bharath Shrestha Bharat" Scheme

- This scheme was launched on 31st October 2015, the 140th birth anniversary of Sardar Vallabh Bhai Patel.
- This scheme aims to enhance **inter-state interaction** and promote mutual understanding between the people from different states/ UT's through the concept of **pairing** for a time period.
- Under this scheme, the paired states will carry out activities based on each other's culture, traditions, festivities, cuisine, language, sports, music, dance etc. to promote sustained and structured cultural connect.
- **Objectives (given in fig. below)**:

CELEBRATE the Unity in Diversity of our Nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our Country.

PROMOTE the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States.

SHOWCASE the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity.

ESTABLISH long-term engagements.

CREATE an environment which promotes learning between States by sharing best practices and experiences.

Matdata Junction

Matadata Junction is a **voter-awareness programme** launched by Election Commission of India.

Objective

- To create awareness among the voters across the country
- To increase voter participation
- To encourage young and first-time voters to take informed decisions

Features

- It is a **year-long programme** that will be broadcasted **every Friday** between 7-9 pm on AIR channels such as **Vividh Bharati, FM Gold, FM Rainbow and Primary Channels.**
- The **52-week programme** will be based on **52 themes (**52 episodes of 15 minutes**)** covering all the aspects of voter ecosystem.

- These themes will be based on Quizzes, expert interviews, and songs produced by SVEEP (Systematic Voter's Education and Electoral Participation).
- This programme will also include a **citizen's corner** where the citizens will be able to make queries and give suggestions.

About SVEEP (Systematic Voter's Education and Electoral Participation)

SVEEP is Election Commission of India's flagship programme launched with the aim of spreading <u>voter awareness and promoting voter literacy</u> in India. The main goal ~~of SVEEP~~ is to encourage all <u>eligible citizens to vote</u> and make informed decisions during elections and build a participative democracy.

Advisory Against Betting Advertisements

The Ministry of Information and Broadcasting issued advisories to *television channels, digital news, OTT platforms and newspapers* advising them to refrain from showing advertisements about betting platforms like Fairplay, PariMatch, Betway etc. and **surrogate advertisements** of such websites.

Key Points: According to the advisory,

- Digital news platforms are being used by the <u>online offshore betting platforms</u> as a **surrogate product** to advertise about online betting and a strong resemblance was found between the **logos** of online betting platforms and digital news platforms.
- These betting websites and news platforms are *not registered under any legal authority of India.*
- These advertisements are illegal as betting and gambling is illegal in most of India.
- This restriction by the government is based on the **Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements 2022** under Consumer Protection Act 2019, Cable TV Network Regulation Act 1995 and the IT Rules, 2021.
- The govt also warned TV channels, news and OTT platforms about strong penal action on violation of rules.

*{For more on Consumer Protection Authority (Prevention of Misleading Advertisements and Necessary Due Diligence for Endorsement of Advertisements) Guidelines 2022 refer **The Recitals-June 2022**}*

Professors of Practice

University Grants Commission (UGC) recently approved <u>draft guidelines</u> for hiring "Professors of Practice" in **universities and colleges.**

Who are "Professors of Practice"?

They are experts from various fields like engineering, science, media, literature, social science, civil services, fine arts, armed forces etc. with proven expertise of atleast **15 years** in their relevant field (at a senior level).

Objective

The National Education Policy (NEP) 2020 focused on <u>skill-based education</u> to meet industry and economy needs and recommended vocational education along with general education to skill youths from the **higher education institutions (HEIs)** at optimum level. Thus, UGC has come up with the idea of bringing <u>industry and professional expertise to the classroom</u> for sharing the knowledge of real-world practices with the students. The idea will also help the **understaffed** universities and college to <u>augment their faculty resources.</u>

Guidelines

- Experts with at least 15 years of experience in their relevant fields at a senior level will be eligible for this post.
- *PhD degree and publications won't be required* to be hired as professors if they have exemplary professional practice.

- Teaching professional (either serving or retired) **won't** be eligible for the post.
- The number of professors <u>should not exceed 10% of the sanctioned posts</u> at any given time.
- Engagement of Professor of Practice should not affect the number of sanctioned posts and recruitment of regular faculty members.
- They will be hired initially for a **one-year period**. At the end of their initial tenure, an assessment will be made by the college/university based on the contribution made by the expert and further requirement and the decision will be taken about their extension.
- **Maximum duration** of service as a Professor of Practice will be **three years** which can be *extended for only upto one year in exceptional cases*.

Duties and Responsibilities

- To help the administration in <u>developing and designing courses and curriculum.</u>
- To introduce new courses and <u>deliver lectures</u> as per institutional policies.
- To <u>encourage and mentor students</u> in projects requiring <u>innovation and entrepreneurship.</u>
- To focus on enhanced **industry-academia collaborations** like conducting workshops, seminars, deliver special lectures and training programmes.
- To carry out <u>joint research project or consultancy services</u> with regular faculty members of the college or university.

3 Categories of Engagement: There are three categories of engagement for hiring a Professor of Practice-

1. **Professor of Practice funded by Industries:** Students graduating from the HEIs lack the required skill set due to which the industries must spend on their training post hiring. Thus, involving industry experts in teaching will be beneficial for both the industry and the HEI as the result will be trained graduates.

2. **Professor of Practice funded by HEIs from their own resources:** The HEIs hire the experts on their own based on their requirement**.** The engagement may be full time or part time based on the need and the renumeration is a mutual decision of the expert and the HEI.

3. **Professor of Practice on Honorary Basis:** Experts who are interested in sharing their knowledge and expertise with the students nominate themselves to teach on honorary basis. The renumeration of such professionals is the decision of the HEIs.

Procedure of Selection

- Nominations will be invited from the industry experts by the Vice-Chancellors/Directors of HEIs.
- Willing experts may ~~also~~ be nominated or can nominate themselves by sending their applications along with a brief write-up about the potential contribution they can make to the HEIs.
- Then, a committee consisting of two senior Professors from the HEIs and one eminent external member will consider the nominations received.
- Based on the recommendations of this committee, the Academic Council and the Executive Council or statutory bodies of the HEI will decide on the engagement of the expert.

Is "Professor Of Practice" A New Concept?

No, it's not a new concept in India. IITs have been hiring experts as Professor of Practice since years but the eligibility criteria at the IITs is a *Master's or a PhD degree* with outstanding record of driving innovations in teaching, guiding technical projects and coordinating industrial projects.

Professor with a PhD vs Professor of Practice

PhD Professors	Professor of Practitioners
They impart cutting edge knowledge along with	They bring knowledge and deep expertise relevant to

a sound conceptual base.	specific context and applications.
They are trained to answer "how" and "why's" as they are originally researchers, and they create new knowledge after long and detailed investigations on relevant issues using their academic knowledge.	Although not trained at conducting original research, they have the practical knowledge in the relevant field with real life experiences which can be used by the students to become industry ready.
They focus on relevant theories and concepts and with their application in various contexts. They prepare students to face current and future challenges.	Due to limited experiences, they are less aware of concepts and frameworks related to their practice domains but with this experience, they can make the students aware of the real-life challenges and come up with new and innovative solutions.

For the successful implementation of this idea, the HEI should be open to work in a mixed model where Professors with PhD and industry experts as Professor of Practice can work together to create a pool of trained-educated graduates that are industry ready.

Financing Poll Promises

The Election Commission of India (ECI) has proposed to amend the Model Code of Conduct (MCC) and add standardized pro-forma to Part VIII (Guidelines on election manifesto) of the MCC seeking details from political parties about the **ways and means** of raising additional resources to finance poll promises, and its impact on the fiscal sustainability of the State or the Central government.

✓ The **Model Code of Conduct (MCC)** is a series of regulations issued by the Election Commission of India to monitor the political parties and their candidates ahead of elections to provide free and fair elections.

Objective: ECI aims at introducing this disclosure requirement so that:

➢ There can be a **healthy debate on the financial implications** of implementing poll promises both in the immediate future and for the long-term fiscal sustainability.

➢ There can be **clarity in the process of declaration**.

➢ Voters can compare and **make informed decisions**.

➢ **Ambiguity and financial vagueness of promises can be removed**.

➢ A **level playing field can be provided** to all parties and candidates.

Key Points

• The ECI floated a consultation paper among all political parties prescribing the standardized disclosure proforma **to declare quantification of the physical coverage of the promises** made during the election (whether it would be universal, for below poverty line (BPL) families or community specific), their financial implications, availability of financial resources and the ways of raising resources for meeting the additional expenditure to be incurred.

• The proforma also provides for certain fiscal information being pre-filled by the Chief Secretaries of States and Union Finance Secretary at the Centre based on the latest budget and revised estimates in the year of the general election.

{For more about "Freebie Culture in India" Refer -The Recitals: August 2022}

PM-DevINE

The union cabinet chaired by the Prime Minister has approved the **Prime Minister's Development Initiative for North East Region (PM-DevINE)** scheme for the remaining 4 years of the 15th Finance Commission from 2022-23 to 2025-26.

Background

- The scheme was announced by the Minister of Finance and Corporate Affairs in the 2022-23 Union Budget and is being implemented through the Ministry of Development of North Eastern Region (MDoNER).
- Initial allocation of Rs. 1,500 crore was made for the scheme to fund infrastructure.
- The scheme will be implemented by MDoNER through North Eastern Council or Central Ministries/ agencies.

Objectives

- Fund infrastructure convergent in the spirit of **PM Gati Shakti**.
- Support social development projects based on needs of North-East Region.
- Enable livelihood activities for youth and women.
- Fill the development gaps in various sectors.
- Employment generation.

Need of PM-DevINE: It was introduced to address issues like-

- Below average **Basic Minimum Services (BMS)** parameters of North-Eastern States with respect to the country.
  - ✓ Basic Minimum Services (BMS) include *primary health care, universalization of primary education, safe drinking water, public housing assistance to all shelter-less poor families, nutrition, connectivity of all villages & habitations by roads, and streamlining of the Public Distribution System (PDS) with a focus on the poor*.
- Critical gaps as per the **NER District Sustainable Development Goals (SDG) Index 2021-22** by the NITI Aayog, UNDP and MDoNER.

Key Points

- It will be a Central Sector Scheme with 100% Central funding.
- Outlay - Rs.6,600 crore for the four-year period from 2022-23 to 2025-26.
- Efforts will be made to complete all PM-DevINE projects by 2025-26 so that there are no *liabilities remaining* post this period.
- Measures would be taken to ensure adequate *operations and maintenance* of the sanctioned projects so that they are sustainable.
- To limit construction risks of time and cost overrun, projects would be implemented on **Engineering-Procurement-Construction (EPC)** basis.
- It will support *large-sized infrastructure and social development projects* and an *end-to-end development solution* instead of isolated projects.
- It will ensure elimination of duplicate projects under PM-DevINE with any of the other schemes of MDoNER or those of any other Ministry/Department.
- Projects with substantial socio-economic impact or sustainable livelihood opportunities for the general public like basic infrastructure in all Primary Health Care Centres, comprehensive facilities in Government Primary and Secondary Schools etc. may be considered in the future.

Governor's Powers To Sack A Minister

Kerala governor threatened to sack the ministers if they continued to lower the dignity of Governor's office.

Can The Governor Sack A Minister?

- According to **Article 164 (1)**, the Governor can appoint the Council of Ministers (CoM) on the advice of the Chief Minister (CM). This means there is no choice of his own in appointing CoM. He must act according to the advice of the CM.

- It also states that the ministers hold the office during the pleasure of the Governor. This doesn't give him the right to sack the ministers or the CM. His pleasure exists <u>until the government enjoys the majority in the house</u>. Once, the government loses the majority but refuses to quit, the Governor can withdraw his pleasure and dismisses it.

- Thus, according to the constitutional provisions, without the advice of the CM, the Governor can neither appoint nor dismiss the ministers.

Related Judgements

- **Shamsher Singh And Anr vs State of Punjab, 1974:** The Supreme Court stated that the President and the Governors are custodians of all executive and other powers under various articles and shall exercise their formal constitutional powers only upon and on advice of the Council of Ministers except for some exceptional situations.

  ✓ *Exceptional situations* can arise if the PM or the CM cease to command majority in the house and the government loses the majority but refuses to quit.

- **Nabam Rabia vs Deputy Speaker And Ors, 2016:** The SC cited the observations of B.R.Ambedkar and stated that the Governor has no function under the constitution which he can discharge by himself but has certain duties to perform.

Related Commission Recommendations

- **Sarkaria Commission, 1983:**

  ✓ It investigated Centre-State relations and proposed that the PM should consult the Vice-President and the Lok Sabha Speaker while selecting a State's Governor.

- **National Commission to Review Working of the Constitution, 2000:**

  ✓ Appointed by the Atal Bihari Vajpayee government, this committee recommended that a state's governor should be appointed by the President after <u>consulting the CM</u> of that state. The five-year term of service will be adhered to and his transfer and removal will be done after consulting the CM.

- **M M Punchhi Committee, 2007:**

  ✓ It proposed a committee consisting of PM, Home Minister, Vice-President, Speaker and concerned Chief Minister for appointing the Governor.

  ✓ It recommended deleting the "Doctrine of Pleasure" from the constitution but backed Governor's right to sanction the prosecution of ministers against the advice of the state government.

  ✓ It also argued for a provision for impeachment of Governor by the state legislature.

What if a Minister lowers the dignity of Governor or his office?

In this case, the Governor can ask the CM to enquire in this case and if the minister is found guilty, the Governor can ask the CM to drop the concerned minister.

Uniform Civil Code

The Centre has sought dismissal of petitions filed in the Supreme Court seeking implementation of Uniform Civil Code in the country.

Key Points

Responding to the PILs filed demanding religion-neutral laws to regulate matters of divorce, adoption, guardianship, succession, and inheritance, etc. the **government said** that-

- Citizens belonging different religions follow different property and matrimonial laws which is affront to the nation's unity.

- It had requested the **21st Law Commission** to make appropriate recommendations following an in-depth study of the provisions of various personal laws governing different communities which preferred a wider consultation on the matter. But its term ended in 2018 and the chairman and members of the new commission are yet to be appointed.

- It said that once the appointment is completed and a report is submitted after scrutinizing the matter, deliberations will be commenced with the stakeholders and a policy decision can then be taken.

- It said that the power to make laws is exclusively that of the legislature and the court cannot give a "mandamus to Parliament to make certain laws".

What is a Uniform Civil Code (UCC)

- It **aims to provide a common law for all the religious communities** governing issues like marriage, adoption, inheritance, divorce, etc. and is directed towards abolishing diverse personal laws of various religious communities.

- There are several laws in India like *Indian Contract Act, Civil Procedure Code, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act* that follow the idea of UCC and are applicable across the territory.

- Goa is the only state with uniform civil code which is applicable to all, regardless of religion except while protecting certain limited right.

Origin

- It's origin dates back to 1835 when the British Government submitted its report recommending a uniform code for Indian laws relating to crimes, evidence, contracts etc. and excluding personal laws of Hindu and Muslims from its perspective.

- In 1941, the B N Rau committee was formed to examine the need of **common Hindu laws**. This committee recommended a **codified Hindu Law** which would give equal rights to women.

- It was then adopted in 1956 as the Hindu Succession Act to amend and codify the laws relating to unwilled succession, among Hindus, Buddhists, Jains, and Sikhs. This Act reformed the Hindu personal law and gave women greater property rights, and ownership.

- However, there were separate personal laws for Muslim, Chirstian and Parsis.

- Dr. B R Ambedkar, while formulating the Constitution made UCC voluntary at that time and added Article 44 in Part IV of the Directive Principles of the State Policy (DPSP) which recommended implementing UCC when the nation was ready to accept it.

Conflict b/w Personal Laws and UCC

Personal Laws	UCC
Apply to a certain section of society based on their religion, caste, faith, and belief made after due consideration of customs and religious texts.	Aims to provide a common law for all the religious communities.
Uphold the diverse community idea-based rights of the individuals.	Imposes a single law governing all aspects of social life.
Sourced and authorized from religious ancient texts of Hindus and Muslims.	Sourced from Hindu code bill, Shariat law, and others.

Related Constitutional Provisions

Article 44 of the Constitution gives state the responsibility to secure a Uniform Civil Code (UCC) throughout the territory of India.

✓ Article 44 is one of the Directive Principles of State Policy (DPSP).

- ✓ DPSP's as defined in Article 37, are not justiciable but the principles laid down therein are fundamental in governance.

Related Judgements

- **Shah Bano Case, 1985:** The Supreme Court held that the Muslim Woman has a right to get maintenance from her husband under Section 125 of the CrPC after she was given triple talaq by her husband. The court recommended bringing a common civil code to remove laws with conflicting ideologies.

- **Sarla Mudgal Case, 1995:** This case questioned whether a Hindu husband could solemnize second marriage by embracing Islam. The court said that a Hindu marriage can only be dissolved under the Hindu Marriage Act, 1955 and conversion to Islam and marrying again would not dissolve the Hindu marriage. The SC asked for implementation of Uniform Civil Code.

- **John Vallamottam Case, 2003:** This case challenged the constitutional validity of Section 118[7] of the Indian Succession Act which imposed unreasonable restrictions on Christians while donating their property for religious or charitable purpose by will. The SC struck down this section and asked the parliament to bring in UCC.

- **Shayara Bano Case, 2017:** This case involved the archaic practice of triple talaq. The Court concluded that the Constitution requires the State to provide for a UCC to remedy and ease maladies.

Need for UCC

1. **Protecting the Vulnerable** including women and religious minorities through a common law applicable to all.

