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1. SCIENCE & TECHNOLOGY

1.1 End of Mangalyaan Mission

Why in News?

Recently, the Indian Space Research Organization (ISRO) confirmed that the Mars Orbiter craft has lost communication and is non-recoverable and the Mangalyaan mission has attained the end-of-life.

1. It is interesting to know that **it was designed for a life-span of just 6 months** but the **Mars Orbiter Mission (MOM) has lived for almost 8 years in the Martian orbit.**

About the MOM

1. It was **launched in November 2013,** and the **MOM spacecraft was successfully inserted into the Martian orbit** in **September, 2014 in its first attempt.**
2. Mangalyaan was **India's 1st interplanetary mission.**
3. This mission has **made India the 1st Asian country and the 4th in the world after Roscosmos (of Russia)**, NASA (National Aeronautics and Space Administration)**, and the **European Space Agency**, to get to the Mars.**
4. China referred to **India's successful Mangalyaan as the "Pride of Asia".**
5. It carried with him almost **850 kg of fuel and 5 payloads including a Mars Colour Camera (MCC)** which it was using to study the **Martian surface and atmosphere** since **entering orbit successfully.**
6. The **highly elliptical orbit geometry of MOM enabled the camera to take snapshots of the 'Full disc' of Mars at its farthest point** and **finer details from the closest point.**
7. The MCC has **produced more than 1000 images** and **published a Mars Atlas too.**
8. **Other instruments it carried with him are: Thermal Infrared Imaging Spectrometer (TIS), Methane Sensor for Mars (MSM), Mars Exospheric Neutral Composition Analyser (MENCA) and Lyman Alpha Photometer (LAP).**

Objectives of MOM are:

1. It was **aimed at studying the Martian atmosphere.**
2. To explore **Martian surface features, mineralogy, morphology and atmosphere using indigenous scientific instruments.**
3. A **crucial objective of MOM** was to **develop technologies required in planning, designing, management and operations** of an interplanetary mission.

So, What caused the End of MOM?

1. **Because of propellant (fuel) exhaustion the desired altitude pointing could not be achieved for sustained power generation** and **it lost communication from the ground station located at Earth.**
2. Recently, there were **back-to-back eclipses including one that lasted for almost seven-and-half hours because of that satellite consumed all the** propellant on board.

3. As the satellite **battery is designed to handle eclipse duration of only about 1 hour and 40 minutes,** a longer eclipse has drained the battery beyond the safe limit.

About Future Indian Mars Mission

1. ISRO **came out with an 'Announcement of Opportunity' (AO)** for future 'Mars Orbiter Mission' (MOM-2) in 2016 but 'Gaganyaan', 'Chandrayaan-3' and 'Aditya - L1' projects **are in the current priority list.**

2. Mangalyaan-2 will only be an orbiter mission.

Additional Information

Various Mars Missions are:

1. ExoMars rover (2021) (European Space Agency)
2. Tianwen-1: China's Mars Mission (2021)
3. UAE's Hope Mars Mission (UAE's first-ever interplanetary mission) (2021)
4. Mars 2 and Mars 3 (1971) (Soviet Union)
5. NASA'sPerseverance Rover

1.2   The First Ever List of Fungal Infection by WHO

Why in News?

Recently, The **World Health Organisation** has released the **1st ever list of fungal infections (Priority Pathogens) that can be a threat to public health.**

About Fungal Priority Pathogen List (FPPL)?

1. **It is the list of 19 fungi, representing the greatest threat to human health.**
2. The **list took preferences** (initials) **from the bacterial priority pathogens list, first published by WHO in 2017**.
3. It **aims to encourage research and policy interventions** to improve the **global response towards antifungal resistance.**

The classification of these pathogens:

Classification is based on the pathogen's public health impact or emerging antifungal resistance risk, and is as follow:

(A) Critical Priority Group	(B) High Priority Group	(C) Medium Priority Group
It includes **Candida Auris,** which is **a highly drug-resistant fungi.** Other fungies are Cryptococcus neofor mans, Aspergillus	It **includes a number of other fungi from the Candida family** as well as **Mucorales.** [Mucorales is a **group containing "black fungus"**, an **infection which rose rapidly in seriously ill people,**	It **includes a number of other fungi, including Coccidioides spp and Cryptococcus gattii.**

fumigatus, and Candida albicans.	particularly in India, during Covid-19.]	

Recommendations by FPPL Report:

1. **Strengthening laboratory capacity** and **observation.**
2. **Sustaining investments** in **research, development, and innovation.**
3. **Enhancing public health interventions** for **prevention and control.**

What are the Rising Concerns related to Fungal Pathogens?

1. **Fungal pathogens are a major threat to public health** and **are becoming increasingly common.**
2. **These are resistant to treatment and only 4 types of antifungal medicines are currently available.**
3. Most fungal pathogens **lack rapid and sensitive diagnostics** (cure) and **those that exist are not widely available or affordable globally.**
4. **Incidences and geographic range of fungal diseases** are **both expanding worldwide, due to global warming and the increase of international travel and trade.**
5. During the **COVID-19 pandemic,** the **incidences** of **invasive fungal infections increased significantly among hospitalized patients.**
6. As the **fungi that cause common infections** (**such as candida oral and vaginal thrush**) become **increasingly resistant to treatment,** risks for the **development of more invasive forms of infections** in the **general population are also growing.**
7. These **generally affects severely ill patients** and **those with very low immune system related conditions.**
8. **Populations at greatest risk of invasive fungal infections** include those with **cancer, HIV/AIDS, organ transplants, chronic respiratory disease, and post-primary tuberculosis infection.**

1.3 NavIC (Navigation in Indian Constellation)

Why in News?

Indian **plans to expand** its **regional satellite navigation system NavIC.**

- ▪ **It is to increase its use in the civilian sector and ships, aircraft travelling far from the country's borders.**

What is NavIC?

1. **NavIC or the Indian Regional Navigation Satellite System** (IRNSS).
2. **It is designed with a constellation of 7 satellites** and **a network of ground stations operating 24×7.**
3. There are **a total of 8 satellites but only seven remain active.**
4. 3 **satellites in geostationary orbit** and **4 satellites in geosynchronous orbit.**
5. The **constellation's 1st satellite** (IRNSS-1A) **was launched in 2013 and the 8th satellite IRNSS-1I** was launched in **2018.**

6. IRNSS **was renamed as NavIC by India's Prime Minister in 2016,** with the **7th launch of the constellation's satellite** (IRNSS-1G).

7. It **was recognised by** the **International Maritime Organization (IMO)** as a **part of the World-Wide Radio Navigation System** (WWRNS) for **operation in the Indian Ocean Region in 2020.**

Possible Applications of NaVIC:

1. Terrestrial, aerial and marine navigation
2. Disaster management
3. Vehicle tracking and fleet management (especially for mining and transportation sector)
4. Integration with mobile phones
5. Precise timing (as for ATMs and power grids)
6. Mapping and geodetic data capture
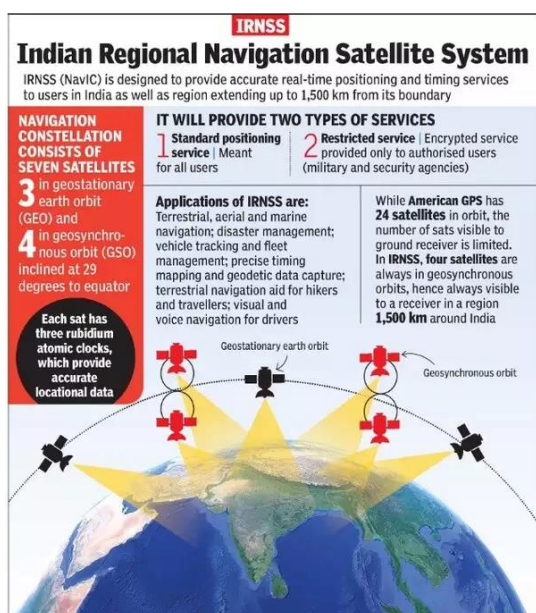
What is the Significance of NaVIC?

1. It gives real time **information for 2 services:**
2. **standard positioning service open for civilian use**
3. **Restricted service** which **may be encrypted for authorized users like for military.**
4. India's **dependence on other countries for navigation reduces** as India has become one of the **5 countries having their own navigation system**.
5. It will help the **scientific & technological advancement in India**.
6. NaVIC is **important for the country's sovereignty** and **strategic requirements.**
7. In **April 2019**, the **government made NavIC-based vehicle trackers mandatory for all commercial vehicles** in the country **in accordance with the Nirbhaya case verdict hence, it will help in ensuring safety of citizens too.**

What was the need for NavIC?

1. NavIC is **an independent regional system over the Indian region** and does **not depend on other countries.**
2. GPS and GLONASS are **operated by defence agencies of the respective nations so, even if they work for India,** it is possible that the **civilian service be degraded or denied**.

3. A **system was always needed which is fully under the control of the Government** of India.

What are the Issues and Future Improvements?

1. ISRO **plans to replace at least 5 satellites with the improved L-Band.**
2. **L Band would give better global positioning services to the public.**
3. **5 more satellites will be launched periodically** to **replace the dysfunctional satellites.**
4. These **new satellites will have L-1, L-5 and S Band**.
5. **L1, L2 and L5** are **GPS frequencies will be used for:**
   - L1 frequency is used to track GPS satellite location
   - L2 frequency is used to track the health of the GPS satellites
   - L5 frequency is used to improve accuracy for civilian use such as aircraft.
6. Currently **ISRO is providing only short code** but soon it will become **long code for strategic sector use** so that the **signal cannot be broken or stolen**.