2. **Promote Nationalism** through unity.

3. **Simplify laws:** It will simplify the complex laws around marriage ceremonies, inheritance, succession, adoptions that are presently segregated on the basis of religious beliefs like the Hindu code bill, Shariat law, and others.

4. **Promote Gender Equality** by replacing the personal laws that contain discriminatory provisions against women such as instant talaq, polygamy in Muslim men, laws of inheritance etc.

Challenges

1. **Diverse laws:** As the personal laws uphold diverse community-based rights of an individual, it is difficult to bring a single law governing all aspects of social life.

2. **Contradicting Constitutional Provisions:**

   - ✓ While Article 44 envisages uniformity in personal laws but the inclusion of personal laws in concurrent list indicates protection of diversity
   - ✓ Article 43 notes that the state shall endeavor **by suitable legislation** but in Article 44 the suitable legislation part is missing making it not compulsive on the legislature as such.
   - ✓ Article 31C that was inserted after the 42nd amendment in 1976 by Indira Gandhi Government says that if a law is made to implement the directive principle, it can't be challenged in the court of law on the grounds of violation of fundamental rights secured under Article 14 and Article 19.

3. **Communal Politics:** Framing a UCC will open up a Pandora's Box with unintended consequences and people in power will use it for their own gain and disrupt the social life of Hindus as well as Muslims.

4. **Sensitivity of the Issue** in order to prevent mass protests and negative public reaction.

The government needs to make efforts to implement the UCC by reaching a common consensus with various communities on this matter. People should be made aware of the benefits of having a common law by conducting discussions and deliberations at various levels of the society. But at the same time, the sensitivity of the issue must be kept in mind to maintain peace and harmony.

INTERNATIONAL RELATIONS

Leakages in Nord Stream Pipelines

Four leaks were reported at different points in the Nord Stream pipelines, linking Russia and Europe. Two of the leaks were in Swedish waters while the other two were reported from Danish waters.

Impact Of These Leaks

- It has disrupted the operations of the **gas** shipment infrastructure and it is not likely to be restored anytime soon.

- With the timeframe for repairs being uncertain, the pipelines were unlikely to provide any gas to Europe in the forthcoming winter months.

- European gas prices spiked after reports of the leaks emerged.

- Analysts are worried about the environmental impact of the leaks as well. Technical experts are saying that the leaks together were releasing more than 500 metric tonnes of methane

Nord Stream Pipelines

- Nord-stream consists of **two pipelines**, which have two lines each.

- **Nord Stream 1** was completed in 2011 and runs from _Vyborg in Leningrad_ to _Lubmin near Greifswald (Germany)._

- **Nord Stream 2** which runs from _Ust-Luga in Leningrad_ to _Lubmin_ was completed in September 2021.

  - ✓ It has the capacity to handle 55 billion cubic meters of gas per year once it becomes operational.

- The twin pipelines together can transport a combined total of **110 billion cubic metres** (bcm) of gas a year to Europe for at least **50 years.**

- The Nord Stream crosses the Exclusive Economic Zones (EEZs) of several countries including Russia, Finland, Sweden, Denmark and Germany, and the territorial waters of Russia, Denmark, and Germany.

- In Germany, the pipeline connects to the **OPAL (Baltic Sea Pipeline)** and **NEL (North European Pipeline)** which further connects to the European grid.

Importance Of This Pipeline

- **Increasing dependence of Europe on Russian gas**

  - ✓ Europe requires more than 100 billion cubic metres (bcm) of natural gas each year and around 40% of its gas comes from Russia. This gas is used for heating homes, factories, and offices in the harsh, long European winters and also for power generation.

  - ✓ Reducing dependence on Russian gas is difficult as there are no easy replacements. There is _no infrastructure to import LNG from exporters like Qatar and U.S._

- ✓ Germany's transition to cleaner fuels by phasing out nuclear power and cutting reliance on coal has increased its dependence on Russian gas.
- **Cost effective mode**
    - ✓ **Nord Stream 2** is important because it eliminates the risks related with sending gas through transit countries.
        - o There is an existing land pipeline between Russia and Europe that runs through Ukraine.
        - o Russia could bypass the Ukrainian pipeline, and deprive it of lucrative **transit fees** of around $3 billion per year. Thus, cutting operating costs and giving direct access to its most important European customer, Germany.
    - ✓ It increases Europe's dependence on Russia while giving it a reliable customer.
- **Importance for Russia**

    As for Russia, which has the largest natural gas reserves in the world, around 40% of its budget comes from sales of gas and oil.

Israel And Lebanon Reach An Agreement On Maritime Border

- Lebanon and Israel have reached a historic deal, brokered by USA, to end a long-running maritime border dispute in the gas-rich Mediterranean Sea.
- Israel and Lebanon do not have official diplomatic relations and the two countries remain technically at war.

Maritime Dispute Between Israel And Lebanon

- The two countries declared overlapping boundaries in 2011 in the Mediterranean Sea.
- Since both countries have been technically at war, the **United Nations** was asked to mediate.
- The issue gained significance after Israel discovered two gas fields off its coast a decade ago, which experts had believed could help turn it into an energy exporter.

Key Highlights Of The Agreement

- The draft agreement aims to settle Israel and Lebanon's competing claims over offshore gas fields in the region.
- **Sets Maritime Boundary**
    - ✓ The agreement sets a border between the maritime waters of Lebanon and Israel for the first time.
    - ✓ Lebanon recognised Israel's existing control of a 3-mile-wide stretch of water closest to their shared coast.
    - ✓ Israel allowed Lebanon the right to drill in a previously contested gas field that stretches between the Israeli and Lebanese economic zones.
- **Division of gas fields**
    - ✓ A major source of friction was the **Karish gas field**, which Israel insisted fell entirely within its waters and was not a subject of negotiation.
    - ✓ The agreement has *not* been made public but under terms leaked to the press all of the Karish field would fall under Israeli control.

Lebanon-Israel maritime border dispute
Lebanon and Israel have agreed to end a long-running border dispute in the Mediterranean Sea. Various boundary lines have been proposed over the years, but the US-brokered deal is based on Line 23. It opens the door to new oil and gas exploration.

Exclusive economic zone boundaries
Line 1
Hof line
Line 23
Line 29
Qana gasfield
Karish gasfield
LEBANON
ISRAEL
Mediterranean Sea

- ✓ On the other hand, Lebanon will get its full rights from the **Qana field**, and Israel might receive share of future revenues.

Significance

- The agreement is also expected to avert the immediate threat of conflict between Israel and Hezbollah militants in Lebanon.

- The agreement will create new sources of energy and income for both countries, particularly important for Lebanon, which is facing a crippling energy and financial crises.

- It could also have a potentially wider impact: it would likely provide Europe with a potential new source of gas amid energy shortages caused by the Russian invasion of Ukraine.

Land Border Dispute Not Covered Under The Agreement

- The agreement does not touch on the shared land border between Israel and Lebanon.

   ✓ Land border between the two countries is still disputed. However, both countries have committed to a ceasefire.
   ✓ This border is also called the **Blue Line**, a boundary that was drawn up by the UN after Israel withdrew from southern Lebanon in **2000.**

- This land border is currently patrolled by the United Nations forces.

National Congress of Chinese Communist Party

- The 20th National Congress of the **Chinese Communist Party (CCP)** started with the address of Chinese President Xi Jinping.

- The weeklong national congress is an important event in Chinese politics as it defines the political-institutional character of the CCP due to its monopoly of Chinese politics.

Why This Year's Congress Is Unusual?

- Former leader **Deng Xiaoping** had left the legacy that CCP general secretaries would step down after serving **two 5-year terms**.

- However, this time, Xi Jinping is flouting this unwritten rule and is set to get a third term.

- Xi Jinping has also flouted a convention that has been followed since 2002. As per this convention, a person cannot be reappointed at age **68 years or older**.

   ✓ Xi Jinping is 69 years old and is being treated as the general secretary.

Chinese Communist Party (CCP)

- CCP is the founding and ruling political party of modern China, officially known as the People's Republic of China.
   - It has maintained a political monopoly since Mao Zedong founded the People's Republic in 1949.
- China is a one-party state which is governed by the CCP.
- The party's *general secretary tends to be the paramount leader of the country*

Selection Of Party Leadership

- Once in every five-year, CCP organizes a weeklong **National congress** to set major policies and select top leaders. This congress should not to be confused with the **National People's Congress**, which is China's legislature.

- The congress is made up of some 2,300 delegates representing all levels of the party hierarchy across 34 provinces and regions.

- These delegates appoint approximately **400 members** to the party's top national-level institution, the **Central Committee.**

   ✓ The Central Committee acts as a sort of board of directors for the CCP, and it is required to hold annual meetings.

- The Central Committee then selects the **Politburo**, which has **25 members**.

- ✓ Politburo members also have <u>concurrent positions in the government and influential regional offices and have authority over bureaucratic appointments.</u>
- In turn, the Politburo chooses the **Politburo Standing Committee (PSC)** through secretive, backroom negotiations.
  - ✓ The <u>Standing Committee functions as the epicentre of the CCP's power</u> and leadership, and its membership has ranged from **five to nine people**.
  - ✓ Currently, Xi Jinping is at the top, as the party's general secretary.
  - ✓ He is also the chairman of the **CCP Central Military Commission** and the **President of the People's Republic of China.**
    - o The first gives him control of the armed forces while the second makes him the head of state.

Governance Structure In China

- While the Central Committee, Politburo, and Standing Committee generally give broad policy direction, actual governance of China can be quite decentralized.
- *Chinese provinces enjoy significant autonomy*, and sub-provincial officials and leaders, appointed by the central government, have much control over local governance.
- <u>China's military, the People's Liberation Army (PLA)</u>, is technically the armed wing of the CCP.
  - ✓ Its main objectives include **protecting the party's rule** and **defending the party's interests.**
  - ✓ As per analysts, the CCP sees the PLA as a practical instrument of its statecraft with an active role in advancing the China's foreign policy.
- The CCP's Central Military Commission, currently headed by Xi, oversees both the PLA and the People's Armed Police, which primarily focuses on internal security.

Rishi Sunak becomes Britain's First non-white Prime Minister

- Rishi Sunak took charge as the 57th Prime Minister of the United Kingdom.
- He became first-ever non-white Prime Minister and Britain's youngest Prime Minister in recent times.
  - ✓ Mr. Sunak, 42, is of Indian descent and was born to parents who migrated to Britain from East Africa.
- He is the country's third PM in 50 days after first Boris Johnson and then Liz Truss were forced from office by a rebellion within the ruling Conservative Party.

Challenges Faced By Sunak

- **A Stagnant Economy**
  - ✓ In terms of overall output (in US$), the economy has been largely stagnant since the start of the 2008 Global Financial Crisis.
  - ✓ The decision to leave the EU made matters worse. It became tougher for the UK to trade with its closest trading partners in Europe.
    - o The higher compliance costs hit small businesses. Several businesses were forced to move out of the UK in order to protect their market share.
  - ✓ The Covid disruption and the war in Ukraine further affected the British economy.
- **Derailed Government Finances**
  - ✓ According to a report, in 2018–19, revenues were sufficient to cover day-to-day (current) spending.
  - ✓ However, spendings made to mitigate the economic impact of the pandemic and associated lockdowns derailed the government finances.
  - ✓ This essentially meant that in the years to come, the government would have to cut spending.
- **Growing Cost of Living Crisis**
  - ✓ The war in Ukraine set off an unexpected energy price inflationary spiral.
  - ✓ The UK's retail inflation, which typically stayed below 2.5%, skyrocketed to double-digit historic highs.

- Coming on the back of reduced incomes and livelihoods, this inflationary pressure reduced the purchasing power of citizens.
- This has triggered labour action across several segments of British life.
  - Workers across different sectors are either already on strike or threatening to go on strike.

- **Decision of Truss Government**
  - The Truss-Kwasi Kwarteng decision to increase spending (including giving tax cuts to the richest) by simply borrowing more further aggravated the situation.
  - This spooked the markets; investors sold British assets such as gilts (government bonds) and currency.
  - The resultant fall in the pound's exchange rate made imports even costlier and the sale of gilts meant that interest rates across the economy skyrocketed.

- **Re-establishing Political Stability**
  - Having a well-established polity is a key reason why developed countries such as the UK get the best terms in international trade and business.
  - But the Conservative Party is a deeply divided house today.
  - Hence, uniting the Tories is the necessary first step for any economic decision-making to be taken seriously by the markets.

India-U.K. Ties Under Sunak

- India's bilateral relations with the U.K. may well be poised to see greater two-way exchanges under Sunak.

- His vision for India-U.K. bilateral ties has gone beyond the opportunity for the U.K. to sell things in India, wanting **Britain to also learn from India**.

  - This vision was presented by Sunak when he was a Chancellor.
- Sunak has openly called China the biggest enemy of the UK.

  - This assumes significance as India shares contentious geopolitical relations with China.

India Abstains on Sri Lanka Vote at UN Human Rights Council

- India abstained on a draft resolution in the **UN Human Rights Council** in Geneva on promoting *reconciliation, **accountability** and human rights in Sri Lanka.*

- The resolution was adopted with 20 nations voting in favour and 7 against.

  - It is the first time that a UNHRC resolution on Sri Lanka calls for accountability for violation of human rights due to **corruption and economic crisis.**
- However, it urged the government in Colombo to deliver on commitments towards the Tamil minority.

- It also observed that Sri Lanka's progress in implementing commitments on the *13th Amendment, meaningful devolution, and early provincial elections* **remains inadequate.**

Background

- Over 13 years since the end of Sri Lanka's civil war, survivors continue demanding justice and accountability for war-time crimes.

- It is claimed that during Sri Lankan civil war tens of thousands of civilians were killed and disappeared.

- In the post-war years, concerns were raised over persisting militarisation, especially in the Tamil-majority north and east; repression, and the shrinking space for dissent.

- In the latest report on Sri Lanka, the U.N. Human Rights Chief said *embedded impunity for past and present human rights abuses, economic crimes and corruption was among the underlying factors that led to the country's devastating economic crisis.*

- Against this backdrop, UNHRC brought a resolution which calls for:

	accountability for economic crimes
	enhancing the mandate of the UN human rights chief for collecting information on war crimes for prosecution in foreign countries

- The resolutions on promoting reconciliation, accountability and human rights in Sri Lanka were previously moved in Geneva in 2012, 2013, 2014, 2015, 2017, 2019, and in 2021.

Why India Abstained?

- Due to its long-held position, India does not vote in favour of a country-specific UN resolution.

- Also voting against Sri Lanka would have pushed the Island country more towards China.

- At the same time, India also cannot entirely toe Sri Lanka's line and vote against the resolution.

  ✓ This is due to its domestic calculations and rising frustration that Colombo is not suitably sensitive to New Delhi's security concerns.
  ✓ It would also go against India's consistent position that the legitimate aspirations of Sri Lankan Tamils are yet to be met.

- Hence, India abstained from voting while urging the Sri Lankan government to deliver on commitments towards the Tamil minority.

Tamil Issue

- Communal tensions between the Sinhalese and Tamil communities had been brewing since the early 1940s.

- The nearly three-decade long armed conflict between Sri Lankan forces and the LTTE came to an end in May 2009.

- Since then, Indian govt. is persuading Sri Lankan govt. for greater devolution of power to Tamils.

- The need for national reconciliation through a political settlement of the ethnic issue has been reiterated by India at the highest levels.

13th amendment in the Constitution of Sri Lanka

- The Sri Lankan Parliament passed the Thirteenth Amendment to the constitution in November 1987 with the objective of creating **provincial councils** based on the provisions of the **Indo-Sri Lanka Accord of July 1987. (**Popularly referred to as the **Rajiv-Jayewardene Accord)**

- The Thirteenth Amendment to the Constitution provides for:

  ✓ The establishment of **Provincial Councils**
  ✓ The appointment and powers of the Governor of Provinces
  ✓ Membership and tenure of Provincial Councils
  ✓ The legislative powers of the Provincial Councils
  ✓ Tamil as an official language and English as a link language

- Elections to the three provinces – Northern, Central and North Western Provinces were held.

- However, the terms of Sri Lanka's nine provincial councils expired about three years ago, and they have remained defunct since.

{For more about UNHRC refer The Recitals- September 2022}

SUMMITS AND ORGANISATIONS

UN Counter-Terrorism Meet

- India hosted a special meeting of the United Nations Security Council's **Counter Terrorism Committee (CTC).**
- This was the first such meeting of the UNSC-CTC in India since its establishment in 2001.
  - ✓ The Permanent Representative of India to the UN serves as the Chair of the CTC for 2022.

Key Highlights

- **Theme -** Countering the use of new and emerging technologies for terrorist purposes.

- **Wreath-laying ceremony at the 26/11 Memorial at the Taj hotel -** The CTC meeting started in Mumbai with all UNSC member-states participating in a wreath-laying ceremony.

- **5 points prescription made by EAM S Jaishankar:** EAM S Jaishankar specified 5 points before the CTC to block financial resources that allow terrorism to thrive.

JAISHANKAR'S PRESCRIPTION

i) Effective and sustained efforts against terror financing; efforts at UN need to be coordinate with other fora like FATF

ii) Objective and evidence-based proposals for listing of terrorist groups must be seen through

iii) Concerted action against terrorists and their sponsors, including through dismantlement of terrorist safe havens, sanctuaries, training grounds and financial and ideological as well as political support structures

iv) Act against terrorism's nexus with transnational organized crime, illicit drugs and arms trafficking is now well established

v) As terrorist groups diversify their funding portfolio, address their exploitation of the anonymity afforded by new and emerging technologies such as virtual currencies for fundraising and finances

- **Presentation highlighting Pakistan's links with the 26/11 attacks was made**

  - ✓ Indian authorities played the recording of one of these terrorists, Sajid Mir, directing the 26/11 perpetrators.
  - ✓ China blocked a proposal for a UN ban on Lashkar-e-Taiba (LeT) commander Mir last month.

- **Delhi Declaration — on countering the use of new and emerging technologies for terrorist purposes – adopted**

  - ✓ The UNSC CTC meeting was concluded with the adoption of Delhi Declaration.
  - ✓ The Declaration:
    - o Talked about **zero tolerance towards terrorism**
    - o Called upon all member-states to cooperate in fight against terrorism
    - o Took note of the new threats emerging due to increasing use of technologies
  - ✓ During 2008 Mumbai attacks, technology of Voice over Internet Protocol (VoIP) was used for organizing and directing the attack from beyond India's borders.
  - ✓ Now terrorists are gaining access of new and emerging technologies – from virtual private networks (VPN), and encrypted messaging services to blockchain and virtual currencies.
  - ✓ This could be dangerous as we have seen the increase in drone attacks by the terrorist organisations.
    - o Discussed the threats from cryptocurrencies and the problem of terrorist use of internet and social media.

- **India committed a voluntary contribution of $0.5 million to the UN Trust Fund:** Indian side announced a voluntary contribution of $0.5 million to the UN Trust Fund for Counter Terrorism this year.

UN Security Council - Counter-Terrorism Committee (CTC)

- In the aftermath of the 11 September attacks against the United States in 2001, the Security Council unanimously adopted resolution 1373 (2001).

- This resolution, for the first time, established a dedicated Counter-Terrorism Committee (CTC) of the Council.

- The CTC is assisted by an Executive Directorate (CTED), which carries out its policy decisions and conducts expert assessments of the 193 United Nations Member States.

Focus Areas: CTC has a global mandate and focuses on specific thematic areas, which are:
- Counter-terrorism strategies
- Countering the financing of terrorism
- Border security and arms trafficking
- Law enforcement
- Legal issues
- Human Rights
- *Integrating gender into counter-terrorism*
- Countering violent extremism and terrorist narratives
- Information and Communications Technologies
- Foreign Terrorist Fighters

OPEC+ Agrees Deep Cuts To Oil Production

Recently, OPEC+ agreed its **deepest cuts to oil production since the 2020 COVID pandemic** at a Vienna meeting.

Reason for slashing production

- Oil prices skyrocketed after Russia's invasion of Ukraine in February, and have since begun to soften over the past few months.

- In September 2022, it dropped to $90 due to fears of a recession in Europe and reduced demands from China because of its lockdown measures.

- OPEC+ members are concerned that a faltering global economy would reduce the demand for oil, and the cuts are seen as a way to protect profits.

- Experts have also raised the possibility that Russia might be influencing OPEC, to make it more expensive for the West to extend energy sanctions on Russia.

  ✓ Prices rise will make it more challenging for Europe to proceed with its sanctions on Russian oil in December.

Impact

- **Impact On EU's Plan To Put A Price Cap On Russian Oil**

  ✓ European Union had announced its plan to implement a price cap on oil exports from Russia.
  ✓ Under the plan, countries will only be permitted to purchase Russian oil and petroleum products transported via sea that are sold at or below the price cap.
  ✓ However, the recent decision to reduce the supply is likely to keep the global oil prices high, allowing Russia to continue aiming for significant revenue from its crude export.

- **Weaponization Of Energy**

  ✓ The West has accused Russia of weaponizing energy, creating a crisis in Europe that could trigger gas and power rationing this winter.
  ✓ Moscow accuses the West of weaponizing the dollar and financial systems, such as **SWIFT,** in retaliation for the invasion of Ukraine in February.

Organisation of the Petroleum Exporting Countries (OPEC)

- Established in 1960 by founding members Iran, Iraq, Kuwait, Saudi Arabia and Venezuela, OPEC has since expanded and now has 13 member states.

- With the addition of another 11 allied major oil-producing countries that include Russia, the grouping is known as OPEC+.

  ✓ I.e., OPEC+ is a group of 24 oil-producing nations.
  ✓ OPEC+ format was born in 2017 with a deal to coordinate oil production among the countries in a bid to stabilize prices.

- The OPEC bloc is nominally led by Saudi Arabia, the group's largest oil producer, while Russia is the biggest player among the non-OPEC countries.


Objective	Significance
- To coordinate and unify the petroleum policies of its Member Countries; - To ensure the stabilisation of oil markets; - To secure an efficient, economic and regular supply of petroleum to consumers, a steady income to producers - To ensure a <u>fair return on capital</u> for those investing in the petroleum industry.	- OPEC bloc accounts for roughly 40% of the world's crude oil and 80% of the globe's oil reserves, according to estimates from 2018. - They usually meet every month to determine how much oil the member states will produce. - However, many allege that OPEC behaves like a cartel, determining the supply of oil and influencing its price in the world market.

6th Ministerial Meeting of CICA

The Minister of State for External Affairs addressed the 6th Summit of **Conference on Interaction and Confidence Building Measures in Asia (CICA).** It was held in Astana, Kazakhstan.

About CICA

- Established in **1999,** CICA is an inter-governmental forum for enhancing cooperation towards promoting peace, security and stability in Asia.
  - ✓ It was **proposed by Nursultan Nazarbayev**, first president of Kazakhstan, at the 47th session of UN General Assembly in October 1992.
  - ✓ It currently has 27 member states and 9 observer states and 5 observer organisations.
- **Secretariat** -Almaty, Kazakhstan.
- For becoming a member of CICA, a state must have at least a part of its territory in Asia.
- **India has been a member of CICA since its inception**. India also co-chairs two CICA Confidence Building Measures (CBMs) on:

- ✓ Development of Secure and Effective Systems of Transportation Corridors, and
- ✓ Energy Security.
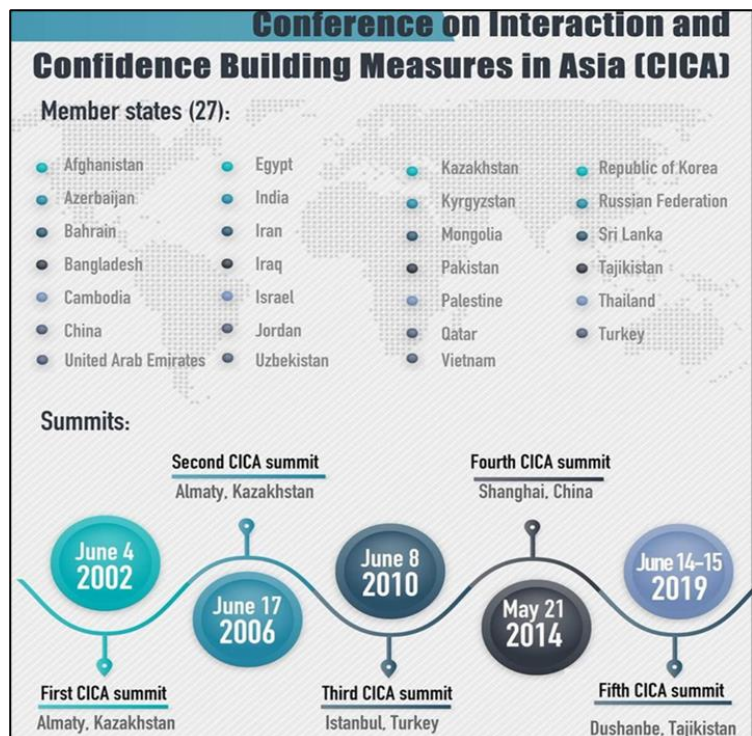
Pakistan Is Out Of FATF 'Grey List' On Terror Funding

- FATF has removed Pakistan from a list of countries under 'increased monitoring' for terror financing.
- Pakistan's exit from FATF's 'grey list' would allow the country to <u>try to get foreign funds for tiding over its precarious financial situation.</u>
  - ✓ It would provide Pakistan a boost after the country's sovereign credit rating was downgraded by Moody's.
  - ✓ It would also improve sentiment, important from a FDI perspective.
- **Pakistan was placed on the grey list by the FATF in June 2018** and was given a 27-point action plan to complete it.

- Since then, it has been in the same list as the Paris-based watchdog was not satisfied with the actions taken by the Pakistan to control terror financing.

FATF Functions

- The FATF has developed the FATF Recommendations/ FATF Standards, which ensure a coordinated global response to prevent organised crime, corruption and terrorism.

- It also works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse

- They help authorities go after the money of criminals dealing in illegal drugs, human trafficking and other crimes.

- It also works to stop funding for weapons of mass destruction.

Financial Action Task Force (FATF)

- Set up in 1989, FATF is the global money laundering and terrorist financing watchdog.
  - It was established during the G7 Summit in Paris.
- It currently comprises 37 member jurisdictions and 2 regional organisations.
  - India became an Observer at FATF in 2006.
  - In June , **2010 India was taken in as the 34th country member of FATF.**
- The inter-governmental body sets international standards that aim to prevent these illegal activities and the harm they cause to society.
- The FATF functions as an independent body guiding policy, with its President selected by the plenary for a one-year period.
- The FATF **Secretariat is located at the OECD headquarters in Paris.**

Grey List

- FATF "grey lists" a country which it considers as a *safe haven for terror funding and money laundering.*

  - ✓ A country is put into this list when strategic deficiencies are detected in a country's policies to prevent money laundering and terror financing.

- It is a warning to the country to tackle the issues, failing which it could be "blacklisted," the highest level of indictment.

  - ✓ So far, only two countries have been blacklisted- **Iran and North Korea**.

Impact of Grey-listing

- FATF stresses the need to consider associated risks when dealing with countries on greylist.

- Once greylisted, it becomes increasingly difficult for a country to get financial aid from multilateral institutions such as: IMF, World Bank, ADB and EU.

  - ✓ E.g. - according to a research paper, Pakistan's frequent grey-listing by FATF from 2008 to 2019 may have resulted in a cumulative GDP loss of $38 billion.

- Grey-listing could further lead to a downgrade in country's ability to float international bonds, receive or send remittances or conduct international trade.

- The status does little more than raising the compliance burden on counterparts, such as correspondent banks, dealing with entities within the financial system of a greylisted country.

  - ✓ Thereby, it attaches an additional cost to many external sector transactions.

India's New Weapon Systems Branch of IAF

- The Government has approved the creation of a **Weapon System branch** for officers in the Indian Air Force (IAF). This step will bring all weapon systems operators of the force under one roof.

- This is the first time <u>since Independence</u> that a new operational branch of IAF is being created.

- This development was announced by the Air Chief Marshal V R Chaudhari at the Air Force Day parade to mark the 90th Air Force Day celebrations at Chandigarh.

Key Highlights

- **A separate specialised cadre of officers will be raised by IAF**

  - ✓ With rapid technological advances in <u>stand-off weapons and armed drones</u> changing the very nature of warfare, the IAF will now raise a separate specialised cadre of officers.
  - ✓ These officers will handle advance missiles, space-based systems, surveillance and combat unmanned aerial vehicles (UAVs).

- **New cadre will be inducted by the end of 2023**

  - ✓ The first lot of new officers for this new **Weapon Systems Branch (WSB)** in the IAF will be inducted by end-2023.
  - ✓ The branch will be headed by an Air Marshal rank (equivalent to Lt-General) Director General of weapon systems.

- **Four sub-branches**

  - ✓ The WSB will have the four sub-branches:

    - flying (weapon systems operators in twin-seat fighters like Sukhoi-30MKI fighters),
    - remote (operational crews for **Remotely piloted aircraft system (RPAS)** and drones),
    - intelligence (information warfare, image and signals intelligence specialists)
    - surface (mission commanders and operators for missiles, guided and close-in weapons).

  - ✓ At present, units of different kinds of air defense and precision-strike missiles as well as UAVs in the IAF are largely commanded and staffed by officers (pilots and navigators) from the flying branch.

Significance

- **Savings to the exchequer**

  - ✓ It is estimated that the creation of this branch would result in savings of over Rs 3400 Crores due to reduced expenditure on flying training.
    - o It will be a fully operational and gender-neutral branch of officers who will not undergo the expensive and time-consuming flying training, especially for fighter pilots.
  - ✓ Active pilots will also not have to be diverted to missile and other units

- **Unification of all weapon system operators**

  - ✓ It will unify all <u>weapon systems operators</u> of the IAF under a <u>single entity</u>.
  - ✓ The existing branches in the air force include the flying branch, engineers, administration, accounts, logistics, meteorology and education.
  - ✓ With the creation of the weapon systems branch, operators of **ground-based** and **specialist airborne weapon systems** will come under one umbrella.

- **Creation Of Specialist Branch Is The Need Of Hour**
  - ✓ Weapon systems have become very sophisticated, requiring personnel with deep specialist knowledge to operate them.
  - ✓ Ever since the **Sukhoi-30s** with the **rear Weapon Systems Operator** position and **UAVs** entered the IAF inventory, the demand for a specialist branch was felt.

90th General Assembly of Interpol

The 90th General Assembly of Interpol was inaugurated by PM Modi in New Delhi. This assembly was held in India after 25 years. This is the second time since 1997 the 195 member-strong body is holding such a conference in India.

Key Highlights

- **India urged the Interpol to speed up the process of issuing Red Notice against fugitive offenders**
  - ✓ This assumes significance as Interpol recently declined to issue a Red Notice against Khalistani separatist Gurpatwant Singh Pannun.
    - o The Canada-based chief of the banned **Sikhs For Justice** is wanted in several cases of terrorism registered by the NIA.
  - ✓ Over 750 such notices from India are active; around 200 of them are against fugitives like Dawood Ibrahim, Chhota Shakeel and Hafiz Saeed.
- **Suggestions Given By Indian PM:** PM Modi suggested the establishment of early detection and warning systems, protecting transportation services, security for communication infrastructure, intelligence exchange, and various other things be taken to a new level.

- **Interpol launches first-ever metaverse for law enforcement worldwide**

  A safe and secure world is our shared responsibility. When forces of good cooperate, forces of crime can't operate. It is high time the world comes together to defeat these threats. Let communication, collaboration & cooperation eradicate crime, corruption & terror. What we do within our borders is not enough. When threats are global, response can't be local —**PM Modi**

  The PM releases a ₹100 coin & postal stamp to mark the 90th Interpol General Assembly

  - ✓ At its ongoing 90th General Assembly in Delhi, the Interpol unveiled the first-ever 'metaverse' specifically designed for law enforcement worldwide.
    - o A metaverse is a shared, online 3D space where users can interact with each other and with computer-generated objects and avatars.
    - o It is a **virtual world** that uses the Internet as its underlying network.
    - o Metaverses are used for various purposes, including social networking, online gaming, education, training etc.
  - ✓ The Interpol metaverse allows the registered users to:
    - o take a virtual tour of its general secretariat headquarters in **France's Lyon,**
    - o interact with other officers via their avatars, and even take training courses in forensic investigation and other policing skills.

[For detailed discussion about Interpol, refer the topic "*Operation Megh Chakra*" from The Recitals- Sept' 2022]

DefExpo 2022

- The 12th edition of DefExpo 2022 was hosted at Gandhinagar, Gujrat with a **theme** of - **'Path to Pride'**. This is the *first defence expo where only Indian companies are participating* and it *features only Made in India equipment.*

- This is a biennial exhibition organised to support, showcase and forge partnerships for the Indian aerospace and defence manufacturing sectors with Indian as well as global customers.
- It aims to achieve the overall objective of catering to <u>domestic defence equipment</u> requirements while fulfilling the needs of friendly foreign countries.

Key Highlights

1. **Mission DefSpace launched:**

- PM Modi, while formally inaugurating the Expo, launched the '**Mission DefSpace'** at the ongoing DefExpo.
- The mission aims to develop **innovative solutions for the Defence Forces** in the domain of **space** through startups and industry.
- In other words, this new initiative would enable the industry to offer solutions to the armed forces for <u>future offensive and defensive requirements.</u>
- **Importance of this mission**:
    - ✓ **Space technology** assumes significance as it is shaping new definitions of India's generous <u>space diplomacy</u>, giving rise to new possibilities.
        - o There are more than 60 developing countries with whom India is sharing its space science. **SAARC satellite** is an example of this.
        - o By next year, 10 ASEAN countries will also get real-time access to India's satellite data.
    - ✓ **Space** technology is also necessary for supporting **maritime trade** and activities.
    - ✓ Today's armed forces rely on Space technology. Space technology has been extensively used by private as well as commercial domains.
    - ✓ In modern warfare, armed forces have been using space technology for fighting wars.
        - o Experts believe, in any future war, the new domains of warfare will include Space and Cyber.
    - ✓ Hence, this mission assumes significance as it provides an opportunity for the private sector to forecast and produce for the future in Space for the Armed Forces.

2. **Fourth Defence Indigenisation List**

- At the Expo, PM Modi also released the fourth defence indigenisation list which bars import of 101 items after certain timelines.
    - ✓ Indigenisation of Indian Defence Sector can be understood as the capability to develop and produce defence equipment within the country for the purpose of achieving self-reliance.
    - ✓ It helps in reducing the burden of imports.
- Indian Government is <u>pushing towards defence indigenisation</u>. For this, it has, from time to time, released **negative import list/positive indigenisation list.**

    - ✓ The items on the lists cannot be imported by the Services and should be sourced from within the country.
    - ✓ So far, first, second and third Positive Indigenisation Lists, comprising 310 items have been released.