Which are the other Navigation Systems operational in the world?

Four global systems	Two regional systems:
1. GPS - U.S. 2. GLONASS - Russia. 3. Galileo - European Union 4. BeiDou - China.	1. NavIC - India 2. QZSS - Japan

Way Forward

To make NavIC truly global like GPS, more satellites would be needed in an orbit closer to earth than the current constellation and constant upgradation of present system would be beneficial.

1.4 India's Space Ecosystem

Why in News?

Recently, Indian Space Conclave was organized to celebrate the one-year anniversary of the Indian Space Association (ISpA).

- The Indian space economy is set to reach USD 13 billion by 2025, according to a **joint report** prepared by EY (Ernst and Young) and the Indian Space Association (ISpA).

What are the Findings of the Report?

- The space-launch segment would grow at a **CAGR (Compound Annual Growth Rate) of 13%,** spurred by growing private participation, latest technology adoption and low cost of launch services.

- The satellite services and application segment will form the **largest share of the space economy** accounting for 36% of the **Space ecosystem by 2025.**

- The country's **satellite-manufacturing opportunity** will reach USD 3.2 billion by the year 2025. In 2020 it was USD 2.1 billion.

  - Satellite manufacturing would be the **second fastest-growing segment in the Indian space economy.**

What is ISpA?

- **About ISpA:**

  - It was launched in 2021, and is the premier industry association of space and satellite companies. It is also part of the Government's approach to **space reforms** based **on 4 pillars.**

    - **Allowing the private sector** freedom of innovation.

    - Government **playing the enabler's role.**

    - **Preparing youngsters for the future.**

    - **Treating the space sector as a resource for the progress** of the common man.

  - ISpA aspires to be the **collective voice of the Indian Space industry.** ISpA will be represented by leading domestic and global corporations that have advanced capabilities in space and satellite technologies.

- **Objectives:**

  - ISpA will undertake **Policy Advocacy and engage with all stakeholders** in the Indian Space domain, including the Government and its Agencies, to make **India self-reliant**, technologically advanced and a leading player in the space arena.

  - It will work towards **building global linkages for the Indian space industry** to bring in critical technology and investments into the country to create more high skill jobs.

- **Significance:**

  - One of the main goals of the organization is to supplement the government's efforts towards **making India a global leader** in commercial space-based excursions.

  - Of late, ISRO's rockets have been carrying the payload and communication satellites of various countries; now, private players will also look to touch on this space with the new organisation.

  - Several private sector companies have shown an interest in India's space domain, with **space-based communication networks** coming to the fore.

What is the Need for Reforms of the Space Sector?

- **To increase the Scale of the Sector:**

- o Indian Space Research Organisation (ISRO) is centrally funded and its annual budget is between Rs 14-15,000 crore, and most of this is used in building rockets and satellites.

- o The size of the space economy in India is small. To increase the scale of the sector, **it is imperative for private players to enter the market.**

- o ISRO is planning to share knowledge and technology, such as manufacturing rockets and satellites, to all the private players.

  - • The United States, Europe, Russia — all have space industries with big players like Boeing, SpaceX, AirBus, Virgin Galactic, etc.

- ▪ **Reforms in Private Players:**

  - o There have always been private players in the sector, but **this has been entirely in manufacture of parts and sub-systems**. There is a need to provide **a fillip to industry to be able to manufacture rockets and satellites.**

  - o Private players **can bring in the innovation needed for developing** space-based applications and services.

  - o Additionally, the **demand for these services is soaring worldwide and in India, with satellite data, imageries** and space technology being used across most sectors.

What are the Related Initiatives taken?

- ▪ **IN-SPACE:**

  - o IN-SPACE was launched to provide a level playing field for private companies to use Indian space infrastructure.

  - o It acts as a single-point interface between Indian Space Research Organisation (ISRO), and everyone who wants to participate in space-related activities or use India's space resources.

- ▪ **NewSpace India Limited (NSIL):**

  - o Announced in Budget 2019, its aim is to use research and development carried out by ISRO over the years for commercial purposes through Indian industry partners.

Way Forward

- ▪ There is a need for a new policy that ends **ISRO's monopoly of the space sector** in India, by sharing knowledge and technology, such as manufacturing rockets and satellites, to all **those who want to.**

- ▪ With India having one of the best space programs in the world, the move to allow FDI in space will make India a bigger player in the global space economy.

- ▪ **Foreign direct investment (FDI) in space** will allow foreign players with a window to venture into the India space domain, this will contribute to Indian

national and foreign reserves, promote technology transfer and research innovations.

- Further, the introduction of the **Indian Space Activities Bill** can give **greater clarity to private players on how to be an integral part of the space sector.**

1.5) Detection of Barium in the Exoplanet Atmospheres

Why in News?

Recently, scientists have detected barium in the upper atmosphere of 2 giant exoplanets for the first time.

So, What are Exoplanets?

1. An **exoplanet or extrasolar planet is a planet outside the Solar System.** The **first confirmation of detection of exoplanets occurred in 1992.**
2. **Around 4,400 exoplanets have been discovered till now.**
3. They are **very hard to see directly with telescopes.**
4. They are hidden by the bright glare of the stars they orbit. So, astronomers use other ways to detect and study exoplanets such as looking at the effects these planets have on the stars they orbit.

Exoplanet Types

Terrestrial
Earth-sized or smaller, mostly made of rock and metal. Some could possess oceans or atmospheres and perhaps other signs of habitability.

Neptune-Like
Similar in size to our own Neptune and Uranus, with hydrogen or helium-dominated atmospheres. "Mini-Neptunes," not found in our solar system, are smaller than Neptune but larger than Earth.

Super-Earth
Typically "terrestrial," or rocky, and more massive than Earth but lighter than Neptune. They might or might not have atmospheres.

Gas Giants
The size of Saturn or Jupiter, or much larger. They include "hot Jupiters"- scorching planets in close orbits around their stars.

Findings of the Study are:

1. The exoplanets are **2 ultra-hot bodies** and these are **WASP-76b and WASP-121b — which orbits their host stars WASP 76 and WASP 121.**
2. The **former is about 640 light-years away** from the Earth and **the latter around 900 light-years away.**
3. Both **WASP-76b and WASP-121b complete one orbit in 2 days.**
4. **Surface temperature in these bodies reach as high as 1,000 degrees Celsius.** These bodies have **unique features owing to their high temperatures.** For instance: **WASP-76b experiences iron rain.**
5. The **presence of hydrogen, lithium, sodium, magnesium, calcium, vanadium, chromium, manganese and iron in the atmosphere of the WASP-76 b has also been confirmed in addition to barium.**

6. In **WASP 121, they confirmed the presence of lithium, sodium, magnesium, calcium, vanadium, chromium, manganese, iron and nickel.**

7. Additionally, the team **found elements like cobalt and strontium.**

About Barium

1. It is **slightly harder than lead and has a silvery white luster when freshly cut.**
2. It readily **oxidizes when exposed to air** and **must be protected from oxygen during storage.**
3. In nature it **is always found combined with other elements.**
4. It is **very light and its density is half of that of iron.**
5. Barium is often **used for spark-plug electrodes** and **in vacuum tubes as a drying and oxygen-removing agent.** As well as in fluorescent lamps too.
6. Its **compounds are used by oil and gas industries** to make drilling mud. Drilling mud simplifies drilling through rocks by lubricating the drill.
7. **Barium compounds are also used to make paint, bricks, tiles, glass, and rubber.**

1.6 Carbon Dating

Why in News?

Recently, a Varanasi district court has rejected the plea to conduct carbon-dating of the disputed structure known to have been found inside the premises of the 'Gyanvapi Mosque'.

About Carbon Dating

1. It's a **widely-used method to establish the age of organic materials that is, the things that were once living.**
2. **Living things have carbon in them in various forms.**
3. The dating method is **based on the fact that Carbon-14 (C-14)** is **radioactive and decays at a well-known rate.**
4. C-14 is an **isotope of carbon** with an atomic mass of **14.**
5. The **most abundant isotope of carbon in the atmosphere is C-12.**
6. A **very small amount of C-14 is also present**. The ratio of **C-12 to C-14** in the atmosphere is almost **static.**
7. The Carbon Dating method **cannot be used to determine the age of non-living things** like rocks.
8. Also, the age of **things that are more than 40,000-50,000 years old cannot be determined through carbon dating.**
9. This is **because after 8-10 cycles of half-lives, the amount of C-14 becomes almost very small and is almost undetectable.**

So, How the Carbon Dating Technique works?

1. All the **plants and animals get their carbon from the atmosphere** and they too acquire C-12 and C-14 in roughly the same proportion as is available in the atmosphere.

2. **Plants get their carbon through photosynthesis** and **animals get it mainly through food**. **When they die, their interactions with the atmosphere stops.**

3. While **C-12 is stable, the radioactive C-14 reduces to one half of itself in almost 5,730 years** — known as its **'half-life'.**

4. The **changing ratio of C-12 to C-14 in the remains of a plant or animal after it dies can be measured and can be used to find the approximate time when the organism died.**

Uses of Carbon Dating Technique are:

1. It has **proved to be a versatile technique of dating fossils** and **archaeological specimens** from 500 to 50,000 years old.
2. This method is **widely used by geologists, anthropologists, archaeologists,** and **investigators in many fields.**

About the Dating Method on Non-Living Things

1. **Radiometric Dating Methods**: In this method, **decays of other radioactive elements that might be present in the material become the basis for the dating method. Some Types of this Method are:**
a) **Potassium-Argon Dating:** The **radioactive isotope of potassium decays into argon,** and their ratios can give a clue about the age of rocks.
b) **Uranium-Thorium-Lead Dating: Uranium and thorium have several radioactive isotopes, and all of them decay into the stable lead atom.** The ratios of these elements present in the material can be measured and used to make estimates about age.