3. **The HTT-40 indigenous trainer aircraft unveiled**

    PM Modi unveiled the

Deesa is in Banaskantha district of north Gujarat near the India–Pakistan border.

HTT-40 indigenous trainer aircraft designed and developed by Hindustan Aeronautics Limited (HAL) at the India Pavilion during the Expo. The Cabinet Committee on Security is expected to give its final approval for procurement of these trainers for the Air Force.

4. **Laid the foundation stone for the Deesa airfield** in Gujarat which will be a forward Air Force base.

- It is close to the border from Pakistan and will respond to any misadventure on the Western border.

India As A Defence Exporter

- India's defence exports have grown eight times in the last 5 years. It is exporting defence materials and equipment to more than 75 countries of the world.
- In 2021-22 Defence exports from India reached $1.59 billion i.e., about Rs 13,000 crore.
  - ✓ In the coming time, India has set a target to reach $5 billion i.e., Rs 40,000 crore.
- India has earmarked 68% of its defence budget for Indian companies (i.e. military's capital acquisition budget)

Aatmanirbhar In Defence Production: Where India Stands Among Indo-Pacific Nations

- According to a study by the Stockholm International Peace Research Institute (SIPRI**), India ranks fourth** among 12 Indo-Pacific nations in self-reliant arms production capabilities. The study, which measures self-reliance until 2020, is based on three indicators of self-reliance in each country:

Arms procurement	Arms industry	Uncrewed maritime vehicles, the sea equivalent of drones

- India is ranked as the **second largest importer of arms** for its armed forces in 2016-20.
  - ✓ India is highly dependent on imports of complete foreign major arms, including many produced under licence or as components for its domestic production.
  - ✓ Of India's total volume of procurement in 2016–20, 84% was of foreign origin.
- Ashok Leyland, one of the largest suppliers of trucks to the Indian Army, is the only company ranked in the top 50 in the Indo-Pacific.

'One Nation, One Uniform' for Police

- While addressing the Chintan Shivir of state Home Ministers and police chiefs in Surajkund in Haryana, PM Modi floated the idea of 'one nation, one police uniform.
  - ✓ He urged states to consider a single uniform for police across the country with states at liberty to have their own number or insignia.
- This suggestion is in line with his broader attempt to introduce a uniform set of policies across the country.
  - ✓ In August, the Ministry of Chemicals and Fertilisers announced that it had implemented the "**One Nation One Fertiliser**" scheme.
  - ✓ The Government of India in August 2019 had introduced the "**One Nation One Ration Card"** scheme.
  - ✓ Other areas include **- one nation, one mobility' card**; '**one nation, one grid**' and a '**one nation, one sign language**
  - ✓ PM Modi has also repeatedly suggested the implementation of "**One Nation, One Election**", and adopting a single voter list for all polls.
- **Challenges**
  - ✓ Both 'public order' and the 'police' are placed in List II (State List) of the Seventh Schedule of the Constitution.
  - ✓ In this circumstance, PM's suggestion will be implemented only with the cooperations of the State Governments.
  - ✓ While police personnel in India are often associated with the colour khaki, their uniforms do differ in varying degrees in different regions.
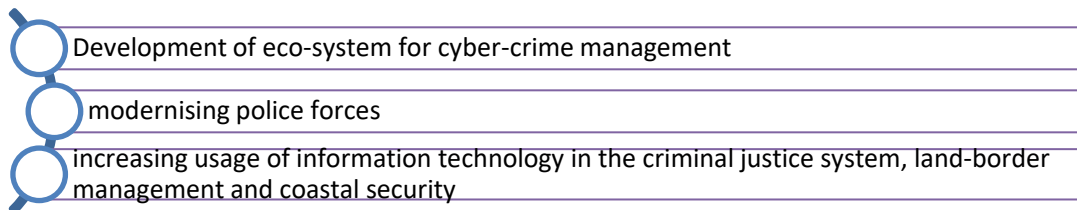
- o The Kolkata Police wear white uniforms.
- o Puducherry Police constables wear a bright red cap with their khaki uniforms.
- o Delhi Traffic Police personnel wear white and blue uniforms.
- ✓ State governments and even an individual force can decide the uniform their personnel wear.

Chintan Shivir

- **The Chintan Shivir of Home Ministers** is an endeavour to provide a national perspective to policy formulation on internal security-related matters.

- The aim of the 'chintan shivir' is to prepare an action plan to implement '**Vision 2047'** and 'panch pran' (5 pledges). Panch pran was announced by PM Modi during his Independence Day speech this year. It includes _resolve of developed India by 2047; erase all traces of servitude; take pride in our legacy; Ek Bharat Shreshtha Bharat; fulfil all duties of responsible citizen_

- The Shivir, in the spirit of cooperative federalism, will bring more synergy in planning and coordination between various stakeholders at the centre and state levels.

Chintan Shivir 2022

- The first-ever Chintan Shivir was held at Surajkund, Haryana in October 2022. It was presided by Union Home Minister.

- Home Secretaries and Director General of Police (DGPs) of the States, Director Generals of Central Armed Police Forces (CAPFs) and Central Police Organisations (CPOs) attended the Chintan Shivir.

- Key focus areas of the event were:

  - Development of eco-system for cyber-crime management
  - modernising police forces
  - increasing usage of information technology in the criminal justice system, land-border management and coastal security

- The aim of the conference was to facilitate national policy-making and better planning and coordination in the above-mentioned areas.

SCO Anti-Terror Exercise

- Pakistan was invited to the closing ceremony of the **Joint Anti-Terror Exercise (JATE).**

  - ✓ In September 2021, India had participated in the closing ceremony of the two-week-long JATE-2021.
  - ✓ It was hosted by Pakistan at the National Counter Terrorism Centre, Pabbi, in Khyber Pukhtunkhwa.
- _**Hosted by India**_, JATE is being conducted under the ambit of the Shanghai Cooperation Organisation Regional Anti-Terrorist Structure (SCO - RATS).

  - ✓ **India assumed its role as Chairperson** of the SCO-RATS mechanism in October 2021.
- The National Security Guard (NSG) hosted this exercise. It was named as "Manesar Anti-Terror 2022".

SCO Regional Anti-Terrorist Structure (SCO – RATS)

- RATS as a permanent body was instituted during the meeting of the Council of Heads of SCO member states in June 2002 in St. Petersburg.

- Since its establishment, RATS has become the pillar of coordination for combatting separatism, terrorism, and extremism regionally as well as globally.

- Under RATS' working relationship, the member countries coordinate with each other and other global organisations to gather information to tackle terrorism.

- RATS also maintains a database of terrorists and terror organisations from across its member countries.

- Through joint counterterrorism exercises under RATS, member countries train armed personnel for strengthening their counterinsurgency grid and coordination amongst the group.
o Joint Anti-Terror Exercise (JATE) is an annual counter-terrorist exercise held within the framework of the SCO RATS.
o The exercise is aimed at exchanging expertise and best practices, and build synergy between the Counter Terrorism Forces of the SCO RATS member countries.

[For more about SCO, refer the topic *"SCO Summit 2022"* from *The Recitals- September 2022.*]

GEOGRAPHY

Uttar Pradesh's 4th Tiger Reserve

- The Uttar Pradesh (UP) cabinet approved the notification of the state's 4th tiger reserve in the **Ranipur Wildlife Sanctuary (RWS) in Chitrakoot district.**

  - ✓ Chitrakoot is a holy place having a deep relation to Lord Ram and also finding mention in the Ramayana.

- RWS has no tigers of its own. But pugmarks of the animals are frequently seen there as tigers from nearby Panna frequent it.

  - ✓ The two protected areas are just 150 km from each other.

- It will be the 1st in the Bundelkhand region of the state of UP.

About Ranipur Wildlife Sanctuary

- The Sanctuary spread over the **Vindhyan Range**, was founded in 1977.
- The Sabri waterfall, Amravati Waterfall, Dhaarkundi Ashram, Marwariya Devi Temple are some of the major tourist attractions on the way to the sanctuary.
- It will be the 54th tiger reserve in India.

Other Tiger Reserves in Uttar Pradesh

Dudhwa National Park and Tiger Reserve	Amangarh Tiger Reserve	Pilibhit Tiger Reserve

Tiger Reserves in India

- India currently has 53 tiger reserves, Guru Ghasidas National Park of Chhattisgarh is the 53rd Tiger Reserve.
- They are governed by Project Tiger, which comes under the jurisdiction of the National Tiger Conservation Authority (NTCA).
- Project Tiger was launched in 1973 to protect Bengal tiger population in its natural habitat.

Sukapaika River

- National Green Tribunal (NGT) directs to revive Sukapaika river, in next six months.
- NGT alleged that the river became dead because of the closure of its mouth in the 1950s.

About Sukapaika River

- It is one of the several distributaries of the **Mahanadi River** in Odisha.

- It branches away from the Mahanadi at Ayatpur Village in Cuttack district and flows some 40 km before re-joining the Mahanadi River.

- In 1952, the Odisha government blocked the starting point of the river with an embankment to prevent flooding in the delta of Sukapaika.

Mahanadi River

- It rises from Raipur district of Chhattisgarh.
- It flows through the states of **Chhattisgarh and Odisha** and finally merged with the Bay of Bengal.
- It is the third largest of peninsular India after Godavari and Krishna and the largest river of Odisha.
- Its main tributaries are the **Seonath, the Jonk, the Hasdeo, the Mand, the Ib, the Ong and the Tel.**
- The catchment area of the river extends to Chhattisgarh, Madhya Pradesh, Odisha, Jharkhand and Maharashtra.
- Hirakud Dam, which is the longest dam of India, is built on the Mahanadi River.

- Since the river has lost its water holding capacity, it remains dry for almost the whole year.

- The riverbed has suffered erosion and it is full of **hyacinth**. Most trees along the river have also disappeared.

Link Between Fast-Melting Arctic Ice And Ocean Acidification

- A team of researchers has flagged *changing chemistry of western region of the Arctic Ocean after discovering acidity levels increasing 3-4 times faster than ocean waters elsewhere.*

- The team identified a strong **correlation** between the accelerated rate of melting ice and the rate of ocean acidification.

About Ocean Acidification

- It refers to a reduction in the pH of the ocean over an extended period of time.

  ✓ The pH scale runs from 0 to 14, with 7 being a neutral pH. Anything higher than 7 is basic (or alkaline) and anything lower than 7 is acidic.

- Its main cause is the absorption of carbon dioxide (CO_2) from the atmosphere.

- 23 -30% of the CO_2 that is in the atmosphere dissolves into oceans, rivers and lakes.

- CO_2 reacts with water molecules (H_2O) and forms the weak acid H_2CO_3 (carbonic acid). Most of this acid dissociates into hydrogen ions (H^+) and bicarbonate ions (HCO_3^-). The increase in H^+ ions reduces pH and the oceans acidify. This process is called ocean acidification.

Relation Between Sea-ice Melting and Rapid pH Decrease

Scientists point to sea-ice melt as the key mechanism to explain this rapid pH decrease, because it changes surface water in **3 primary ways**:

- The water under the sea ice, which had a deficit of carbon dioxide, now is exposed to the atmospheric carbon dioxide and can take it up freely.

- The seawater mixed with meltwater is light and can't mix easily into deeper waters, which means carbon dioxide is **concentrated at the surface.**

- The meltwater **dilutes the carbonate ion concentration** in the seawater, **weakening its ability** to **neutralise the carbon dioxide into bicarbonate**.

Impacts of Ocean Acidification

- As the ocean absorbs CO_2, seawater chemistry changes, which changes the living conditions of marine species.

- Generally, shelled animals including mussels, clams, urchins and starfish are having trouble building their shells in more acidic water.

- Studies have shown that decreased pH levels affect the ability of some fish to detect predators and also it affects the ability of fish to locate suitable habitat. It may affect the entire food web.

Way Forward

- The main solution to current ocean acidification is to reduce atmospheric CO_2 levels through climate change mitigation.

- We can **cultivate seaweed** to improve water quality, because seaweed has the ability to reduce the effects of ocean acidification.

- The United Nations SDG 14 ("Life below Water") has a target to "minimize and address the impacts of ocean acidification".

Global Ocean Acidification Observing Network (GOA-ON)

- It is a collaborative international network to detect and understand the drivers of ocean acidification in estuarine-coastal-open ocean environments.
- It was established in 2012 in association with several organizations including International Atomic Energy Agency (IAEA) etc.
- It is to provide early warning of the impacts of ocean acidification on natural ecosystems, wild and aquaculture fisheries, coastal protection, tourism and local economies.
- It provides key input to communities, industry and governments seeking to develop action plans, best practices, and mitigation strategies to address ocean acidification impacts.

Graded Response Action Plan (GRAP)

The **Commission for Air Quality Management (CAQM)** said that measures under 'Stage-1' of the **Graded Response Action Plan (GRAP)** will be enforced in the NCR with immediate effect. The order came after Delhi's Air Quality Index (AQI) deteriorated to be in the 'poor' category.

About GRAP

- It is a set of emergency measures that kick in to prevent further deterioration of air quality once it reaches a certain threshold.

- It is **implemented by the CAQM**.

  ✓ **Stage 1** of GRAP is activated when the **AQI is in the 'poor' category (201 to 300).**

  ✓ The 2nd, 3rd and 4th stages will be activated when AQI reaches the '**very poor' category (301 to 400), 'severe' category (401 to 450)** and **'severe +' category (above 450)** respectively.

- It is a statutory body formed under the Commission for Air Quality Management in National Capital Region (NCR) and Adjoining Areas, Act 2021.
- It aims at better coordination, research, identification, and resolution of problems related to air quality in NCR and adjoining areas.
- Functions of the Commission include
  ○ Coordinating actions taken by concerned state governments (Delhi, Haryana, Punjab, Rajasthan, and Uttar Pradesh)
  ○ Conducting R&D through networking with technical institutions
  ○ Preparing various action plans such as increasing plantations and addressing stubble burning.

- The orders and directions of the CAQM will prevail in **case of any conflict** between directions issued by the State governments and the CAQM.

- Measures under the different categories of the plan are to be enforced by the pollution control boards of the NCR states and the concerned departments and agencies, including the traffic police, the Transport Department and road-owning and construction agencies.

- It was approved by the Supreme Court in 2016.

- It was 1st notified in January 2017 by the Ministry of Environment, Forest and Climate Change (MoEFCC)

Has GRAP Helped?

- It has been successful in doing two things that had not been done before -

> **Creating a step-by-step plan for the entire Delhi-NCR region**

> **It has gathered several agencies: all pollution control boards, industrial area authorities, municipal corporations, regional officials of the India Meteorological Department, and others.**

- The biggest success of GRAP has been in fixing accountability and deadlines. For each action to be taken under a particular air quality category, executing agencies are clearly marked.

- Three major policy decisions that can be credited to GRAP are -

  ✓ Closure of the thermal power plant at Badarpur
  ✓ Bringing BS-VI fuel to Delhi before the deadline set initially, and
  ✓ Ban on Pet coke as a fuel in Delhi-NCR.

Older Version of GRAP	This year GRAP
• In the version of the GRAP that was notified in 2017, measures kicked in after pollution concentrations reached a certain level.	• Measures are pre-emptive and will kick in based on forecasts in an attempt to prevent the AQI from deteriorating further.
• GRAP was enforced	• GRAP is being enforced based on the AQI, which takes **other pollutants**

based **only on the concentration of PM2.5 and PM10.**	**also** into account, such as ozone, sulphur dioxide and oxides of nitrogen.
• The construction ban was implemented only in the 'severe +' category.	• A ban on construction activities (except for those involving railways, projects of national security, hospitals, metro services, and linear public projects like highways, roads) will be imposed under the 'severe' category.
• No such provisions	• For the first time, it specifies that State governments in the NCR may impose restrictions on **BS-III petrol and BS-IV diesel** four wheelers under Stage-3, or when the AQI is likely to reach the 'severe' category. • In the 'severe +' category, GRAP imposes a ban on plying of four-wheelers in Delhi and NCR districts bordering Delhi, **except for BS-VI** vehicles and those plying for emergency or essential services.

Country Climate and Development Reports (CCDRs)

- It is released by the **World Bank Group.**

- These are new *core diagnostic reports* that integrate climate change and development.

- It helps countries prioritize the most impactful actions that can reduce greenhouse gas (GHG) emissions and boost adaptation, while delivering on broader development goals.

- It aims to inform governments, citizens, the private sector and development partners.

- The reports suggest concrete, priority actions to support the low-carbon, resilient transition.

- It feeds into other core Bank Group diagnostics, country engagements and operations, and helps attract funding and direct financing for high-impact climate action.

Light Pollution and its Impact on Migratory Birds

World Migratory Bird Day was recently celebrated, in which light pollution and its impact on migratory birds has been highlighted.

Impact of Light Pollution on Birds

- Due to the artificial light, particularly when there is low cloud or when flying at lower altitudes, migrating birds become disorientated and may end up circling in illuminated areas.

  ✓ This puts them at risk of exhaustion, predation, and fatal collision with buildings.

- Most birds migrate at night because they navigate with the

About Light Pollution
- It refers to the excessive, misdirected, or obtrusive artificial light that alters the natural patterns of light and dark in ecosystems.
- Components of light pollution include
  ○ Glare – excessive brightness that causes visual discomfort.
  ○ Skyglow – brightening of the night sky over inhabited areas.
  ○ Light trespass – light falling where it is not intended or needed.
  ○ Clutter – bright, confusing and excessive groupings of light sources
- The calibrated satellite radiometer designed for night lights shows that from 2012 to 2016, Earth's artificially lit outdoor area grew by 2.2% per year.

help of the stars. With the city lights in the night sky, birds are no longer able to navigate by the stars.

  ✓ Seabirds such as petrels and shearwaters are attracted by artificial lights on land and become prey for rats and cats.

Overall Impact of Light Pollution

- It washes out starlight in the night sky and interferes with astronomical research.

- Adverse health effects which include increased headache, anxiety and stress, decrease in sexual function.

- It poses a serious threat in particular to nocturnal wildlife, it confuses animal navigation, alters competitive interactions, changes predator-prey relations and causes physiological harm.
- Studies suggest that light pollution around lakes prevents zooplankton from eating surface algae, which causes algal blooms that can kill off the lakes' plants and lower water quality.

Way Forward

- We can Turn lights off using a timer or occupancy sensor or manually when not needed.
- We can improve lighting fixtures, so they can direct their light more accurately towards where it is needed, and with fewer side effects.

About World Migratory Bird Day

- It is celebrated twice a year, on the **second Saturday in May and October.**
- It is celebrated in recognition of the cyclical nature of bird migration and the different peak migration periods in the northern and southern hemispheres.
- It raises awareness about migratory birds, the need for their conservation, and the importance of the preservation of their habitat.
- It is organized by a collaborative partnership among the **two UN wildlife treaties** - Conservation of Migratory Species of Wild Animals (CMS) and African-Eurasian Migratory Waterbird Agreement (AEWA), and the non-profit organization, Environment for the Americas (EFTA).
- This year it was celebrated on 14 May and 8 October 2022 and the theme was "Dim the Lights for Birds at Night" and "Light Pollution" respectively.

Living Planet Report 2022

According to the latest Living Planet Report 2022, there has been a **69% decline** in the wildlife populations of mammals, birds, amphibians, reptiles and fish, across the globe in the last 50 years.

About Living Planet Report

- It is released every two years by the **World-Wide Fund for Nature (WWF)** since 1998,
- The 2022 report is the 14th edition of this report.
- It tracks changes in the relative abundance of wild species populations across the globe.

Major Highlights of the Repot

- The highest decline in wildlife populations that is 94% was in the Latin America and the Caribbean region.
- Africa recorded a 66% fall in its wildlife populations from 1970-2018 and the Asia Pacific 55%.
- Freshwater species populations globally reduced by 83%, confirming that the planet is experiencing a "biodiversity and climate crisis".

- World Wide Fund for Nature is an international NGO founded in 1961 with Headquarters – in Gland, Switzerland.
- It works in the field of wilderness preservation and the reduction of human impact on the environment. It aims to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.
- Earth Hour is an annual initiative of WWF, which is held every year on the last Saturday of March. It encourages people from more than 180 countries to switch off the lights from 8.30 pm to 9.30 pm as per their local time.

  ✓ Habitat loss and barriers to migration routes were responsible for about half of the threats to monitored migratory fish species.
- The vertebrate wildlife populations are plummeting at a particularly staggering rate in tropical regions of the world.

- **Mangroves** continue to be lost to aquaculture, agriculture and coastal development at a rate of 0.13% per year.
  - ✓ Many mangroves are also degraded by overexploitation and pollution, alongside natural stressors such as storms and coastal erosion.
- Around 137 square kilometers of the Sundarbans mangrove forest in India and Bangladesh has been eroded since 1985.

Challenges Cited By The Report

- WWF identified six key threats to biodiversity:

| agriculture | hunting | logging | pollution | invasive species | climate change |

- We face the double emergencies of human-induced climate change and biodiversity loss, threatening the well-being of current and future generations.
- Transformational, game-changing changes are needed in how we produce, how we consume, how we govern and what we finance.

Lead Poisoning

A report by NITI Aayog and the Council of Scientific & Industrial Research (CSIR) has found that India bears the world's highest health and economic burden due to lead (Pb) poisoning.

Key Findings of the Report

- Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand, Chhattisgarh and Andhra Pradesh had the highest average **blood lead levels (BLL)** among Indian states. These states account for 40% of India's population.

- India has over _275 million children_ with BLLs more than considered safe (**5 micrograms per deciliter).**
  - ✓ This is the highest level of Pb poisoning cases in children in any country.

About Lead Poisoning
- Lead is a naturally occurring toxic metal found in the earth's crust.
- Lead poisoning occurs when lead builds up in the body, often over months or years.
- Sources of lead poisoning include battery recycling, lead mining, smelting, welding, soldering, adulterated spices, cosmetics, water from leaded pipes and traditional medicines.
- Children are also exposed in-utero through exposure of mothers, with adverse impacts on neuro-behavioral development.
- Lead poisoning can be hard to detect, even people who seem healthy can have high blood levels of lead.

- Deaths due to lead poisoning continue to rise in India, even though its use in gasoline was phased out in the country by 2000.
- Lead pollution resulted in an estimated 5% loss of Indian GDP due to lower economic productivity.

Step Taken to Prevent Lead Poisoning

- WHO) has identified lead as one of 10 chemicals of major public health concern.

- WHO along with United Nations Environment Programme (UNEP) has formed the "_Global Alliance to Eliminate Lead Paint_" to promote a phase-out of the manufacture and sale of paints containing lead.

Impact of Lead Poisoning
- Children under the age of 6 are particularly vulnerable, who can seriously affect mental and physical development.
- Exposure to high levels of lead may cause anemia, weakness, and kidney and brain damage.
- It accounts for about 0.6% of the global burden of disease.

- Ministry of Environment, Forest and Climate Change (MoEFCC), has prohibited manufacture, trade, import as well as export of paints containing lead or lead compounds in excess of 90 parts per million (ppm).

IUCN Global Ecosystem Typology

The IUCN recently adopted its Global Ecosystem Typology to *support global, regional and national efforts to assess and manage risks to ecosystems.*

About IUCN Global Ecosystem Typology

- It is the **1st-ever comprehensive classification** framework for classifying and mapping all Earth's ecosystems, which integrates their **functional and compositional features**.

- It is founded on a *conceptual ecosystem model* that draws on **community assembly theory.**

- Its purpose is **not to duplicate** existing biogeographic classifications, but to complement them in a framework that supports a broader utility for conservation management and other applications.

- It will help identify the ecosystems that are most critical for biodiversity conservation, research, management and human wellbeing into the future.

Key Features of the IUCN Global Ecosystem Typology

- A 6 **hierarchical structure** that represents **functional features** of ecosystems in **3 upper levels** and **compositional features** in **3 lower levels**.

- Comprehensive coverage of earth's **biosphere,** (encompassing terrestrial, subterranean, freshwater, marine and atmospheric environments).

- Top-down construction of upper levels to ensure global consistency and bottom-up construction of lower levels to promote local accuracy and ownership.
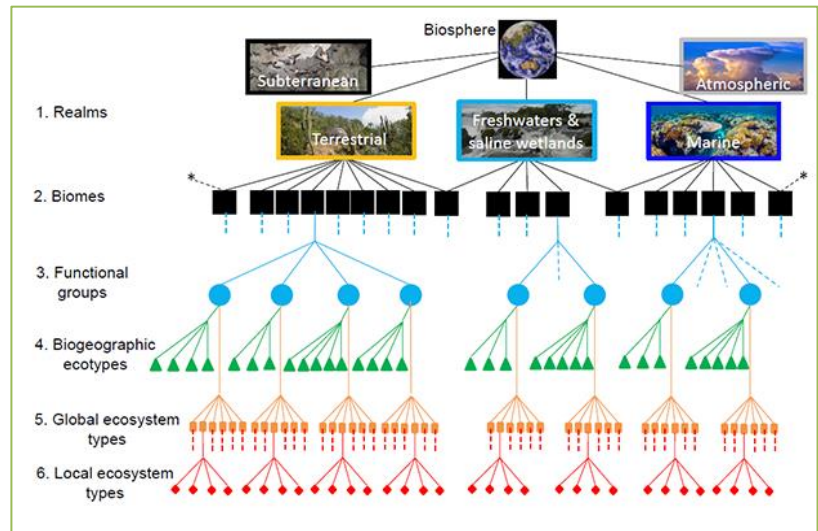
- Structural integration of established national classifications, which form the lowest level of the hierarchy.

- Detailed documentation, including illustrated descriptive profiles for 108 Ecosystem Functional Groups.

- Indicative global maps of Ecosystem Functional Groups, to be developed into high resolution digital models.

- Standard terminology and definitions to promote consistent application.

- Strong scientific foundations in community assembly theory.

WWF's Diet Chart to Help Curb Climate Change

The World-Wide Fund for Nature (WWF) outlined a sustainable diet plan that is healthy for humans and the environment alike.

Why We Need WWF's Diet Chart

- Our **global food system** is one of the primary drivers of biodiversity loss, with agriculture alone being the identified threat to 22,500 of the 41,000 species at risk of extinction.

- **Emissions burden** from the world's food production is also massive. A quarter of global greenhouse gas (GHG) emissions are associated with food.

- 75% of the global food supply comes from only 12 plant and 5 animal species.

- Around 60% of the GHG emission from agriculture is due to animal farming.

Consumption Patterns Encouraged by WWF

- **Plant-heavy Diet**
  - ✓ Growing plants requires less water and land and emits lower volumes of GHGs than meat, dairy and egg production.
  - ✓ Incorporating more fruits, vegetables and wholegrains in our diet can reduce the impact our food system has on the environment.
- **Diversify the platter**
  - ✓ The global dependence on a small range of food threatens the diversity of species in agriculture, weakens our food systems and is also not the most nutritious.
- **Cut food waste**
  - ✓ Planning meals, shopping smart and more efficient storage of food items can help reduce food waste.
  - ✓ Nearly 570 million tonnes of the global food waste occur at the household level.
- **Proteins beyond meat**
  - ✓ Consuming more mushrooms, peas, beans and nuts to meet our protein requirements can help reduce GHG burden.
- **Pay attention to logos**
  - ✓ Being aware of and choosing food packages based on eco-labels can go a long way.
- **Fat, sugar, salt best avoided**
  - ✓ Simple lifestyle choices such as choosing water over sugary drinks and saving sweets, chocolates, fries etc. for special occasions can make a significant difference.

Significance of the WWF's Diet Chart

- It can help address a host of environmental challenges while also providing health benefits.
- It can help us to waste less food, look for eco-labels, and follow a more varied diet.
- It can help reduce premature mortality and reduce the risk of future pandemics.

Global Status of Multi-Hazard Early Warning Systems

- According to a new report, half the countries in the world have no early warning systems to help prepare against natural disasters.
- The report titled the **Global Status of Multi-Hazard Early Warning Systems (MHEWS).**
  - ✓ MHEWS has the ability to address several hazards and impacts of similar or different types in situations where hazardous events may occur.

About The Report

- It was released by the United Nations Disaster Risk Reduction (UNDRR) and the World Meteorological Organization (WMO) on the occasion of International Day of Disaster Risk Reduction (13th October).
- The analysis was made with data from the **Sendai Framework Monitor (SFM).**
  - ✓ It is an online tool where member countries report their progress on the targets outlined in The Sendai Framework (2015-2030).

Sendai Framework

- The framework is a global blueprint for _disaster risk reduction and prevention_.
- It outlines **7 global targets** to be achieved between 2015 and 2030.
- It was adopted at the 3rd United Nations World Conference on Disaster Risk Reduction, held in 2015 in Sendai, Japan.

- It is the successor instrument to the **Hyogo Framework for Action (HFA)** 2005-2015: Building the Resilience of Nations and Communities to Disasters.
- Of the 7 targets in the framework, **Target G** aims to "*substantially increase the availability of and access to* multi-hazard early warning systems and disaster risk information and assessments to the people by 2030".
- The framework also has 38 indicators to measure progress on risks and losses.

Key Finding of the Report

- Countries in Africa, South America, Arabian and Caribbean regions have low coverage of MHEWS.
- The number of countries with MHEWS varies from region to region. However, on average, at least 40% of countries in each region reported that they operate a MHEWS.
- Less than 50% of Least Developing Countries (LDC) and only 33% of Small Island Developing Countries (SIDS) were equipped with MHEWS.
- Several countries may have a working MHEWS, but they may not have officially reported it to SFM.

Recommendation Provided by The Report

- Special assistance is needed for LDC, SIDS and Africa.
- More investments are needed throughout the MHEWS value cycle, with emphasis on reaching the last mile.
- The report urged the governments to scale up reporting for better analysis.

United Nation Disaster Risk Reduction (UNDRR)

- It is the focal point of the United Nations systems for disaster risk reduction, established in 1999.
- Headquartered in Geneva, Switzerland.
- It is an organizational unit of the UN Secretariat and is led by the UN **Special Representative of the Secretary General** for Disaster Risk Reduction (SRSG).
- The UN **Global Assessment Report** on Disaster Risk Reduction (GAR) is the flagship report of the UNDRR of world-wide efforts to reduce disaster risk.

World Meteorological Organization

- It is an organization of the United Nations.
- It was created in 1950 to replace the International Meteorological Organization.
- It coordinates member nations in the fields of meteorology, operational hydrology, and Earth sciences for the security of their population.

Zoological Diplomacy

The Indian government is considering a proposal from Sri Lanka to export 6 **gaurs, or Indian bison.** If the project is cleared, it would be the first such agreement between India and Sri Lanka, and part of a global trend of wildlife or zoological diplomacy.

About Zoological Diplomacy

- It is different from **loaning or gifting the animals**, rather, it involves **translocation and reintroduction of species between countries.**
- It particularly takes place between neighboring countries with similar ecosystems.

Significance of Zoological Diplomacy

- The translocation of a species from one nation to another could be a tremendously valuable initiative as a scientific and cultural collaboration between the two countries.

- The animal plays a role as a zoological ambassador between nation states.

Examples of Zoological Diplomacy
• Translocation of cheetahs from Namibia to India
• The American bison herds were supplemented with animals from Canada after almost all herds in the US were lost.
• South Africa has been exporting cheetahs to other African countries since the end of the apartheid era.
• Recently, Cambodia has requested translocation of tigers from India.

Mission LiFE

The Prime Minister of India launched a new mission named 'Mission LiFE' (Lifestyle For Environment), to combat climate change. U.N. Secretary-General Antonio Guterres was also present at the launching ceremony at the Statue of Unity in Gujarat.

   ✓ The concept of LiFE was introduced by the PM of India during COP26 in Glasgow in 2021.

About Mission LiFE

- It is a global plan of action led by India that aims to save the planet from the disastrous consequences of climate change.

- This mission envisions replacing the prevalent 'use-and-dispose' economy with a **circular economy.**

- Its objective is to promote an environmentally conscious lifestyle that focuses on mindful and deliberate utilization instead of mindless and wasteful consumption.

Why Do We Need Mission LiFE?

Limited attention has been paid to essential actions at the level of individuals, communities and institutions. Changing individual and community behavior alone can make a significant change in the environmental and climate crisis.

3-pronged Strategy of Mission LiFE

- Motivate individuals to practice **simple yet effective, eco-friendly actions** in their daily life **(demand).**

- Enabling industries and markets to respond rapidly to changing demand **(supply)**.

- Influencing government and industrial policy to support both sustainable consumption and production **(policy).**

Features of Mission LiFE

- It intends to inspire individuals to take simple actions in their daily lives that can contribute significantly to climate change when adopted around the world.

- It plans to leverage the power of social networks to influence the social norms surrounding climate.

- The mission plans to build and nurture a global network of individuals, named **'Pro-Planet People' (P3),** who will have a shared commitment to adopt and promote eco-friendly lifestyles.

India's Achievement so far to Save environment

- Reduces the annual per capita carbon footprint, which is only about 0.56 tons, compared to the world average of 4 tons per year.

- As of January 2022, 36.78 crore LEDs were distributed across India under UJALA scheme. It helped in reducing electricity bills and protecting the environment.

- 4th largest capacity for renewable energy in the world and ranked <u>4th in wind energy and 5th in solar energy.</u>

- Renewable energy capacity has increased by about <u>290% in the last 7-8 years</u>.

- Achieved the target of achieving <u>40% of the electric capacity from non-fossil-fuel sources 9 years ahead of the deadline</u>, which was by 2030 and achieved a target of <u>10% ethanol blending in petrol.</u>

- Now through the National Hydrogen Mission, India has moved towards an environment-friendly energy source.

COP26-Glasgow Summit, 2021

- It was the 26th session of the Conference of Parties to the UN Framework Convention on Climate Change. It was held in Glasgow, United Kingdom.

- The summit targeted global warming not to exceed +1.5°C and got about 140 countries to announce target dates for bringing emissions down to net zero.

Climate Transparency Report 2022

The 8th edition of the Climate Transparency report was released.

Key Highlight Of This Report

Global	India
• G20 members are responsible for around three-quarters of global emissions. However, they are still not taking the necessary level of accountability of action. • At 1.5°C, most G20 members can expect water scarcity and prolonged periods of drought, and less favorable agricultural conditions. • Earth's global surface temperature has increased by around 1.1 degrees Celsius compared with the average in 1850-1900.	• India suffered an income loss of USD 159 billion (5.4% of GDP), in the service, manufacturing, agriculture, and construction sectors due to extreme heat in 2021. • Heat exposure led to the loss of 167 billion potential labour hours, a 39% increase from 1990-1999. • Labour productivity is projected to decline by 5% from the 1986-2006 reference period if global temperatures increase by 1.5 degrees Celsius. • Between 2016-2021, extreme events such as cyclones, floods, and landslides caused damage to crop in over 36 million hectares, a USD 3.75 billion loss for farmers. • The annual damage from river flooding is likely to increase by around 49% at 1.5 degree Celsius of warming. • The damage from cyclones will increase by 5.7%. • Snowfall is expected to decrease under the 1.5 degrees Celsius scenario by 13%.