1.7 Mission DefSpace

Why in News?

Recently, the PM has launched 'Mission DefSpace' at the ongoing DefExpo.

1. PM released the '**4th Defence Indigenisation List' which bars import of 101 items** after **certain timelines.**
2. He also welcomed the **HTT-40** (Hindustan Turbo Trainer-40) **indigenous trainer aircraft which was designed and developed by Hindustan Aeronautics Limited (HAL) at the 'Indian Pavilion' during the Expo.**

About Mission DefSpace

1. It's an ambitious effort to **develop innovative solutions for the 3 services (Indian Airforce, Navy and Army)** in the **space domain through the Indian industry and start-ups.**
2. **75 challenges are opened up to find innovative solutions,** based on the defence requirements in the space domain.
3. **Startups, innovators and the private sector** will be invited to **find solutions for the problems that will include both offensive and defensive capabilities.**
4. It **aims to develop a range of military applications for space warfare** and to enable the private industries to **offer solutions to the armed forces for future offensive and defensive requirements.**

5. Defence applications in space will not only help the Indian armed forces **but can also be extended to friendly foreign nations.**

So, What is the Indigenisation of Defence?

1. **Indigenisation is the capability** of **developing and producing any defence equipment within the country** for the **dual purpose of achieving self-reliance and reducing the burden of imports.**

2. **Self-reliance in defence** manufacturing is 1 of the key objectives of the **Department of Defence Production.**

3. **Defence Research & Development Organisation (DRDO), Defence Public Sector Undertakings (DPSUs)** and private organisations are playing a critical role in indigenisation of defence industries.

4. **India is among the world's largest arms importers,** and the **armed forces are expected to spend about USD 130 billion on defence purchases over the next 5 years.**

5. **4ᵗʰ Indigenisation List:**

a) It lays a special focus on **equipments, which are being developed and likely to translate into firm orders** in the next 5 to 10 years.

b) The items listed in the 4ᵗʰ list will provide **visibility and opportunity to the domestic defence industry for understanding the trend and futuristic needs** of the armed forces and to work towards requisite research, development and manufacturing capacity within the country.

What is the Significance of Indigenisation of Defence?

1. **Promotes Domestic Industry:** These weapons & platforms will promote the domestic industry and will transform R&D and manufacturing in the country.

2. **Reducing Fiscal Deficit:** The other benefits of indigenisation will be the reduction in the **fiscal deficit, security against its porous borders and hostile neighbours, generation of employment and ignition of the fire of nationalism and patriotism with the strong sense of integrity and sovereignty amongst the Indian Forces.**

About HTT-40 Indigenous Trainer Aircraft

1. HTT-40 is a **basic training aircraft developed by Hindustan Aeronautics Limited (HAL)** for the Indian Air Force (IAF).

2. It will replace the **ageing fleet of HAL HPT-32 Deepak trainers** that are in service with the IAF.

3. Its trainer offers the **best-in-class fuel economy and power rating.**
4. It **takes-off from a short distance and has a high climb rate.**
5. It **has a maximum speed of 450km/h** and **can reach a maximum distance of 1,000 km.**

1.8 Polio Eradication

Why in News?

Recently, global leaders announced USD 2.6 billion in funding towards the 'Global Polio Eradication Initiative' (GPEI) 2022-2026 Strategy to end polio.

About Polio

1. Polio is a **deadly viral infectious disease that affects the nervous system.**
2. There are **3 distinct wild poliovirus strains:**
a) Wild Poliovirus type 1 (WPV1)
b) Wild Poliovirus type 2 (WPV2)
c) Wild Poliovirus type 3 (WPV3)
3. **Symptomatically**, **all 3 strains are identical and all can cause irreversible paralysis or even death.**
4. However, **there are some genetic and virological differences too, which makes these 3 strains separate viruses.**
5. The virus is **transmitted from person-to-person mainly through the faecal-oral route** or, less frequently, by a common vehicle (for example, through contaminated water or food).
6. It **largely affects children under 5 years of age.** The **virus multiplies in the intestine, from where it can invade the nervous system and can cause paralysis.**

Symptoms of Polio are:

1. Most people with polio do not feel sick. Some people have only **minor symptoms like fever, tiredness, nausea, headache, pain in the arms and legs, etc.**
2. **In rare cases, polio infection causes permanent loss of muscle function (paralysis).**
3. **Polio can be fatal** if the muscles used for breathing are paralysed or if there is an infection of the brain.

Vaccines Available:

1. **Currently, there is no permanent cure available for Polio, but it can be prevented through Immunisation.**
2. **Oral Polio Vaccine (OPV):** It is **given orally as a birth dose for institutional deliveries** and then primary three doses at 6, 10 and 14 weeks and one booster dose at 16-24 months of age.
3. **Injectable Polio Vaccine (IPV):** It was introduced as an additional dose along with the **3rd dose of DPT (Diphtheria, Pertussis and Tetanus)** under the **Universal Immunisation Programme (UIP).**

India & the Polio:

1. **India received 'polio-free certification'** from the **World Health Organisation (WHO)** in **2014, after 3 years of zero cases.**

2. This achievement has been achieved by the successful '**Pulse Polio Campaign**' in **which all children were given polio drops.**

3. The **last case due to 'wild poliovirus' in the country was detected on 13th January 2011.**

Initiatives have been taken to Eradicate Polio are:

1. **At Global level:**

a) **Global Polio Eradication Initiative:** It was **launched in 1988 with the name 'Global Polio Eradication Initiative' (GPEI)**, by national governments and WHO. Presently, **80% of the world's population is now living in certified polio-free regions.** An estimated **1.5 million childhood deaths** have been prevented, through the systemic administration of **vitamin A** during polio immunization activities.

b) **World Polio Day:** It is **observed every year on 24th October in order to increase awareness** regarding the fight against the disease.

2.Initiatives of India are:

a) **Pulse Polio Programme:** It was **started with an objective of achieving 100% coverage** under Oral Polio Vaccine.

b) **Intensified Mission Indradhanush 2.0:** It was a **nationwide immunisation drive to mark the 25 years of Pulse polio programme (2019-20).**

c) **Universal Immunization Programme (UIP):** It was launched in **1985 with the modification to 'Expanded Programme of Immunization (EPI).** The objectives of the Programme include:

a**) Rapidly increasing immunization coverage**

b**) Improving the quality of services**

c**) Establishing a reliable cold chain system to the health facility level**

d**) Introducing a district-wise system for monitoring of performance**

e**) Achieving self-sufficiency in vaccine production.**

1.9 Sandalwood Spike Disease (SSD)

Why in News?

In October 2022, a study has shown that the **Sandalwood Spike Disease (SSD)** is causing a serious threat to the **Commercial Cultivation of Sandalwood.**

What is Sandalwood Spike Disease?

1. It is an **infectious disease which is caused by phytoplasma.**
   - [Phytoplasmas are **bacterial parasites of plant tissues**, which **are transmitted by insect vectors and involved in plant-to-plant transmissions.]**

2. There **is no cure** for this **infection yet** and the **only option** available **is to cut down and remove the infected tree** to **prevent the spread of the disease.**

3. The **disease was 1st reported in Kodagu, Karnataka in 1899.**

4. More than 1 **million sandalwood** trees **were removed in the Kodagu** and **Mysore region between 1903 and 1916.**

What are the major concerns?

1. About **1% to 5% of sandalwood trees** are being **lost every year due to the disease.**
2. Scientists **warn that the SSD could wipe out the entire natural population** if **measures are not taken to control it.**
3. Any further **delay in controlling the** disease may result in the disease **spreading to cultivated sandalwood trees.**

Recent Step taken by India in this regard:

1. The **Institute of Wood Science and Technology (IWST)** joined hands with the Pune-based National Centre for Cell Sciences **for a 3-year study, initiated by the Union Ministry of AYUSH with a financial allocation of Rs. 50 lakhs.**
   [IWST is a **Centre of Excellence for Sandalwood Research and Wood Science**.]

What is Indian Sandalwood?

1. Its scientific name is **Santalum album.**
2. It is a **dry deciduous forest species, native to China, India, Indonesia, Australia, and the Philippines.**
3. **The country contributed 85% of the world's sandalwood trade in past times,** however, lately it is **declining at a fast rate.**
4. This is a **small tropical tree grows to 20m high** with **red wood** and **a variety of dark colors of bark** (dark brown, reddish and dark grey).
5. **It is listed as ''vulnerable'' under the IUCN Red List.**
6. **In India**, it is **also called "Chandan" and "Srigandha".**

Uses of Sandalwood:

1. Sandalwood is mostly **harvested for its timber** because, **it is strong and durable**.
2. Sandalwood has a close relation with **Indian heritage & culture also, where it is being used from cradle** (structure) **to cremation.**
3. The heartwood and roots also **contain 'sandal oil'** which is **valued for use in perfumes, incense, cosmetics, soaps, and medicines.**
4. The **bark contains tannin, which is used for dye.**
5. Sandalwood **essential oil has antiseptic** (clean), **anti-inflammatory and astringent** (harsh) **properties.**
6. Sandalwood heartwood is **close-grained and used for fine furniture and carving.**
7. It is **used in aromatherapy to reduce stress, hypertension and heals wounds and treats skin marks.**
8. In India, **sandalwood is mostly grown in Andhra Pradesh**, **Telangana, Bihar, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, and Tamil Nadu.**

Way Forward:

The **study has recommended certification of commercial production of sandalwood seedlings through testing** to **ensure that the plants are free from SSD. A paradigm** (standard) **shift in policies handling sandalwood seedlings is also the need of the time.**

1.10 World Tuberculosis Report 2022: WHO

Why in News?

Recently, the World Health Organisation (WHO) released the 'World Tuberculosis Report 2022' noting the impact of Covid-19 pandemic on the diagnosis, treatment and burden regarding the Tuberculosis (TB) disease.

Key Findings of the Report are:

1. **Regarding the Diagnosis and Mortality Globally:**
a) Almost **10.6 million people across the world were diagnosed with TB** in 2021, an **increase of 4.5%** as compare to **2020**, while **1.6 million patients died because of TB.**
b) Of the total **TB deaths, 187,000 patients were also positive** for **HIV (human immunodeficiency virus).**
c) **Almost 80% of global TB deaths among HIV positive people occurred** in the **African and South-East Asia regions.**
d) The number of people **newly diagnosed with TB fell from 7 million in 2019 to 5.8 million in 2020.**
e) There was a **partial recovery of almost 6.4 million in 2021**, but this is still well below the pre-pandemic levels.

Percentage of people newly diagnosed with TB who were initially tested with a WHO-recommended rapid test at country level,ᵃ 2021
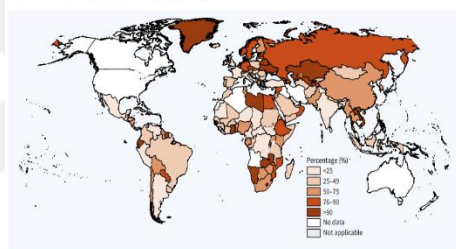
2. **Regarding India:**
a) With almost **28% cases of the world**, **India is among the 8 countries of the world which accounts for more than 2/3 (68%) of the total TB patients count.**
b) The other countries are: **Indonesia** (9.2% cases), **China** (7.4%), the **Philippines** (7%), **Pakista**n (5.8%), **Nigeria** (4.4%), **Bangladesh** (3.6%) and the **Democratic Republic of the Congo** (2.9%).
c) India **accounted for 36% of the global TB related deaths** among HIV positive people.
d) **India was among the 3 countries** (along with Indonesia and the Philippines) that **accounted for most number of reduction of TB cases in 2020** (67% of the global).
3. **Regarding the Major Challenges in TB Elimination:**

a) **Rise in Drug-Resistant TB:** The **burden of drug-resistant TB (DR-TB) increased by 3% globally** between **2020 and 2021, with 4,50,000 new cases of rifampicin-resistant TB (RR-TB)**.

4. **Disruptions due to Covid-19:**

a) This is the **1st time in several years** that an **upward trend** has been reported in the number of **people developing both TB and drug resistant TB.** Experts attribute this trend to the Covid-19 pandemic.

b) Many services were disrupted by the Covid-19 in 2021 but its impact on the TB response has been particularly severe.

5.Decline in Diagnosis and Expenditure:

a) A reduction in the reported TB cases suggest an increase in the number of people with undiagnosed and untreated TB.

b) The number of people provided with **treatment for RR-TB and multidrug-resistant TB (MDR-TB) also declined** between 2019 and 2020.

c) The report also notes a **decline in global spending on essential TB services** from **US$6 billion in 2019 to US$5.4 billion in 2021,** which is less than half of the global target of US$13 billion annually by 2022.

Global success rates for people treated for TB, 2012–2020ª
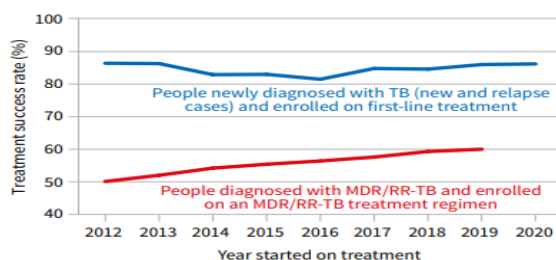
What is Tuberculosis (TB)?

1. TB is caused by a **bacterium called 'Mycobacterium tuberculosis',** which belongs to the **'Mycobacteriaceae' family which consists of almost 200 members.**

2. Some Mycobacteria cause diseases like **TB and Leprosy in humans** and others infect a wide range of animals too.

3. In humans, TB most **commonly affect the lungs (pulmonary TB),** but it can also affect **other organs (extra-pulmonary TB) too.**

4. TB is a **very ancient disease** and **has been documented to have existed in Egypt as early as 3000 BC.**

5. TB **spreads from person to person through the air.** When **people with lung TB cough, sneeze or spit, they throw the TB germs into the air.**

6. Common **symptoms of active lung TB are cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.**

7. **TB is a treatable and curable disease. It is treated with a standard 6-month course of 4 antimicrobial drugs**.

8. **Many Anti-TB medicines** are in use from decades and it **has led to development of resistance in bacteria for 1 or more of the TB drugs.**

a) **Multidrug-resistant tuberculosis (MDR-TB)** is a form of **TB caused by bacteria that do not respond to 'Isoniazid' and 'Rifampicin', the 2 most powerful, first-line anti-TB drugs.** MDR-TB is treatable and curable by using second-line drugs.

b) **Extensively drug-resistant TB (XDR-TB)** is a **more serious form of MDR-TB caused by bacteria that do not respond to the most effective second-line anti-TB drugs,** often leaving patients without any further treatment options.

What are the Initiatives to Combat TB?

1. **At Global level:**
a) The WHO has launched a joint initiative named **"Find. Treat. All. #EndTB"** with the **Global Fund** and **Stop TB Partnership.**
b) WHO also released the '**Global Tuberculosis Report'.**

2.**India's Efforts:**

a) **'National Strategic Plan (NSP**) for Tuberculosis Elimination (2017-2025)', **'The Nikshay Ecosystem (National TB information system)', 'Nikshay Poshan Yojana (NPY- financial support)', 'TB Harega, Desh Jeetega Campaign'.**
b) Currently, **2 vaccines named 'VPM (Vaccine Project Management) 1002' and 'MIP (Mycobacterium Indicus Pranii)' have been developed and identified for TB, and are under Phase-3 clinical trial.**
c) **The Saksham Project**: It is a project of the **'Tata Institute of Social Sciences (TISS)' that has been providing psycho-social counselling to TB patients.**

About Pradhan Mantri TB Mukt Bharat Abhiyan?

1. **It's an initiative of Ministry of Health and Family Welfare (MOHFW)** to **accelerate the country's progress towards TB elimination by 2025.**
2. **Objective is to provide additional patient support to improve treatment outcomes of TB patients** and to increase **community involvement** in meeting India's commitment to end TB by 2025.
3. **Components:**
a) **Ni-kshay Mitra Initiative:** It is to ensure **additional diagnostic, nutritional, and vocational support** to those on TB treatment.
b) **Ni-kshay Mitra** (Donor) are those who can support by adopting health facilities (for individual donor), blocks/urban wards/districts/states for accelerating response against TB to complement government efforts.
c) **Ni-kshay Digital Portal:** It **will provide a platform for community support to the persons with TB.**

Additional Information:

About Nikshay Poshan Yojna (NPY)

1. The NPY was **launched in 2018 by the Ministry of Health and Family Welfare.**
2. It **aims to support every Tuberculosis (TB) Patient by providing a Direct Benefit Transfer (DBT) of Rs 500 per month for nutritional needs.**
3. Since its launch, **almost Rs 1,488 crore has been paid to 5.73 million notified beneficiaries.**
4. **Performance of NPY:**
a) As per 'India TB Report' 2022, only **62 % of 2.1 million notified cases across the country received at least one payment in 2021.**
b) In **Delhi, which has the highest burden of all forms of TB at 747 cases per 100,000 people, only 30.2 % of patients have got at least one DBT.**

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2. POLITY AND GOVERNANCE

2.1 Democratic Decentralisation in India

Why in News?

It has been almost 30 years since the '73rd and 74th Constitutional Amendment Acts' were passed by the parliament to facilitate democratic decentralisation in India, but very little and actual progress has been made in this direction.

So, What is Democratic Decentralisation?

1. It's the **process of devolving (giving away) the functions and resources of the state from the centre to the elected representatives at the lower levels so as to facilitate greater direct participation of citizens in governance.**
2. In other words, it means that **precisely defined governance functions are formally assigned by law to the local governments which are** backed by **adequate transfer of financial grants and taxes**, and they are given **adequate staff so that they can carry out their responsibilities.**
3. **73rd and 74th amendment acts have given the constitutional status** to **Panchayati Raj Institutions (PRIs)** in India and mandated the establishment of panchayats and municipalities as elected local governments.
4. **Local government, including panchayats, is a state subject in the Constitution, and consequently,** the **devolution of power, functions and authority to the panchayats has been left to the discretion of states.**
5. The **constitution mandates that panchayats and municipalities shall be elected every 5 years**.