Recommendation Provided in Report

- We need to transform our energy system, which will require the support of rich countries whose per capita emissions are much higher than India's.

- We can use targeted support for poorer households instead of expanding subsidies for all.

- We need to expand climate finance for <u>zero-carbon investments</u> both domestically and through international cooperation.

Climate Transparency Report

- It is the most comprehensive annual study of G20 countries' climate measures and their transition to a net

zero emissions economy.

- Its assessment includes **100 indicators** for <u>climate adaptation, risks, protection and finance</u>.
- In 2022, the report especially highlights the link between the <u>climate emergency and energy crisis</u>.

Partial Solar Eclipse

About Partial Solar Eclipse

- This occurs when the earth, moon and sun are not aligned completely.
  - ✓ Due to this, a small part of the sun is uncovered by the moon's shadow.
- It arrives when the penumbra (the lighter part of the Moon's shadow) passes through the overhead.

- The places farther from the poles but under the penumbra zone cannot observe the eclipse completely. In this, only a small part of the sun remains covered.
  - ✓ It means that you need to get closer to the path to witness the partial effect of the solar eclipse.
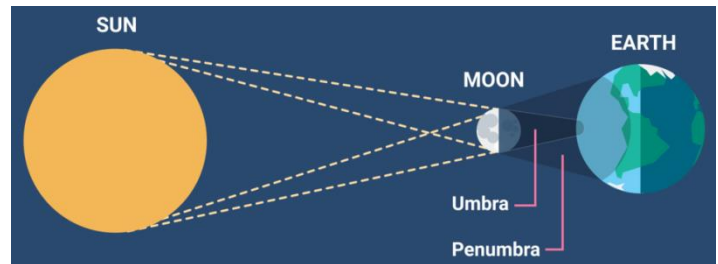
3 Distinct Stages Of A Partial Solar Eclipse

- Partial solar eclipse **begins** - The Moon starts moving over the Sun's disk.
- Maximum eclipse - The eclipse reaches its maximum magnitude. The Moon now covers more of the Sun's disk than at any other moment during the eclipse.
- Partial solar eclipse ends - The Moon stops covering the Sun.

Other Different Types Of Solar Eclipse

Annular Solar Eclipse

- It happens when the Moon passes between Sun & Earth, but when it is at or near its farthest point from Earth.
- Because the Moon is farther away from Earth, it appears **smaller than the Sun** and does not completely cover the Sun.
- The Moon appears as a **dark disk** on top of a larger, bright disk, creating what looks like a ring around the Moon.

Total Solar Eclipse

- It happens when the Moon passes between the Sun and Earth, **completely blocking** the face of the Sun.
- It is only visible from a small region on the earth. In this particular phenomenon, the diameter of the earth is around 400 times larger than the moon. But the distance can vary from one eclipse to another.

How Does A Solar Eclipse Occur?

- It is a celestial phenomenon in which the moon passes across the sun. It causes the moon to block the light towards the earth, and its shadow falls on the earth. This shadow is called the "Umbra."
- The movement of the moon, earth affects the duration of the solar eclipse.
- It takes one month for the moon to complete the revolution of the earth. But the eclipse doesn't happen every month.
- It is because the moon and earth's orbital plane is different from the earth toward the sun. Hence, the solar eclipse occurs when the moon arrives in front of the sun.

Blue Flag Certification

The Blue Flag certification has been accorded to two new beaches - **Minicoy Thundi Beach and Kadmat Beach** (both in Lakshadweep). This takes the number of beaches certified under the Blue Flag certification to 12.

About Blue Flag certification

- It is a certification that can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an **eco-label.**

- It is awarded by the *Denmark-based non-profit Foundation for Environmental Education (FEE).*

- Blue Flag certified beaches are considered the cleanest beaches in the world.

- The Blue Flag Beach must comply with **33 Blue Flag Criteria**.

- These criterias are divided into 4 major heads namely -

  ✓ Environmental education and information
  ✓ Bathing water quality
  ✓ Environmental management
  ✓ Conservation and safety services on the beaches

- So far, the label has been awarded to **5,042** beaches, marinas, and tourism boats in **48 nations**.

- **Spain** is the country with the most Blue Flag beaches, followed by Greece and France

Taking the lead from the Blue Flag certification, India has launched its own eco-label **BEAMS** (Beach Environment & Aesthetics Management Services) as part of the Integrated Coastal Zone Management (ICZM) project.

The Society of Integrated Coastal Management (SICOM) and the Union Ministry of Environment, Forests and Climate Change initiated BEAMS in 2020.

Other Indian Beaches in the Blue Flag List

Total Dissolved Solids (TDS) Vs Total Coliforms

TDS

- It is terminology often used in water filtration, especially in regards to reverse osmosis.

- If your water is known to be free from harmful contaminants, a TDS level of 300 – 500 ppm is the ideal amount of TDS to have in drinking water.

Total Coliforms

- It is a large group of different types of bacteria, commonly found in the environment, such as in soil, and in the intestines of animals, including humans.

- The main sources of total coliforms in water is contamination from human and animal waste.

Green Fins Hub

- United Nations Environmental Programme (UNEP), along with the UK-based charity Reef-World Foundation, launched the Green Fins Hub.

- It is the 1st-ever global *marine tourism industry* platform.

- The platform will help diving and snorkelling operators worldwide to make simple, cost-efficient changes to their daily practices by utilising tried and tested solutions.

India's Largest Rubber Dam

- India's largest rubber dam named 'Gayaji Dam' built on Falgu River in Gaya, Bihar.

- The dam uses rubber instead of concrete. It is also environmentally friendly. At the same time, it is being claimed that it will not deteriorate for one hundred years.

- This rubber dam built in Gaya, a famous pilgrimage site of Hindus and Buddhism, will keep water in the Falgu River throughout the year.

Harmful Gases From Sewer Waste

- Highly toxic components of sewer gas include hydrogen sulfide and ammonia. The hydrogen sulfide is what gives it its signature rotten egg smell.

- It also contains methane, carbon dioxide, sulfur dioxide, and nitrous oxides.

Ratcheting Mechanism Under The Paris Agreement

- It is an informal term used to describe the requirement that countries will revise and communicate their emission targets, known as nationally determined contributions (NDCs)

- The term comes from the idea that amendments to plans and promises to tackle climate change will increase in a progressive manner at every review.

  - ✓ This means that countries will be expected to promise more action every five years in an effort to reduce global warming and the effects of climate change.

Why Millet Is Called Super Grain?

- Millet is a collective term referring to several small-seeded annual grasses that are cultivated as cereal crops, mainly on marginal lands.

- It is called the super grain because it is high in dietary fibre. Specifically, it contains 7-12 % protein, 2-5 % fat, 65-75% carbohydrates and 15-20% dietary fibre.

- It is an excellent grain to alleviate malnutrition and micronutrient deficiency.

- It does not require high-quality soil to grow and hence can easily cater to the needs of the growing population.

Areca Nut

- It is the source of a common chewing nut, popularly known as betel nut or Supari.

- Major states cultivating this crop are Karnataka (40%), Kerala (25%), Assam (20%), Tamil Nadu, Meghalaya and West Bengal.

- The dyes are derived from areca nut, which is a good source of antioxidants including flavonoids and polyphenols.

Kaas Pathar

- It is a plateau made from volcanic rock situated in Maharashtra.

- It falls in the biosphere of the Western Ghats, and it became a part of a UNESCO World Natural Heritage Site in 2012.

- It is known for various types of seasonal wildflowers bloom and numerous species of endemic butterflies annually in the months of August and September.

Species in News	
Pangasius icaria	• A new catfish species named has been discovered in the river Cauvery. • The new species is edible and the locals call it "aie keluthi" in Tamil. • Catfish has high commercial value in aquaculture and wild capture fisheries.
Bannerman's turaco	• It is a species of bird endemic to Cameroon. • Its natural habitat is subtropical or tropical moist montane forests. • It is listed as Endangered in IUCN Red List. • These birds are very shy and are highly sensitive to the presence of humans in their habitats.
Koala	• The Australian government declared the koala as Endangered. • They are an **arboreal herbivorous marsupial** native to Australia. • <u>Marsupials -</u> a mammal with a pouch for the development of offspring. • They are listed as Vulnerable in the IUCN Red List Status.
Olive ridley turtle	• It is the smallest and most abundant of all sea turtles found in the world. • These turtles are known for their unique mass nesting called **Arribada,** where thousands of females come together on the same beach to lay eggs. • It found in warm waters of the Pacific, Atlantic and Indian oceans. • It is listed as vulnerable in IUCN red list and schedule I in wild life protection act, 1972.
Emperor Penguin	• It is the tallest and heaviest of all living penguin species and is endemic to **Antarctica.** • They live in colonies ranging from 10 to hundreds of birds and use *vocal calls to recognize and communicate with each other.* • It is listed as near threatened in IUCN red list. • The primary causes for an increased risk are declining food availability, due to the effects of climate change and industrial fisheries.
Thalassotitan atrox	• An ancient giant sea lizard was discovered by researchers in an area outside Casablanca, Morocco. • It is an extinct genus of mosasaur (a group of extinct marine lizards) that lived in Morocco during the late Maastrichtian of the Cretaceous period, around 66 million years ago. • If dinosaurs dominated the land, the ancient giant sea lizards were the apex predators of the oceans when they were still alive. • It reaches a length of up to 50, which preyed on other marine reptiles such as plesiosaurs, sea turtles and other mosasaurs.
Slender Loris	• It is a species of primate, which is a nocturnal and a slow-moving animal. • It is native to India and Sri Lanka and inhabits subtropical and tropical dry forests and subtropical or tropical moist lowland forests. • It is threatened by habitat loss. • It is listed as Near Threatened in the IUCN Red List and Schedule I in the Wildlife

	Protection Act of India 1972.
Paraliparis selti	• Scientists have recently discovered a new species of deep sea fish in the Atacama Trench. • With its large eyes and unique colour, it resembled snailfish living in shallower waters. • The new species has evolved from cold-adapted species of Southern Ocean. • Its discovery opens new questions related to the connection between cold temperature and high-pressure adaptation. • It gives insights into how and when life went into the deep waters.
Pilot Whale	• Pilot whales are so named because it was once believed that each observed group was navigated by a pilot or leader. • While normally oceanic in their distribution, it can also approach coastal areas, and are frequently seen on whale watching tours around the world. • There are two species of pilot whales: <u>Short finned pilot whales</u>, which are mainly found in tropical and warm-temperate regions, and <u>long-finned pilot whales</u>, which inhabit colder waters. • It is listed as near Least Concern in IUCN red list. • It has been hunted for bone, meat, oil, and fertilizer.
Neelakurinji	• It is a shrub that is found in the shola forests of the Western Ghats in Kerala, Karnataka and Tamil Nadu. • Nilgiri Hills, which literally means the blue mountains, got their name from the purplish blue flowers of Neelakurinji that bloom only once in 12 years. • Tamil Nadu's 'Paliyan' tribe used the Neelakurinji flowers to calculate age. • Besides the Western Ghats, it is also seen in the **Shevroy in the Eastern Ghats, Sanduru hills of Bellary district in Karnataka.**
Indian bison	• It is also known as Indian gaur, which is one of the largest extant bovines, native to South and Southeast Asia. • It is found in evergreen forests or semi-evergreen and deciduous forests. • It is listed as Vulnerable in the IUCN red list and in the Schedule I of the Wild Life Protection Act, 1972. • It is the State Animal of Goa and Bihar.
Great Indian Bustard	• It is one of the heaviest flying birds in the world. • It usually found in dry grasslands and scrublands on the Indian subcontinent. • Its largest populations are found in Rajasthan. It is the state bird of Rajasthan. • It is listed as Critically Endangered on the IUCN Red List and Schedule I of the Indian Wildlife (Protection) Act, 1972.
Allmania multiflora	• A new species of the genus Allmania has been identified. • It is an annual herb, erect, <u>with branches arising from the base.</u> • It grows to a height of about 60 cm and is only the second species of this genus discovered to date. • It is listed as Critically Endangered in the IUCN red list.

Partnership Between OneWeb and NSIL

- The ISRO heaviest rocket Launch Vehicle Mark 3 (LVM3 or GSLV Mark 3) took off from the Satish Dhawan Space Centre, Sriharikota.
  - ✓ It successfully orbited 36 satellites of U.K. based OneWeb.
- This mission is being undertaken as part of the commercial arrangement between New Space India Limited (NSIL) and Network Access Associates Limited (m/s OneWeb Ltd).

About OneWeb Satellite Constellation

- It is a London-based satellite communications company with planned network of 648 **low Earth orbit (LEO)** satellites.
- It aimed to deliver high data throughput, low latency, and true global coverage to the poles.
- They are mostly used for telecommunication and satellite imagery.

OneWeb-NSIL partnership

- In October 2021, OneWeb had signed a letter of intent (LoI) with NSIL as one of the potential platforms to launch its satellites.
- The satellites will be carried onboard GSLV-Mk III, ISRO's heaviest rocket.
- It aims to help in bridging the digital divide in India.
- The arrival of OneWeb satellites in India for launch can provide a huge impetus and even more global exposure to the country's space industry.

About LVM3-M2

- It is earlier called Geosynchronous Launch Vehicle Mark III or GSLV-MK3.
- It is the dedicated commercial satellite mission of NSIL.
- It is capable of launching a 4,000-kilogram class of satellites into Geosynchronous Transfer Orbit (GTO) and 8,000 kgs of payloads into Low Earth Orbit (LEO).
- It is a 3-stage launch vehicle consisting of two solid strap-on motors, Core Liquid Stage and Cryogenic Upper Stage.
- It is ISRO's 2nd rocket for global commercial market, after its Polar Satellite Launch vehicle (PSLV).

Characteristics of GSLV MKIII

- Cost effective, Improved reliability, operability and redundancy management
- Future growth potential of payload with minimal design changes
- Later, the payload capability of GSLV MKIII will be increased upto 6 tons to GTO.
- A satellite in the GTO, orbits (at an altitude of ~37,000 km) the Earth once per day, keeping the satellite in roughly the same area over the ground.
- To support manned missions (like Gaganyaan mission) of Indian Space Programme
- Human rated GSLV MkIII is identified as the launch vehicle for Gaganyaan mission.
- Gaganyaan programme aims at carrying three Crew to Low Earth Orbit (LEO) and bring them back safely to a predetermined location on Earth.

About NSIL

- It is a Central Public Sector Enterprise & is the **commercial arm** of the Indian space agency **ISRO**.
- It was incorporated in March 2019 and is under the administrative control of the Department of Space (DoS) of the Government of India.
- It operates to fulfil business demands in the space sector, including building launch vehicles, satellite building and technology transfer, and satellite-based services.
- Its mission is to enable Indian industries to develop a high-technology manufacturing base for space programmes.

Other Related Organisation

Indian Space Association (ISpA)

- ISpA aspires to be the collective voice of the Indian Space industry
- It will act as a **single-window** and independent agency on matters related to space technology.
- It will be represented by leading domestic and global corporation that have advanced capabilities in space and satellite technologies.

Indian National Space Promotion and Authorisation Centre (IN–SPACe or INSPACe)

- It is an organisation under Department of Space of the Government of India, approved in 2020.
- The Centre will act as a facilitator and regulator of space activities in India.
- It will act as a link between the ISRO and private sector companies.

Antrix Corporation Limited (ACL)

- It is a wholly owned Government of India Company under the administrative control of the Department of Space (DoS).
- It was incorporated as a private limited company owned by GOI in September 1992 as a Marketing arm of ISRO for promotion and commercial exploitation of space products.
- As the **commercial and marketing arm** of ISRO, Antrix is engaged in providing Space products and services to international customers worldwide.

Banana Fungus

Researchers have warned that a fungus called Banana Fungus is spreading rapidly across the world and threatening food security in Africa.

About Banana Fungus

- It is also called **Panama disease**, a devastating disease of bananas.
- It is caused by the fungus Fusarium oxysporum, which lives in soil and can survive there for many years.
- It infects the plant through its roots. The infection stops water and essential nutrients from being transported to the rest of the plant. The leaves begin to wilt, and the stem of the plant starts turning dark brownish before the plant dies.
- It is highly **contagious**.
- It has no cure and no banana varieties that are resistant to the disease are yet developed.
- Although the best long-term control is to breed and grow highly resistant cultivars. Most bananas are sterile and are grown clonally, making the development of new, resistant cultivars difficult.
- The fungus is not harmful to humans.

Why Is It Important To Save Bananas?

- Globally, it is the 4th most important crop of the food market next to rice, wheat and maize. This makes it to be the prime leading fruit crop in terms of volume and value in the world market.
- It is especially important for vulnerable populations, whose food options are limited. Bananas account for up to 25% of their daily calorie intake.
- It is grown in 135 countries, so the crop is a source of income for countless small-scale producers.
- It is known for their high nutritional values too. Potassium, fiber, magnesium, and vitamin C and B6 are among the nutritious contents in it.

Black Cocaine

Narcotics Control Bureau (NCB) in Mumbai, seized at least 3.2 kilograms of high-grade black cocaine, worth Rs 13 crore.