Some Major Achievements of the Local Bodies are:

1. **Rising Women Representation:**
a) The **proportion of elected women representatives has been steadily rising** since the enactment of the 73rd Amendment Act.
b) Currently, **India has 260,512 Panchayats with 3.1 million elected representatives**, of which a **record 1.3 million are women.**
c) While there is merely **7–8% representation of women in Parliament and State Assemblies but it is 49%** in case of elected local representatives (in states like Odisha it has crossed 50%).
2. **Led to creation of Healthy Competition among Various States:**
a) The passage of the **73rd and 74th amendment acts** has **created healthy competition among various states regarding devolution (3Fs: funds, functions, and functionaries).**
b) **For Example:**
i) **Kerala has devolved 29 functions to Panchayats.**
ii) **Rajasthan** took the inspiration from Kerala to devolve many key departments such as **health, education, women, and agriculture.**
iii) Similarly, **Bihar came out with the idea of "Panchayat Sarkar"** and states such as **Odisha have increased 50% seats for women.**

Issues with Local Governments in India are:

1. **Lack of Funds:** The money given to the local governments is **inadequate to meet their basic requirements** and there is little investment in enabling and **strengthening local governments to raise their own taxes and user charges.**

2. **Infrastructural Challenges:**

a) Some of the **Gram Panchayats (GPs) do not have their own building and they share space with schools, Anganwadi centres and other places.**

b) Some have them **own building but without basic facilities** like **toilets, drinking water, and electricity connection.**

c) While **many Gram Panchayats (GPs) have internet connections but they are not functional** in many cases. For any data entry purposes, panchayat officials have to visit Block Development offices and it delays the work.

3.Inadequate Staff:

a) **In many cases, Local governments do not have the adequate staff** to perform even basic tasks.

b) Furthermore, **as most staff is hired by higher level departments** and placed with local governments on **deputation**, **they do not feel responsible to the latter**.

4. Delay in Elections: States often **postpone the elections and violate the constitutional mandate of 5 yearly elections to local governments.**

5.Downgraded Role of Local Government:

a) In most cases, Local governments are **merely acting as an implementation machinery rather than a policy-making body** for **local development.** Technology-enabled schemes have further downgraded their role.

6. **Huge Corruption: Criminal elements and contractors** are more **attracted to local government elections.**

Conclusion

India is a very large and diverse country so here 'over centralisation' can't be the solution for everything. So, Local government's organisational structure has to be strengthened with sufficient fund and manpower. The 'Ministry of Panchayati Raj' should monitor the release and expenditure of Finance Commission grants to ensure that there is no delay in their release and it should also be ensured that grants are utilised in a proper and effective manner so that, it can ensure the 'Grassroot Democracy' in real terms which was the dream of Mahatma Gandhi too.

2.2 Election Symbols

Why in News?

Recently, the Election Commission (EC) allotted "2 swords and a shield" symbol to the Maharashtra CM Eknath Shinde-led faction of the Shiv Sena for the upcoming byelection.

Key Points Related to Election Symbols are:

1. An electoral or election symbol is a standardized mark allocated to a political party.
2. They are **used by the political parties during their campaigns and are shown on Electronic Voting Machines (EVMs), where the voter chooses the symbol and votes for the associated party.**
3. Basically, they were **introduced to facilitate voting by illiterate people, who can't read the name of the party** while casting their votes.
4. In the **1960s**, it was proposed that the **regulation, reservation and allotment of electoral symbols should be done through a law of Parliament, i.e., Symbol Order.**
5. As a response to this proposal, the ECI stated that the recognition of political parties will be supervised by the provisions of **Election Symbols (Reservation and Allotment) Order, 1968** and so will the allotment of symbols.
6. The **Election Commission of India (ECI) registers political parties for the purpose of elections and grants them recognition as national or state parties on the basis of their electoral performance.** The other parties are simply declared as registered-unrecognised parties.
7. The **recognition determines their right to certain privileges** like allocation of the party symbols, provision of time for political broadcasts on television and radio stations and access to electoral rolls.
8. **Every national party and every state party is allotted a symbol exclusively reserved for its use** throughout the country and the states respectively.

Election Symbols (Reservation and Allotment) Order, 1968:

1. Before **1968, the EC used to issue notifications and executive orders under the Conduct of Election Rules, 1961.**
2. Under **Paragraph 15 of the order**, **EC can decide disputes among rival groups or sections** of a **recognised political party** who are making claim on its name or symbol.
3. **EC is the only authority to decide issues on a dispute or a merger under the order**. The **Supreme Court (SC)** upheld the validity of this order in **Sadiq Ali and another vs. ECI in 1971.**
4. It **applies to disputes in recognised national and state parties too.**
5. For splits in **registered but unrecognised parties**, the EC usually advises the rival factions to resolve their differences internally or to approach the court.
6. In almost all disputes decided by the EC so far, a clear majority of party delegates/office bearers, MPs and MLAs have supported 1 of the factions.
7. The **splinter group of the party** - other than the group that got the party symbol - **has to register itself as a separate party.**
8. They **can lay claim to national or state party status only on the basis of its performance in state or central elections after registration.**

2.3 Imposition of Hindi Language

Why in News?

In October 2022, the **Report of the Official Language Committee submitted to the President of India,** has **received angry reactions from some of the Southern states.**

- These states **are feeling that the report is forcing them to use Hindi.**
- **It was the 11th volume of the Report.**

About the Committee of Parliament on Official Language?

1. In accordance with **Article 351, the Official Language Committee** was **set up to review and promote the use of Hindi in official communications.**
2. The **Committee of Parliament** on **Official Language was set up in 1976.**
3. It comes under the **Section 4 of The Official Languages Act, 1963.**
4. The **first Report** of the **committee was submitted in 1987.**
5. The **Committee is chaired by the union home minister,** and works according to the **provisions of the 1963 Act**.
6. It has **total 30 members, 20 MPs from Lok Sabha** and **10 MPs from Rajya Sabha.**
7. Unlike the **other Parliamentary panels, this panel submits its report to the President**. (Others submit its report to Parliament)

What are the Recommendations of the report?

1. Hindi should be **the medium of instruction in IITs, IIMs, and central universities** in the Hindi-speaking states.
2. The **language used for communication** in the **administration should be Hindi**, and efforts should be made to teach the syllabus in Hindi.
3. **High Courts**, where **proceedings are recorded in English or a regional language can make available translations in Hindi.**
4. **Lower courts in Uttar Pradesh, Uttarakhand, Madhya Pradesh, Bihar, Haryana, and Rajasthan already use Hindi.**
5. The **use of Hindi, by the officers** in the central government would **reflect in their Annual Performance Assessment Report (APAR).**
6. It is the **responsibility of the Committee** to **see that the Hindi language is promoted in official communication.**
7. There are **specific proposals to make the language in official letters and invitations simpler.**
8. "There should be **attempts to reduce the usage of the English language in official communication** and to **increase the usage of Hindi".**
9. "Knowledge of Hindi **would be compulsory in a number of government jobs,".**

What is the Constitutional Status of Hindi?

1. **Schedule 8 of Indian constitution has 22 Official Languages including Hindi.**
2. **Article 351 says** that it is the **duty of the state** to **encourage the spread of the Hindi language** to **make it lingua franca.**
    ▪ (Lingua franca is a **common language** of communication used by people who are speakers of different languages)
3. **Article 348 (2)** says, the **Governor of the State can allow** the **use of the Hindi language** or **any other language** in **offices and courts** with the previous consent of the President.
    ▪ But, **rulings, judgments or orders passed by such High Courts shall be in English.**
4. As per **Article 343(1)** of the **Constitution of India**, **Hindi in Devanagari script shall be the official language of the Union.**

What is Position of Hindi in India with respect to other Regional Languages?

As per, 2011 Linguistic census:

1. **44% population** declared **Hindi as its mother tongue** and **11%** of the population described Hindi **as their second language.**
2. So, **55% of the population knows Hindi** as either as mother tongue **or as their second language.**
3. **Bengali 9.72 crore individual** and **8% population**, as **2nd most spoken language in India.**
4. The **share of the languages like Bengali**, **Malayalam and Urdu has declined but Hindi and Punjabi speakers have increased.**
5. Between **1971 to 2011 the speakers of Hindi multiplied by the 2.6 times from 20.2 Crore to 52.8 crores.**

<u>**What are the Government's Effort to Promote Hindi and Other Regional Language?**</u>

1. **Three-Language Formula (Kothari Commision 1968):**

First language	Second language	Third Language:
will be the mother tongue or **regional language**.	1. In **Hindi speaking states**, second language **will be other modern Indian languages or English**. 2. In non-Hindi speaking states, it will be Hindi or English.	1. In **Hindi speaking states, 3rd language will be English or a modern Indian** language. 2. In the non-Hindi speaking state, it will be **English or a modern Indian language.**

2. The new **National Education Policy (NEP) in 2020:**
   - This was also an attempt to "**promote Hindi, Sanskrit"** and **regional languages**.
   - The **NEP says that mother tongue or the regional language would be the "preferred" mode of instruction until Class 5, and possibly Class 8.**

<u>**Way Forward:**</u>

Government should consider the interests for all the states while keeping in mind the integrity and unity of the nation, and should adopt a balanced approach for promoting Hindi along with conserving other languages.

2.4 Electoral Bonds

<u>**What are Electoral Bonds?**</u>

1. An **electoral bond is promissory note on paper through which money can be donated to political parties.**
2. **Before 2018, anyone could give these donations through direct cash to political parties.**
3. **But later Electoral Bond Scheme (EBS) was introduced by government to bring some transparency accountability in the spendings of political parties and to curb the black money in country.**
   - [Black money is the money which is not in the records of government through banking or any other medium]

4. **EBS was introduced with** the **Finance Bill, 2017 and** notified **in 2018.**
5. **Through the EBS, banks came in between the donor and buyer of bonds, making it easier to track the donation money.**

<u>**How does the Electoral Bond works?**</u>

1. **Notified Banks are chosen.**

2. **These notified banks issues electoral bonds.**

3. **The Donor buys an electoral Bond using cheque/digital Payments.**

4. The **donor gives the bond to the party of his choice.**

5. The **party deposits in the bond in an account**, whose details **are with the election commission.**

<u>**More About the Electoral Bond Scheme:**</u>

1. **Nature of the Bond**	1. Bond **received is of the nature of a promissory note.** (Unsecured promise on the paper) 2. It is the **interest free banking instrument.** 3. It can be used for making **donation to only those parties** who are **registered under section 29 A of Representation of People Act (RoPA) 1951 and which secured not less than 1% of votes polled in the last general election to the house of the people or a legislative assembly.**
2. **Life of the Bond**	1. These **bonds have life of just 15 days, after** which the **buyer have to pay the money back.** 2. Available for purchase **for a period of 10 days**, in **month as specified by government.**

3. Value of Bonds	1. **Issued/ Purchased** in the **denominations of** 1000, 10,000, 1,00000 and 1,0000000 **Rs. With no maximum limits.** 2. **Available from specified branches of SBI banks.**
4. Taxability	1. The donations **would not be taxable.**

Benefits of Electoral Bonds:

1. **More Transparency:** It makes **political parties to spend** in a **more transparent way, as the account details get shared with Election Commission.**
2. **Ensures Accountability:** As the **donations/spendings are done through banking** channels, **every political party have to explain in the end** that **where the entire sum of money has been expended.**
3. **Discouraging Cash:** Bonds are **given through a limited number** of notified banks and that too **through cheque** and **digital payments that discourages the usage of cash.**
4. **Maintain Privacy:** The **identity of the individuals, groups of individuals, NGOs, religious and other trusts** who donates electoral bonds is **not disclosed.**

Issues with the Electoral Bonds:

1. **No Disclosure of the amounts:** Even **major political parties have not disclosed the amount they received** through electoral bonds.
2. **Not good for Democracy:** The **introduction of electoral bonds is "distorting democracy"** in India as only 23 political parties are eligible to get these bonds according to eligibility criteria.
3. **Restricting Right to know:** Before the introduction of electoral bonds, **political parties had to disclose details of all its donors,** who **have donated more than Rs 20,000.** The **change violates the citizen's 'Right to Know' and makes the political class even more unaccountable.**
4. **Low Secrecy:** Anonymity **does not apply to the government of the day,** which **can always access the donor details** by **demanding the data** from the **State Bank of India (SBI).** This **means that only the common people are in the dark about the source of these donations**.

Way Forward:

The **government should reconsider and modify** some **provisions of the Electoral Bonds Scheme** to **ensure full disclosure and transparency**. At the **same time,** the **bonds should ensure** that the **funds being collected by the political parties are coming from clean money**.

2.5 Broadcasting be Done Only Through Prasar Bharti

Why in News?

In October 2022, the **Ministry of Information and Broadcasting (MoIB) has advised that any kind of broadcasting be done only through Prasar Bharti.**

What is Prasar Bharti?

1. Prasar Bharati is a **statutory autonomous body** and the **Public Service Broadcaster of the country.**
2. It was **established under the Prasar Bharati Act in 1997.**
3. Its **main objective** is to **provide autonomy to Doordarshan and Akashvani to "educate and entertain'' the public.**

What are the recommendations of MoIB?

1. The **ministries, departments of the central/state governments,** and **union territories (UTs)** would **not be allowed to enter into broadcasting or distribution of broadcasting activities.**
2. In the **cases where** the **central ministries, states and UTs** are **already broadcasting** their content**, it would now be done through the public broadcaster Prasar Bharati.**
3. This step is **in line with the recommendations of the Telecom Regulatory Authority of India (TRAI),** the **Supreme Court judgment** and the **legal opinion given by the Ministry of Law and Justice.**
4. As per the Supreme Court, **Public service broadcasting should be in the hands of a statutory corporation to ensure their impartiality in political, economic, and social matters.**
5. **As per the existing policy guidelines for setting up of community radio** in India**, schools, colleges, central / state universities, including autonomous bodies** etc., are **eligible for setting up of community radios.**

What were the TRAI's Recommendations?

1. In 2012, the TRAI had **suggested that the Central/State governments,** their **companies, undertakings and joint projects with the private sector** etc., **should not be allowed to enter the business of broadcasting**.
2. These recommendations were based **upon the Sarkaria Commission's recommendation and the Cricket Association case verdict.**
3. The **importance of Prasar Bharati should not be neglected.**

Additional Information:
What is TRAI?
1. The **TRAI was established in 1997 by the Telecom Regulatory Authority of India Act, 1997.**
2. It aims **to create the favourable environment for growth of telecommunications in the country.**
3. TRAI **regulates telecom services including fixation/revision of tariffs** for telecom services which were **earlier vested in the Central Government.**
4. It also **aims to provide a fair and transparent policy environment** which **promotes a level playing field and facilitates fair competition.**
5. The **head office of the TRAI is located at New Delhi.**

2.6 People Rights Vs Animals Welfare

Why in News?

In view of **rising cases of killings of stray dogs**, the **Supreme Court of India said that a balance has to be maintained between the safety of people and animal rights.**

- The court also **suggested that people who feed stray dogs could be made responsible for vaccinating them** and **bearing costs if somebody is attacked by the animal.**

What is the Need to maintain a Balance between People Rights and Animal Welfare?

1. It is a **fundamental issue** related to **rights of wild animals within the society in general** and **within the framework of the Constitution of India in particular.**
2. **Ancient Hindu texts also recognises the rights of animals, birds and every living creature and regarded every living being and** thereby deserving due respect, love and affection.
3. India **has a culture that promotes tolerance** and **respect for all life forms.** For example, **Hindus** regard **cows as their sacred animal.**
4. During ancient times **some civilizations punished animals for wrongs committed by them**. But later **they realized that animals have lack of rationality to make a difference between right and wrong** and thus they also **stopped the practice of punishing them.**
5. Thus, **laws evolved and animals were safeguarded by the laws.**
6. The **present legal regime punishes pet owners** for **any damage resulting from the negligence of their pet.**

What are the Related Judgements?

1. **Animal Welfare Board of India v. Nagaraja (2014):**
   While **banning practice of Jallikattu** (bull-wrestling) and **bullock cart racing in the Indian states of Tamil Nadu** and **Maharashtra,** respectively, the **Supreme Court had ruled that the right to dignity and fair treatment is not confined to human beings alone, but animals as well**.
2. **Uttarakhand High Court Judgement** (2018) & **Punjab and Haryana High Court** (2019):
   Declared all **citizens of Uttarakhand and Punjab to be persons in loco parentis** (in place of parents) **for the welfare/protection of animals.**

What is the Constitutional Protection for Animal Rights?

It is everyone's responsibility to care for and preserve the country's natural resources, such as its **forests, lakes, rivers, and animals and major provisions related to these come in** the **Directive Principles of State Policy (DPSP)** and **Fundamental Duties.** (Which cannot be enforced unless there is statutory backing).

DPSP	**Article 48 A**	**The State shall work to protect and improve the environment and safeguard the forests and wildlife of the country.**
		It is the **duty of every citizen of India "to protect and improve the natural**

Fundamental Duty	Article 51A (g)	environment including forests, lakes, rivers, and wildlife, and to have compassion for living creatures."
State List	Item 14	"Preserve, maintain and improve stock and prevent animal diseases and enforce veterinary training and practice,"
Concurrent List	Item 17 Item 17 B	1. "Prevention of animal cruelty," 2. "Protection of wild animals and birds"

What are the Important Laws in India for the Protection of Animals?

1. **Indian Penal Code (IPC):**
   - The Indian Penal Code (IPC) 1860 is the **official criminal code of India which covers all possible parts of criminal law**.
   - Section **428 and 429 of the IPC provides for punishment** of **all acts of cruelty** such as **killing, poisoning, abuse of animals.**
2. **The Prevention of Cruelty to Animals Act of 1960:**
   - It is **to prevent the unnecessary pain** or **suffering on animals** and **to amend the laws relating to the prevention of cruelty to animals.**
   - The Act **defines "animal" as any living creature other than a human being.**
3. **Wildlife Protection Act 1972:**
   - It **aims to safeguard all plants and animal species in the country** to **ensure environmental and ecological security.**
   - The Act **prohibits the hunting of endangered animals** while **providing for the establishment of wildlife sanctuaries, national parks, and zoos.**

Way Forward:

The need of the hour is to strike a balance between safeguarding the interests of animals without compromising on the safety or well-being of humans and humans should not be allowed to replace living rights of **another species. Co-existence of all life forms is absolutely essential for eco-system.**

2.7 Use of Regional Language in Legal System

Why in News?

Recently, the PM inaugurated the 'All-India Conference of Law Ministers and Law Secretaries' through video conference.

1. In this Conference, **PM Modi again focused on the use of regional languages in the legal system to bring ease of justice.**

2. He stressed that the new **laws should be written in a very clear manner and in regional languages to bring in "ease of justice," so that even the poor can easily understand them** and the legal language doesn't become a barrier for citizens.

Background of the Languages in the Indian Legal System

1. The language used in courts in India **has seen a transition over centuries** with the shift from **Urdu to Persian and Farsi scripts during the Mughal period** which continued in subordinate courts even during the British Rule.