About Black Cocaine

- It is a mixture of regular cocaine base with various substances to camouflage typical appearance.
- It is done to interfere with colour-based drug tests and also to neutralise the smell of cocaine which ensures that sniffer dogs cannot detect it.
- Black colour also reportedly makes it easier to smuggle as it can be disguised as asphalt, printer toner, charcoal, fertiliser or metal moulds.

About Cocaine

- It is a stimulant drug obtained from the leaves of **Coca plant species**.
- After extraction from coca leaves and further processing into cocaine hydrochloride (powdered cocaine).
- It has mental effects that may include an intense feeling of happiness, loss of contact with reality, or agitation.
- Physical effects may include a fast heart rate, sweating, and dilated pupils. It also has numbing and blood vessel constriction (tightening) properties, it is occasionally used during surgery.
- In 2017, the Global Burden of Disease study found that cocaine use caused around 7300 deaths annually world-wide.

Other Different Types of Cocaine

- **Pure Cocaine** - It is a crystalline powder derived from the leaves of the coca plant. It is uncut and unadulterated by other substances.
- **Crack Cocaine** - It comes in small, rock-like chunks. They can vary in colour depending on the purity. It is intended for smoking, and is an alternative to smoking freebase cocaine.
- **Synthetic Cocaine (fake cocaine)** – It is sometimes used in medicine as a local anesthetic. When it is sold for recreational use, it is often a synthetic cathinone.
- **Pink Cocaine** - It is not technically cocaine. It's a **synthetic drug** also known as 2C-B. It is called pink cocaine because of its pink powder form. It should never be snorted. It is considered highly dangerous because very small changes in dose can have hefty consequences.
- **Fish Scale Cocaine** - It is typically **high-quality** and uncut. It does not come in a powder form. Instead, fish scale cocaine looks like tiny, iridescent (display of colors) flakes. It appears to increase the user's tolerance more quickly than other forms of cocaine.
- **Cocaine Hydrochloride** - It is the salt form of cocaine. It's a fine white powder that can be identified by its bitter, numbing taste.

LCH Prachand

- Indian Air Force (IAF) has formally inducted the **indigenously** developed multi-role Light Combat Helicopter (LCH), Prachand. 45% of the equipment and materials used to make it are indigenous.
- It is designed and manufactured by the Hindustan Aeronautics Limited (HAL).
- It is powered by **two French-origin Shakti engines** manufactured by the HAL.
- Due to its light weight, it is capable of flying at great heights.
- The IAF claims that it is the **only attack helicopter** in the world, which can easily **land and take-off** at altitudes up to **5,000 meters (**16,400 ft).
- It uses radar-absorbing material to lower radar signature
- A pressurised cabin offers protection from Nuclear, Biological and Chemical (NBC) contingencies.

Need of LCH

- The idea of making a Light Combat Helicopter first came after the Kargil War of 1999.
- In 2006 the project of Light Combat Helicopter was launched in India.
- HAL then announced that it would develop a helicopter that could easily operate in the **harshest desert areas** as well as in **high altitude areas** like Ladakh and Siachen Glacier.
- After the sanctioning of project in 2006, initial operational clearance came in 2017 for the IAF variant and in 2019 for the Army variant.
- In March this year, the Cabinet Committee on Security (CCS) approved procurement of 15 LCH Limited Series Production (LSP) — 10 for IAF and 5 for Army.

Helicopters Currently Operated By Indian Armed Forces (IAF)

- India has been operating sub-3-ton category French-origin legacy helicopters, **Chetak and Cheetah,** made in India by the HAL. These single engine machines were, primarily, **utility helicopters**.
- Indian forces also operate the **Lancer**, an armed version of Cheetah.
- In addition, the IAF operates the Russian origin Mi-17 and its variants Mi-17 IV and Mi-17 V5, with maximum take-off weight of 13 tonnes. These helicopters are to be phased out starting 2028.

Click Chemistry

- The Nobel Chemistry Prize 2022 was awarded to three scientists for their work on click chemistry.
- It has been given to **Carolyn R Bertozzi, Morten Meldal and K Barry Sharpless**.

K Barry Sharpless shared the **2001 Nobel Prize** with William S. Knowles and Noyori Ryōji for "Developing the First Chiral Catalysts".

About Click Chemistry

- It is a technique that allows molecular building blocks to snap together quickly and efficiently.
- The reacting molecules should be in a *made-for-each-other kind of situation* for this particular reaction, so that the reaction was irreversible and 100% efficiency was achieved
- This approach emphasised the need to replicate nature's efficiency, not its processes, or even products.
- It is used to develop *pharmaceuticals, map DNA and create new materials*.
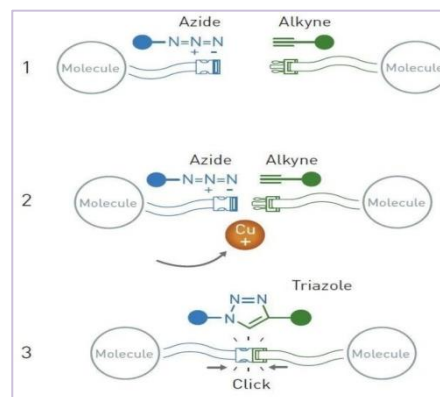
Vyommitra

Vyommitra is currently undergoing pre-flight ground tests.

- It is the humanoid designed to **fly abroad unmanned test missions** ahead of the Gaganyaan human space-flight mission.
- Over the past few months, ISRO Inertial Systems Unit (IISU) has successfully integrated it with a computer brain which enables it to read control panels aboard and communicate with the ISRO ground stations.

About Vyommitra

- It is a female-looking spacefaring humanoid robot developed by ISRO to function on-board the Gaganyaan, a crewed orbital spacecraft. A humanoid is basically a robot with the appearance of a human being.
- It is also being called a half-humanoid since she will only have a head, two hands and a torso, and will not have lower limbs.

Why Is ISRO Developing A Humanoid?

- ISRO plans to send a human into space for the first time by 2022.
- ISRO does not want to fly animals on experimental missions, unlike other nations that have carried out manned space flight.
- Instead, it will fly humanoid robots for weightlessness and a better understanding of what radiation does to the human body during long periods in space.
- It can mimic human activity, recognize other humans, and respond to their queries.
- It will simulate the human functions required for space before real astronauts take off. Two trial flights without crew will take place with a humanoid.
- It can detect and give out warnings if environmental changes within the cabin get uncomfortable to astronauts and change the air condition.

Super App

Elon Musk revealed the idea of creating an everything app, which is often referred to as a super app.

About Super App

- It is a mobile or web application that can provide multiple Products and services under one umbrella. It includes messaging, social networking, peer-to-peer payments and e-commerce.
- It is expected to bring together all the consumer-facing businesses.
- **Some Examples of Super Apps: WeChat, Hugo, Grab, Tata Neu**

Significance of Super Ap	Concerns Related to Super App
- It can increase the <u>revenue realization</u> due to consolidation of services at one place. - It will save a lot of time because these apps provide diverse services at one place. - It enables domestic and foreign retailers to easily get access to the market. - It also provides companies with large swaths of consumer data which can then be harnessed to learn more about user behaviour.	- Companies are trying to keep a customer within their own ecosystem for most services that increase the possibility of a monopoly. - There are concerns of privacy in cases where a super app has boarded 3rd-party service providers. - Data collected by the master app could be used to **train machines in artificial intelligence** and predict consumer behaviour.

Kuafu-1

- China launched its first space-based solar observatory- **Advanced Space-based Solar Observatory (ASO-S),** nicknamed Kuafu-1, to solve the mystery of the Sun's eruptions.

- It will provide insights into how the Sun's magnetic field causes **coronal mass ejections (CMEs)** and other eruptions.

- It has the unique ability to study the middle corona, an important region of the sun where solar storms brew.

- It will also conduct simultaneous observations of both solar flares and CMEs to understand their connections and formation mechanisms.

- This mission is similar to _NASA's Parker Solar Probe and European Space Agency's Solar Orbiter._

- India is also planning to launch a solar mission named **Aditya-L1 in 2023** to research the solar atmosphere.

Cyber-Knife System

The Prime Minister of India laid the foundation stone of healthcare facilities in Ahmedabad, Gujarat, which will be the country's 1st govt. hospital that'll offer modern facilities like Cyber-Knife.

About Cyber-Knife System

- It is a non-invasive alternative to surgery for the treatment of both _cancerous and non-cancerous tumours_ anywhere in the body.
  - ✓ It is used to treat conditions including the prostate, lung, brain, spine, head and neck, liver, pancreas and kidney.
- The treatment delivering beams of high-dose radiation to tumours with extreme accuracy offers new hope to patients worldwide.

- A robotic arm is used in this technology to engage the radiation rays with any part of the body.

- It can treat moving tumours with pinpoint accuracy, which is unmatched by other radiosurgery systems.

Next-Gen Launch Vehicle (NGLV)

ISRO is developing a Next-Gen Launch Vehicle (NGLV).

About Next-Gen Launch Vehicle

- In NGLV, ISRO is looking at a cost-efficient, three-stage to orbit, reusable heavy-lift vehicle with a payload capability of 10 tonnes to Geostationary Transfer Orbit (GTO).

- It will feature semi-cryogenic propulsion (_refined kerosene as fuel with liquid oxygen (LOX) as oxidiser)_ for the booster stages which is cheaper and more efficient.

- Potential uses of NGLV will be in the areas of launching communication satellites, deep space missions, future human spaceflight and cargo missions.

Significance of NGLV

- It will one day replace operational systems like the Polar Satellite Launch Vehicle (PSLV).

- It will feature a simple, robust design which allows bulk manufacturing, modularity in systems, sub-systems and stages and minimal turnaround time.

Launch Vehicles Developed by ISRO

Satellite Launch Vehicle (SLV)

- It was a small-lift launch vehicle project started in the early 1970s.

- It was intended to reach a height of 400 kilometers and carry a payload of 40 kg.
- The 1st successful launch took place in July 1980.
- It was a four-stage rocket with all solid-propellant motors.

Augmented Satellite Launch Vehicle (ASLV)

- It was a small-lift launch vehicle five-stage solid-fuel rocket developed to place 150 kg satellites into Low Earth Orbit (LEO).
- ISRO did not have sufficient funds for both the PSLV programme and the ASLV programme at the same time.
- The ASLV programme was terminated after the initial developmental flights.

Polar Satellite Launch Vehicle (PSLV)

- It is the 3rd generation four-stage launch vehicle of India. PSLV's first launch was in 1994.
- It is the 1st Indian launch vehicle to be equipped with liquid stages.
- It is the most reliable rocket used by ISRO to date, with 52 of its 54 flights being successful.
- Notable launches are – Chandrayaan-1 in 2008 and Mars Orbiter Spacecraft in 2013.

Geosynchronous Satellite Launch Vehicle (GSLV)

- It is a three-stage vehicle, which can carry heavy satellites to greater depths in space.
- It can place approximately 4,000-kilogram into GTO (Geosynchronous Transfer Orbit) and 8,000 kgs of payloads into LEO.
- GSLV rockets have carried out 18 missions, of which four ended in failure.
- Mission Chandrayan-2 was launched by GSLV Mk-III.

Small Satellite Launch Vehicle (SSLV)

- It is a rocket that is designed to orbit satellites weighing less than 500kg in LEO and 300 kg to Sun Synchronous Orbit (SSO).
- It is a 3 stage Launch Vehicle configured with three Solid Propulsion Stages and liquid propulsion-based Velocity Trimming Module (VTM) as a terminal stage.

{For more about SSLV refer The Recitals – August 2022}

Adderall

The US Food and Drug and Drug Administration (FDA) recently announced a shortage of Adderall.

About Adderall

- It is a drug for the treatment of attention-deficit hyperactivity disorder (ADHD) and narcolepsy, a sleep condition that causes daytime sleepiness.
- It consists of a combination of dextro-amphetamine and amphetamine.
- It can help enhance sports performance, improve focus, concentration, impulse control, hyperactivity, because of its effects on the central nervous system.
- It is classified as a Schedule II drug in the US, which means the drug has a high potential for abuse.

Plant Based Meat

Cricketer M S Dhoni picked up an undisclosed equity stake in plant-based meat start-up Shaka Harry.

About Plant Based Meat

- It refers to products that bio-mimic or replicate meat derived from animals, by looking, smelling, and tasting like them.
  - ✓ Other plant-based products are seafood, eggs, and milk that biomimic or replicate original products derived from animals.
- It is made from vegetarian or vegan ingredients such as soy, wheat gluten, pea protein or myco-protein.
- It found it to be a good source of fiber, folate, and iron while containing less saturated fat than ground beef.

Significance Plant Based Meat

- It is consumed as a source of dietary protein by vegetarians, vegans and people who follow religious and cultural dietary laws.
- It demands has also increased among non-vegetarians, who seek to reduce the environmental impact of meat production in terms of greenhouse gas production, water and land use.

Disadvantages of plant-based meat

- **High on sodium –** usually in an attempt to make it more palatable and have greater shelf-life.
  - ✓ Too much sodium can cause adverse health effects, including high blood pressure and stroke.
- **Highly processed food –** It is highly processed and filled with less healthy ingredients like refined coconut oil and modified food starch.
  - ✓ Some plant-based substitutes, for example, those derived from soybeans, are not so eco-friendly.
- Plant-based meats can fit into a healthy diet when eaten in moderation no more than a couple times a week.

Scope of Plant Based Products in India

- According to APEDA, India's plant protein market is expected to reach 400 to 450 million USD in the next five years.
- India's popular consumer goods companies like ITC and Tata Consumer Products are investing in this industry.

Kamikaze Drone

- These are made in **Iran,** where they are known as Shahed-136
- It is small unmanned drones that are **loaded with explosives** and can be flown directly over a tank or group of soldiers. Unlike drones that return to base once missiles are launched, "kamikaze" or "suicide" drones are destroyed in an attack
- It is called Switchblade drones because their bladelike wings spring out on launch.
- Russia, China, Israel, Iran and Turkey all have some version of this drone.
- Because of their small size they are difficult to detect on radar.
- It can even be programmed to hit targets without human intervention based on facial recognition.
- It has a feature that allows the operator to adjust the blast radius. So, it can kill the driver of a vehicle but not a passenger.

Rustom-2

DRDO is expected to complete all user trials of Rustom-2 by August 2023,. Parallelly, a separate project for the weaponisation of the Rustom UAV is also under way.

- It is an indigenous **Medium altitude long endurance (MALE)** underlined unmanned aerial vehicle (UAV).
- It is also known as Tapas-BH (Tactical Airborne Platform for *Aerial Surveillance*-Beyond Horizon).

- It is part of the Rustom line of UAVs that includes Rustom-I, Rustom-H and Rustom-C.
- It is developed for use by all three services of the Indian armed forces, primarily for intelligence, surveillance and reconnaissance (ISR) operations.
- It is designed and developed by Aeronautical Development Establishment (ADE), a Bengaluru-based premier lab of DRDO, with HAL-BEL as the production partners.
- It can carry a variety of payloads like Medium and Long-Range Electro Optic, Synthetic Aperture Radar (SAR), Electronic Intelligence (EILNT) and Situational Awareness Payload (SAP).
- Last year in December 2021, it had crossed a milestone by reaching an altitude of 25,000 feet and an endurance of 10 hours.

Pillars of Creation (PoC)

- NASA's James Webb Space Telescope has captured the iconic Pillars of Creation (PoC).
- The pillars are composed of cool molecular hydrogen and dust that are being eroded by photo evaporation from the ultraviolet light of relatively close and hot stars.
- The large loops of gas and dust that have collapsed under their own gravity slowly heated up to give birth to new stellar bodies. The bright red spheres located outside the pillars are baby stars.
- They are located 6,500 light years from Earth, in the **Eagle Nebula** of our Milky Way galaxy.
- The three-dimensional pillars are appeared at times semi-transparent in near-infrared light.
- It will help researchers revamp their models of star formation by identifying far more precise counts of newly formed stars, along with the quantities of gas and dust in the region.

Sampurnanand Telescope

Sampurnanand Telescope completed 50 years of operations.

About Sampurnanand Telescope

- It is located at ARIES, Manora Peak, Nainital (Uttarakhand).
  - ✓ Aryabhatta Research Institute of Observational Sciences (ARIES) is an autonomous institute under the Department of Science & Technology, specializes in observational Astronomy & Astrophysics and Atmospheric Sciences.
- It has been extensively used for optical observations of comets, occultation by planets and asteroids, star-forming regions and star clusters, variable stars, transients, active galactic nuclei, etc.

Some of the Breakthrough Science Results Contributed by the Telescope Include

- Discovery of rings of Uranus.
- Two additional rings around Saturn were detected, out of these, one ring was detected for the 1st time.
- 1st detection of optical afterglows of Gamma-ray-bursts (GRBs) and micro-lensing event from Indian soil.
- The 1st photoelectric observations of stars from Indian soil were obtained at the institute.
- The discovery of quakes in a half dozen of stars under 'The Nainital-Cape Survey', the one of the longest and unique ground-based surveys initiated jointly at the northern and southern hemispheres.

Hawk Air Defense

The United States (US) is considering retrieving older HAWK air defense equipment from storage to send to Ukraine.

About HAWK Air Defense

- It short for 'Homing All the Way Killer'.

- It is an American **medium-range surface-to-air missile**.

- It entered service with the US Army in 1959, during the Vietnam war.

- It underwent upgrades over the decades that followed, including a major one in 1971 that produced the so-called I-HAWK (or improved HAWK), with a kill probability of 85%.

- The HAWK system was the predecessor to the PATRIOT missile defense system.
    - ✓ Patriot is a long-range, all-altitude, all-weather air defense system to counter tactical ballistic missiles, cruise missiles and advanced aircraft.