2. But the **Britishers introduced a codified system of law in India with English as the official language.**

3. After independence, **Article 343** of the Constitution of India provides that the **official language of the Union shall be Hindi in the Devanagari script.**

4. However, it **mandated that the English language will continue to be used for all official purposes of the Union for 15 years from the commencement of the Constitution of India.**

5. It further provided that the **President may allow during the said period, by order to authorise the use of the Hindi language for any official purpose of the Union, other than the English language.**

Constitutional Provisions regarding the Languages of Legal System are:

1. Article 348(1)(a) states that **unless Parliament by law provides, all proceedings before the Supreme Court and in every High Court shall be conducted in English.**

2. Article 348(2) provides further that notwithstanding the provisions of Article 348(1), **the Governor of a state may, with the previous consent of the President, authorise the use of Hindi or any other language used for any official purpose, in proceedings in the High Court.**

3. Currently states like Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh have already authorised the use of Hindi in proceedings before their respective high courts and **Tamil Nadu** is **also working in this direction** – to authorise the use of Tamil before its high court.

4. Therefore, the **Constitution recognizes English as the primary language of the Supreme Court and the High Courts.**

Official Languages Act 1963:

1. It empowers the **Governor of a state to allow, with previous consent of the President, authorise the use of Hindi or the official language of the state,** in addition to English, for the purpose of any judgement, decree or order passed by the High Court of that state.

2. It further **provides that where any judgement/decree/order is passed in any such language it shall be translated into English also.** So, **it is clear that primacy is given to English even by this Act also**

3. The **Official Languages Act makes no mention of the Supreme Court,** where English is the only language in which proceedings are conducted.

Which Languages are used in the Subordinate Courts?

1. The **language of all courts subordinate to the High Courts generally remains the same as the language on the commencement of the Civil Procedure Code 1908, until the state government determines.**

2. The state government has the **power to declare any regional language as an alternative** for the proceedings of the court.

a) However, **all the judgments, orders, and decree should be passed by the magistrate in English also.**

b) The recording of the evidence shall be done in the prevailing language of the state.

3. **Section 272 of the Code of Criminal Procedure 1973**, states that the **State government shall determine the language of all courts other than the High Courts.** So, broadly it means that the language used in the district courts can be in the regional language as the state government directs.

So, What are the Reasons for Using English Language in Legal System?

1. As the **cases comes from all over the country in the Supreme Court, judges and lawyers of the Supreme Court also come from all parts of India.**

2. Judges can hardly be expected to read documents and hear arguments in languages with which they are not familiar.

3. So, **without the use of any popular language, it will be almost impossible for the SC to discharge its duty.**

4. Though, in **2019**, the **SC introduced an initiative to translate its judgments into regional languages.**

Significance of using English in Higher Judiciary:

1. **Brings Uniformity:** At present, the **judicial system in India is well developed, integrated and uniform throughout the country.**

2. **Provides Easy Access:** Lawyers as well as the judges have the benefit of **easy access to the views of other high courts on similar cases** and other matters of law and constitution.

3. **No issue in Transfers:** Presently, the **judges from one high court are transferred to other high courts seamlessly** as they need not to learn the local language.

4. **Unified Structure: This has given a unified structure to the Indian judicial system.** The hallmark of any legal system is that the law should be certain, precise and predictable and we have highly achieved that in India.

5. **Link Language:** To a very great extent, **English has served as a link language for India** where we have almost 2 dozen official state languages.

2.8 50th Chief Justice of India

Why in News?

Recently, **Justice D.Y. Chandrachud got appointed as the 50th Chief Justice of India (CJI)** as he succeeded the 49th CJI U.U. Lalit. Justice Chandrachud will have a **relatively longer tenure of 2 years** and is **due to retire on 10th November, 2024.**

About Chief Justice of India (CJI)

1. **Qualifications:**

a) He should be a **citizen of India.**

b) Should fulfil any 1 of the 3 conditions mentioned below :

Have been **a Judge of a High Court or of 2 or more such Courts in succession for a period of atleast 5 years or**

Have been **an advocate of a High Court or of 2 or more such Courts in succession,** or

Is a distinguished jurist in the opinion of the President.

2. **Process of Appointment of the CJI:**
   a) The CJI and the Judges of the **Supreme Court (SC)** are appointed by the President under **clause (2)** of **Article 124** of the Constitution.
   b) As far as the CJI is concerned, the **outgoing CJI recommends his successor.**
   c) Then, the Union Law Minister forwards the recommendation to the PM who, in turn, advises the President.
   d) SC in the '**Second Judges Case' (1993)**, ruled that the senior most judge of the Supreme Court should alone be appointed to the office of the CJI.
   e) The **SC collegium is headed by the CJI** and comprises 4 other senior most judges of the SC.
   f) The collegium system is the **system of appointment and transfer of judges** that has evolved through judgments of the SC (Judges Cases), and not by an Act of Parliament or by the provisions of the Constitution.

About the Administrative Powers of CJI (Master of Roster):

a) It will not be wrong if we refer to the office as 'primus inter pares' – **first amongst equals.**

b) Besides his **adjudicatory role (hearing the cases),** the CJI also plays the role of the **administrative head of the Court.**

c) In his administrative capacity, the CJI **allocates cases to the various benches.**

d) CJI **also decides the number of judges that will hear a case.** Thus, he can influence the result of the case by simply choosing judges that he thinks may favour a particular outcome.

e) Such administrative powers **can be exercised by him without any consultation from anyone** and without any stated reasons.

Removal process of CJI

1. He can be removed **from the office by an order of the President** only after an address by Parliament has been presented to the President regarding it.

2. This resolution should be **supported by a special majority of each House of Parliament** (i.e., by a majority of the total membership of that House and by a majority of not less than 2/3 of the members of that House present and voting).

3. **Grounds of Removal:** Proved misbehaviour or Incapacity (Article 124(4).

2.9) Right to Privacy

Why in News?

Recently, the Supreme Court rejects WhatsApp-Meta pleas against the Competition Commission of India (CCI).

1. **Both WhatsApp and Meta have argued that the CCI cannot investigate into the matters of the privacy policy.**

So, What are the Issues with the Privacy Policy of WhatsApp?

1. Issue is regarding the information that the **WhatsApp automatically collects and shares with the Facebook** like the **mobile phone number, user activity, and other basic information of the WhatsApp account.**

2. **WhatsApp's privacy policy to share commercial user data with Facebook establishes that it is the owner of the data rather than an intermediary.**

3. The **policy essentially takes away the choice users had until now to not share their data with other Facebook-owned and third-party apps.**

4. But, the **WhatsApp policy contradicts with the recommendations of the Srikrishna Committee report, which forms the basis of the Data Protection Bill 2019.** For Example: The **'Principle of Data Localisation', which aims to put curbs on the transfer of personal data outside the country, may come in conflict with WhatsApp's privacy policy.**

What is Right to Privacy?

1. The **Supreme Court described privacy and its importance in the landmark decision of K.S. Puttaswamy v. Union of India in 2017 that - Right to Privacy is a fundamental and inalienable right and attaches to the person covering all the information about that person and the choices that he/ she makes.**

2. **Right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 of the constitution.**

3. **Limitations to this Right:**

The right may be restricted only by the state action that passes each of the 3 tests:

a) Such state action must have a legislative mandate (as per law),

b) It must be pursuing a legitimate state purpose, and

c) It must be proportionate i.e., such state action- both in its nature and extent, must be necessary in a democratic society.

About the Competition Commission of India (CCI)

1. It was **established in March 2009 by the Government of India under the Competition Act, 2002 for the administration, implementation, and enforcement of the Act.**

2. Its **Objectives are:**

a) **Eliminate practices having adverse effects on competition.**

b) **Promote and sustain competition.**

c) **Protect the interests of consumers.**

d) **Ensure freedom of trade in the markets of India.**

e) **Establish a robust competitive environment through Proactive engagement with all stakeholders, including consumers, industry, government, and international jurisdictions.**

3. **The Commission consists of 1 Chairperson and 6 Members who shall be appointed by the Central Government.**

2.10 Reforms in Education System

About the Issue:

1. By **2030**, **India will have the largest number of young population in the world**.
2. India can take benefit of this favourable **'Demographic Dividend' only when these young people are skilled enough to join the workforce.**
3. So, here **Quality education** will play a major role but the **current state of Education in India faces major challenges** like **lack of adequate infrastructure, low government expenditure on education** (less than **3.5% of the GDP**) and as per 'Unified District Information System For Education' (UDISE), the **pupil-to-teacher ratio at the national level** for **elementary schools is 24:1.**
4. So, **it's high time to upgrade the Indian Education System** with **global standards and adopt modern learning approaches that are responsive and relevant.**

So, What are the Features of the National Education Policy (NEP) 2020?

1. The **NEP 2020** aims at making **"India a global knowledge superpower"**.
2. Since Independence, it is the **3rd education policy in India**. The **2 earlier education policies** were brought in **1968 and 1986.**
3. NEP 2020 aims to bring **2 crore out of school children back into the mainstream** through an **open schooling system.**
4. **It also aims to change School governance**, with a **new accreditation framework** and an **independent authority to regulate both public and private schools.**
5. **Vocational Education** to start from Class 6 with Internships.

Other Government Initiatives Related to Educational Reforms are:

1. **National Programme on Technology Enhanced Learning.**
2. **Sarva Shiksha Abhiyan**
3. **PRAGYATA**
4. **Mid Day Meal Scheme**
5. **Beti Bachao Beti Padhao**
6. **PM SHRI Schools**

So, What are the Issues Related to the Education Sector in India?