Dirty Bomb

Russia has claimed that Ukraine is planning to use a dirty bomb.

About Dirty Bomb

- It is a bomb that contains radioactive material, such as uranium, which is scattered through the air when its conventional explosive detonates.

- It does not create city-flattening atomic explosion but are designed to spread toxic waste.

- It uses radioactive materials from hospitals, nuclear power stations or research laboratories.
    - ✓ This makes them much cheaper and quicker to make than nuclear weapons.

Concerns Related to Dirty Bomb

- The radioactive materials used in would probably not create enough radiation exposure to cause immediate serious illness, except to those people who are very close to the blast site.

- However, the radioactive dust and smoke spread farther away could be dangerous to health if it is inhaled. Because people cannot see, smell, feel, or taste radiation.

- Evacuation of cities can cause huge economic losses if radioactive dust and smoke spread.

Anti-radiation Missile

- It is used to detect an enemy's source of radio emission. These are mostly manufactured to be used against the enemy radar.

- These can play a key role in neutralising any jamming platforms of the enemy or take out radar stations thereby clearing a path for their own fighters to carry out.

- India's 1st indigenous anti-radiation missile, **Rudram**, developed for the Indian Air Force, was successfully flight-tested from a Sukhoi-30 MKI jet.

Lecanemab

- It is an experimental drug currently in clinical trials for the treatment of Alzheimer's disease.

- Alzheimer's disease is a form of dementia. The disease is not a part of normal aging, and likely caused by various processes that damage neurons of the brain.

- **Amyloid hypothesis** is a theory in which some researchers believe that flaws in the processes governing production, accumulation or disposal of beta-amyloid are the primary cause of Alzheimer's.

Standalone vs Non-standalone Mode of 5G Technology

- Standalone (SA) options include only one generation of radio access technology and Non-standalone (NSA) includes two generations of radio access technologies (Eg. 4G LTE and 5G).
- NSA connects the control signalling of 5G radio networks to the 4G core while SA connects the 5G radio networks directly to the 5G core network.
- NSA is a 5G service that is not stand-alone but built on existing 4G networks.

Quantum Entanglement

- It is a counterintuitive phenomenon that explains how two subatomic particles can be intimately linked to each other even if separated by billions of light-years of space.
- Despite their vast separation, a change induced in one will affect the other, if both are quantum entangled.
- Entangled states are key resources to facilitate many quantum information processing tasks and quantum cryptographic protocols.

Gene Drive

- It is a type of genetic engineering technique that modifies genes so that they don't follow the typical rules of heredity.
- It consists of *3 major components*: the gene we want to spread; Cas9 enzyme that can cut DNA; and CRISPR, a permissible DNA sequence that identifies where the enzyme should cut.
- This technology could be an effective way to eradicate nuisance species, such as malaria-causing mosquitoes.

Diethylene Glycol (DEG) And Ethylene Glycol (EG)

- Many children have died in the Gambia after consuming cough syrup containing DEG and EG.
- Both are often found as contaminants in glycerin, which is used as a sweetener in the manufacture of pharmaceutical cough syrups.
- Both have similar physical properties like colourless, odorless and viscous.

Becquerel, Gray, Sievert

- **Becquerel (Bq)** - It is a unit of radioactivity and focuses on where radiation comes from. It is used to express the amount of radioactive materials contained in soil, foods, tap water, etc.
- **Gray (Gy)** - It is the unit for *absorbed dose* which measures the amount of ionizing radiation that has been absorbed by any material.
- **Sievert (Sv)** – It is the SI unit for ionizing radiation dose. It is a measure of external and internal biological exposure to radiation.

Troponin

- It is a type of protein found in the muscles of your heart.

- It isn't normally found in the blood. When heart muscles become damaged, troponin is sent into the bloodstream.
- As heart damage increases, greater amounts of troponin are released in the blood.
- A troponin test measures the level of troponin in your blood.
- It is an air-to-surface missile, designed and developed by the DRDO.

Gamma Ray Bursts (GRB)

- These are short-lived bursts of gamma-ray light, the most energetic form of light.
- It shines hundreds of times brighter than a typical supernova and about a million trillion times as bright as the Sun.
- Two types of GRBs -
  - ✓ Long-duration bursts last anywhere from 2 seconds to several minutes, with an average time of about 30 seconds.
  - ✓ Short duration bursts are those that last less than 2 seconds; lasting anywhere from a few milliseconds to 2 seconds with an average duration of about 0.3 seconds.

CAR T Cells

- Chimeric Antigen Receptor (CAR)-T Cells are a patient's own immune cells that are genetically engineered in the laboratory to fight cancer.
- It is used as 3rd or 2nd-line treatment for patients of specific types of cancers of blood and lymph nodes.

ORS

- Oral rehydration solution (ORS) is an oral powder–containing mixture of glucose, sodium chloride, potassium chloride, and sodium citrate.
- After being dissolved in the requisite volume of water they are intended for the prevention and treatment of dehydration due to diarrhea, including maintenance therapy.

Very Large-Scale Integration (VLSI)

- It is the process of integrating or embedding hundreds of thousands of transistors on a single silicon semiconductor microchip.
- This technology was conceived in the late 1970s when advanced level computer processor microchips were under development.
- The microprocessor and memory chips are VLSI devices.

CULTURE

Mahakal Lok corridor

- The Prime Minister recently inaugurated the **first phase** of the **Shri Mahakal Lok corridor** in **Ujjain, Madhya Pradesh**.

- After Vishwanath temple in Varanasi and the Kedarnath shrine in Uttarakhand, Mahakal temple is the third 'jyotirlinga' site to see a major upliftment exercise.

- Worth more than Rs 850 crore Mahakal corridor is four times the size of the Kashi Vishwanath corridor, which was inaugurated last year.

Details Of The Corridor

- **Mahakal Maharaj Mandir Parisar Vistar Yojna** is a plan for the expansion, beautification, and decongestion of the Mahakaleshwar temple and its adjoining area in Ujjain district.

- Under the plan, the Mahakaleshwar temple premise of around **2.82 hectares** is being increased to **47 hectares**, which will be developed in two phases by the Ujjain district administration. This will also include the 17 hectares of **Rudrasagar lake**.

- At the beginning point of the corridor, two gateways, namely **Nandi Dwar** and **Pinaki Dwar** are erected.

- A 900-metre pedestrian corridor has been constructed, consisting of **108 pillars**, made of beautifully carved **sandstones**.

- The **mural wall** along the path is based on stories from **Shiva Purana**, such as Shiv Vivah, Tripurasur Vadh, Birth of Ganesh, Shiv Tandav Swaroop among others.

- The second phase of the project is being developed with funding from **Agence Francaise de Development (AFD)** under the **City Investments to Innovate Integrate and Sustainable (CITIIS) programme**.

Significance of Mahakaleshwar Temple

- Mahakaleshwar, which means the '**Lord of time**', refers to Lord Shiva. As per Hindu mythology, the temple was constructed by Lord Brahma and is presently located alongside the **holy river Kshipra**.

- According to Puranas, Lord Shiva pierced the world as an **endless pillar of light**, called the **jyotirlinga**. There are 12 jyotirlinga sites in India, considered a manifestation of Shiva.

- Mahakaleshwar Jyotirlinga in Ujjain is one of the **12 jyotirlingas** considered the most sacred abodes of Shiva.

- Besides Mahakal, these include Somnath and Nageshwar in Gujarat, Mallikarjuna in Andhra Pradesh, Omkareshwar in Madhya Pradesh, Kedarnath in Uttarakhand, Bhimashankar, Triyambakeshwar and Grishneshwar in Maharashtra, Viswanath at Varanasi, Baidyanath in Jharkhand, and Rameshwar in Tamil Nadu.

- The temple's Mahakal Lingam is believed to be **Swayambhu (originated on its own)**. The shrine is also revered as one the **18 Maha Shakti Peeth** in India.

- **Mahakaleshwar** is the **only jyotirlinga facing the south**, while all the other jyotirlingas face east.

- The Mahakal temple is mentioned in several ancient Indian poetic texts. In the early part of the **Meghadutam** (Purva Megha) composed in the 4th century, **Kalidasa** gives a description of the Mahakal temple.

- It is described as one with a stone foundation, with the ceiling on wooden pillars. There were no shikharas or spires on the temples prior to the Gupta period.

Construction Of The Temple

- In the 13th century, the temple complex was destroyed by Turk ruler **Shams-ud-din Iltutmish** during his raid on Ujjain.

- The present five-storeyed structure was built by the **Maratha general Ranoji Shinde** in **1734**, in the Bhumija, Chalukya and Maratha styles of architecture. A century later, its marble walkways were restored by the Scindias.

Historical Significance of Ujjain

- The city of Ujjain was also one of the primary centres of learning for Hindu scriptures, called **Avantika** in the 6th and 7th centuries BC.

- Later, astronomers and mathematicians such as **Brahmagupta** and **Bhaskaracharya** made Ujjain their home.

- Also, as per the **Surya Siddhanta**, one of the earliest available **texts on Indian astronomy** dating back to the 4th century, Ujjain is geographically situated at a spot where the zero meridian of longitude and the Tropic of Cancer intersect.

- In the 18th century, an observatory was built here by **Maharaja Jai Singh II**, known as the **Vedh Shala** or **Jantar Mantar**, comprising 13 architectural instruments to measure astronomical phenomena.

Booker Prize

- Sri Lankan writer **Shehan Karunatilaka** recently won the Booker Prize for his novel **The Seven Moons of Maali Almeida**.

- The Booker Prize is the **world's leading literary award** for a single work of fiction.

- It was formerly known as the **Booker Prize for Fiction** (1969–2001) and the **Man Booker Prize** (2002–2019).

- **Founded** in the **UK** in **1969**, it initially rewarded Commonwealth writers but is now **open to anyone regardless of origin**.

- It is awarded each year for the **best novel written in English** and **published in the United Kingdom or Ireland**.

- A sister prize, the **International Booker Prize**, is awarded for a **book translated into English** and published in the United Kingdom or Ireland.

ASI Findings in Bandhavgarh

The Archaeological Survey of India (ASI) recently reported Buddhist caves in Madhya Pradesh's Bandhavgarh Tiger Reserve.

The Findings

- The 26 caves dating back to the 2nd and 5th centuries are associated with the **Mahayana sect of Buddhism**. These date back to the same time as the Ajanta caves in Aurangabad, a UNESCO World Heritage Site.

- The caves and some of their remains had 'Chaitya' (rounded) doors and stone beds typical of Mahayana Buddhism sites.

- This discovery brings the total number of caves found in Bandhavgarh to 76, as 50 are already in the records.

Temple Remains

- Besides the caves, the team also found the remains of 26 temples, two mathas, two stupas, 46 idols and sculptures, 26 fragments and 19 water bodies.

- The remains of 26 temples date to the **Kalachuri period** between **9th-11th centuries**.

- The Kalachuri dynasty, which spread over parts of Gujarat, Maharashtra and Madhya Pradesh, is also associated with the earliest Ellora and Elephanta cave monuments.

Inscriptions

- Apart from this, the ASI team found **24 inscriptions in Brahmi text**, all dating back to the 2nd-5th centuries.
- The inscriptions mention sites such as Mathura and Kaushambi, and Pavata, Vejabharada and Sapatanaairikaa. The kings they mention include Bhimsena, Pothasiri and Bhattadeva.

Bandhavgarh

- Bandhavgarh, located in Umaria district of Madhya Pradesh was declared a national park in 1968 and became a tiger reserve in 1993.
- The word Bandhavgarh is a combination of two words: Bandhav+ Garh where Bandhav means brother and Garh means Fort. Thus, it means **brother's fort**.
- Ancient books like **Narad Panch Ratra** and the **Shiv Purana** show that the place is associated with Ramayana.
- This region also unveils the history to find the major dynasties that ruled the Bandhavgarh regions including **Sengars, the Kalchuris and the Baghels**.

Kashi-Tamil Sangamam

- The Union Government has announced a month-long programme called '**Kashi-Tamil Sangamam**' to strengthen and revive the cultural and civilisational bond **between Tamil Nadu and Varanasi** - both deep centres of knowledge.
- The programme, would be a part of the **Ek Bharat Sreshtha Bharat** initiative.
- As part of the programme, a total of 2,500 people (divided into 12 groups) would be travelling to Varanasi by train during the month-long period. The journey points in Tamil Nadu would be Chennai, Rameswaram and Coimbatore.
- The tours would include seminars, lectures, group meetings and visits to the Kashi Vishwanath temple and centres of important Tamil cultural heritage in Varanasi.

Bharatiya Bhasha Samiti (BBS)

- A High Powered Committee for Promotion of Indian Languages called Bharatiya Bhasha Samiti (BBS) headed by Chamu Krishna Shastry, has come up with a proposal to rediscover, reaffirm and celebrate the links between the Tamil culture and Kashi that have existed for centuries.
- The Committee has been constituted by the Education Ministry.

National Maritime Heritage Complex

- The Prime Minister recently reviewed the progress of the **National Maritime Heritage Complex** (NMHC) at Lothal, Gujarat.
- Developed at a cost of Rs 3,500 crore, the project is being developed to display India's rich and diverse maritime heritage and to help Lothal to emerge as a **world class international tourist destination**.
- The boost to the tourism potential through this project will also augment the economic development of the region.

Features

- It will have several innovative features such as **Lothal mini-recreation**, which will recreate *Harappan architecture and lifestyle through immersive technology.*

- It will have **four theme parks** – Memorial theme park, Maritime and Navy theme park, Climate theme park, and Adventure and Amusement theme park.
- It will also house the world's tallest lighthouse museum, 14 galleries highlighting India's maritime heritage starting from the Harappan time till today.
- A **coastal states pavilion** displaying the diverse maritime heritage of Indian states and UTs will also be a part of the project.

Lothal

- Lothal was one of the southernmost sites of the Indus Valley civilization, located in the Bhāl region of what is now the state of Gujarat.
- It is known for the **discovery of the oldest man-made dockyard**, connecting the city to an ancient course of the Sabarmati river.
- The meaning of Lothal (a combination of Loth and (s) thal) in Gujarati is "the mound of the dead".
- Incidentally, the name of the city of Mohenjo-daro (also part of the Indus Valley Civilisation, now in Pakistan) means the same in Sindhi.
- Believed to have been built in **2,200 BC,** Lothal was a thriving trade centre in ancient times, with its trade of beads, gems and ornaments reaching West Asia and Africa.
- Lothal was nominated in 2014 as a UNESCO World Heritage Site, and its application is pending on the tentative list of UNESCO.
- Its heritage value is comparable to other ancient port-towns around the world – including Xel Ha (Peru), Ostia (Port of Rome) and Carthage (Port of Tunis) in Italy, Hepu in China, Canopus in Egypt, Gabel (Byblos of the Phoenicians), Jaffa in Israel, Ur in Mesopotamia, Hoi An in Vietnam.
- In the region, it can be compared with other Indus port towns of Balakot (Pakistan), Khirasa (in Gujarat's Kutch) and Kuntasi (in Rajkot).

Sharda Peeth

- The Muslim community of Sharda village has taken the initiative to conserve and renovate Sharda Peeth.
- Sharda Peeth is an ancient Hindu temple and cultural site in **Pakistan-occupied Kashmir's Neelum Valley** and has been completely deserted since Partition in 1947.
- It is believed to be the place where **Adi Shankaracharya** was elevated to **Sarvajna Peetha** (seat of omniscience), after comprehensive debates with Buddhist and Jain monks.
- The Peeth finds mention in **Nilamata Purana,** a 7th century text.
- **Kalhana's Rajatarangini** (deemed to be the first history of Kashmir) from the 12th century, also states that the Peeth was a Hindu pilgrimage site renowned in the subcontinent by 8th century.
- It is one of **18 Maha Shakti Peethas -** highly revered temples throughout South Asia that commemorate the location of fallen body parts of the Hindu deity Sati.
- Between the 6th and 12th centuries CE, Sharda Peeth was one of the foremost temple universities of the Indian subcontinent and was once at par with Nalanda and Takshila.
- According to experts, it was "**a crossroads of civilisations**" that attracted scholars of various faiths, pilgrims and monks, who left their mark in the form of rock inscriptions in Neelam Valley or the valley of Kishanganga.

Sawai Jai Singh

- Few MPs have asked the central government to oppose the misleading claim about **Sawai Jai Singh of Jaipur**, being referred as the servant of the Mughal Emperor, at a museum in Samarkand, Uzbekistan.

- Jai Singh II, popularly known as Sawai Jai Singh was a **Kachwaha Rajput** ruler of the **kingdom of Amber**.

- He became ruler of Amber at the age of 11 after the death of his father, Raja Bishan Singh in 1699.

- He was **given the title of Sawai by the Mughal Emperor Aurangzeb** before the siege of Khelna in Deccan. Sawai means **one and a quarter time superior** to his contemporaries.

- He had also received the titles of Maharajah Sawai, Raj Rajeshvar, Shri Rajadhiraj and Saramad-i-Rajaha-i-Hind.

- Initially, Jai Singh served as a vassal of the Mughal Empire. In the later part of his life, Jai Singh broke free from the Mughal hegemony.

- He also moved his kingdom's capital from Amber to the newly-established city of Jaipur in 1727.

- He has made great contributions to the field of architecture, mathematics, and astronomy.

- He built Astronomy Observatories at Delhi, Jaipur, Varanasi, Ujjain and Mathura known as the **Jantar Mantar**.

- He also got the Euclid's 'Elements of Geometry' translated into Sanskrit.