1. **Lack of proper Infrastructure in Schools**: According to the 'Unified District Information System for Education' (UDISE) for **2019-20, only 12% of schools have internet facilities and 30% have computers.**
2. **Still High Dropout Rate:** In India, the **dropout rate is very high at primary and secondary levels.** A lot of students in 6-14 age group leave the school before completing their education.
3. **Very High Brain Drain:** Due to the **cut-throat competition for getting admission in top institutes** like IITs and IIMs, a **challenging academic environment is created for a large number of students in India**, so **they prefer going abroad,** that makes India deprived of good talent.

4. **Mass Illiteracy:** In-spite of the constitutional directives and efforts which are aimed at enhancing education, around **25% of Indians are still illiterate**, which **also leaves them socially and digitally backward.**

5. **Lack of Technical and Vocational Education: Development of technical and vocational education is quite unsatisfactory in India** and due to this only the number of educated unemployed people are still increasing day by day.

6. **Gender-Inequality**: Despite the government's effort to ensure equality of opportunity for education to both men and women in our society, **the literacy rate of women in India, especially in the rural areas, still remains very poor.**

Way Forward

1. **Change of Mindset: Today, there is a immediate need for the inclusion of problem-solving and decision-making related subjects in the school curriculum to offer a hands-on learning experience to the students and to prepare them to face the outside world when they enter into the workforce.**

2. **Implementation of National Education Policy:** The **implementation of the NEP can help shake the education system in India.** Moving away from the current **10+2 system to a 5+3+3+4 system** will bring the **pre-school age group formally into the education set-up.**

3. **Education-Employment Corridor:** India's educational setup needs to be enhanced by **integrating vocational learning with mainstream education** and providing right mentorship at school **(especially in government schools)** to ensure that students are guided in the right direction from the start and are **aware of career opportunities.**

4. **Reducing the Language Barrier:** While keeping English as a means of **Education for International Understanding (EIU)**, it is **important to give Indian languages equal importance too** and **special publication agencies** can be established to **translate resources into a variety of languages** so that all Indian students have the same opportunity regardless of their **linguistic background.**

5. **Taking a Note From Past to Future:** It is important to look at the future while keeping our **long-established roots in mind.** There is much to learn from the **'Gurukul' system** of ancient India, which focussed on **holistic development of an individual beyond academics**.

2.11) Women Representation in Parliament

Why in News?

Recently, the **representation of women in parliament in New Zealand crossed the 50% mark.**

More About the News:

1. **New Zealand is among a half-dozen nations in the world that can claim at least 50% female representation in their parliament by 2022.**

2. In 1893, **New Zealand became the first nation to allow women to vote.**

What is the Indian Scenario?

The report of Inter Parliamentary Union and latest report by Election Commission of India says:

1. Currently, women **represent 14.44% of the total members of the Lok Sabha**.
2. As of **2021**, **Women represent 10.5%** of the **total members of the Parliament.**
3. The **scenario for women Members** across **all state assemblies in India is even worse and** at 9% only**.**
4. **In the last 75 years** of independence, **women's representation in Lok Sabha has not even increased by 10%**.
5. According to **(IPU) global ranking of women's parliamentary representation**, India has fallen from 117 in 2014 to 143 in 2020.
6. India is currently **behind Pakistan (106), Bangladesh (98) and Nepal (43) and ahead of Sri Lanka (182).**
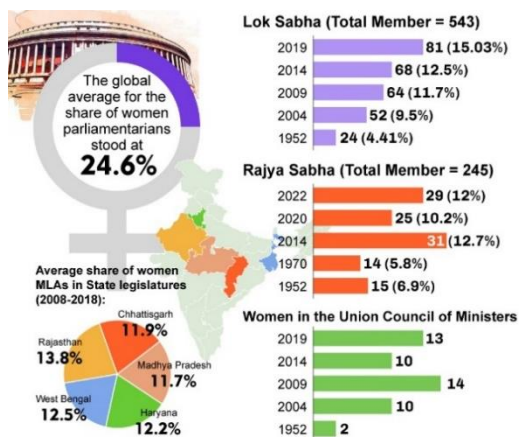
What are the Reasons for Low Representation?

1. **Gender stereotyping is one of the major issues as role of managing household** has been **traditionally given to women.**
2. Politics, is a **field of competition**. Many of the politician's fear that, in the case of **women reservation, their seats can rotationally be reserved for women candidates.**
3. Formal education at educational institutions **creates opportunities for leadership, and impart leadership essential skills** and due to lack of education and understanding of politics, **they do not know about their basic and political rights**.
4. **Uneven distribution of family care responsibilities** means that women spend more time than men in child & home care.
5. A **woman not only has to give her time at time of pregnancy** but it **continues till the child is dependent on parents for care.**
6. The **lack of openness in political decision-making** and **undemocratic internal processes creates a challenge** for women, as they lack the political networks due to less socialization.
7. **Social Conditioning is one big challenge as** women **have to accept the orders forced on them** and **bear the burden of society.**
8. **The** environment of Political Parties also **not women-friendly**, they **have to struggle hard and face several issues** to **create space for them in the party.**

What are the Government Efforts?

1. **The Women's Reservation Bill 2008:**
   - It **proposes to amend the Constitution** of **India to reserve 1/3rd of all seats for women** in the **Rajya Sabha**, the **Lok Sabha**, and in **all state legislative assemblies.**

2. **Reservation for Women in Panchayati Raj Institutions:**
   - **Article 243D of the Constitution also ensures participation of women in Panchayati Raj Institutions**.
   - **It** mandates **not less than 1/3rd reservation for women out of total** number of seats **to be filled by direct election** and **number of offices of chairpersons of Panchayats.**

3. **Parliamentary Committee on Empowerment of Women:**
   - It **was constituted for the first time in 1997** during the **11th Lok Sabha of the Parliament for improving the status of women.**
   - The **Members of the Committee work together for the empowerment of women**.
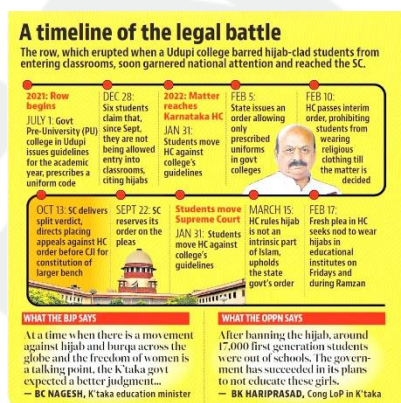
Way Forward: It is the need of the hour in a country like India to have equal political participation of all the sections of society, therefore government should take necessary steps to promote it and implement the proposal of the Election Commission of India to make it mandatory for the recognized political parties to ensure equal political opportunities.

2.12 Karnataka Hijab Ban Case

Why in News?

Recently, the **Supreme Court** has delivered a split verdict in the Karnataka Hijab ban case.

- In case of a split verdict, the **case is heard by a larger Bench.**

- The larger Bench to which a split verdict goes can be a three-judge Bench of the High Court, or an appeal can be preferred before the Supreme Court.

- In March, 2022, the high court had **dismissed the petitions filed by a section of Muslim students** in Karnataka seeking permission to wear the hijab inside classrooms, ruling it is **not a part of the essential religious practice in Islamic faith.**

A timeline of the legal battle
The row, which erupted when a Udupi college barred hijab-clad students from entering classrooms, soon garnered national attention and reached the SC.

2021: Row begins
JULY 1: Govt Pre-University (PU) college in Udupi issues guidelines for the academic year, prescribes a uniform code

DEC 28: Six students claim that, since Sept, they are not being allowed entry into classrooms, citing hijabs

2022: Matter reaches Karnataka HC
JAN 31: Students move HC against college's guidelines

FEB 5: State issues an order allowing only prescribed uniforms in govt colleges

FEB 10: HC passes interim order, prohibiting students from wearing religious clothing till the matter is decided

OCT 13: SC delivers split verdict, directs placing appeals against HC order before CJI for constitution of larger bench

SEPT 22: SC reserves its order on the pleas

Students move Supreme Court
JAN 31: Students move HC against college's guidelines

MARCH 15: HC rules hijab is not an intrinsic part of Islam, upholds the state govt's order

FEB 17: Fresh plea in HC seeks nod to wear hijabs in educational institutes on Fridays and during Ramzan

WHAT THE BJP SAYS
At a time when there is a movement against hijab and burqa across the globe and the freedom of women is a talking point, the K'taka govt expected a better judgment...
— BC NAGESH, K'taka education minister

WHAT THE OPPN SAYS
After banning the hijab, around 17,000 first generation students were out of schools. The government has succeeded in its plans to not educate these girls.
— BK HARIPRASAD, Cong LoP in K'taka

What are the Highlights of the Verdict

Divergent views
A look at what was emphasised by the two verdicts on the hijab ban

DELIVERED BY **JUSTICE HEMANT GUPTA**	DELIVERED BY **JUSTICE SUDHANSHU DHULIA**
"Secularism is applicable to all citizens, therefore, permitting one ... community to wear their religious symbols would be antithesis to secularism."	"Wearing hijab should be simply a matter of choice. It may or may not be a matter of essential religious practice, but it still is, a matter of conscience, belief, expression."
SCHOOL AND RELIGION: Religion has no meaning in a secular school run by the state. "Students are free to profess their religion and carry out religious activities other than when they're attending a classroom."	**CLASSROOM IS DIFFERENT:** Though discipline is required in educational institutions, they can't be put on par with a jail or a military camp, as was cited by HC while describing schools as "qualified public spaces"
UNIFORM, EQUALITY: "... Uniform fosters a sense of 'equality' amongst students- instills a sense of oneness, diminishes individual differences..."	**TICKET TO EDUCATION:** "If it is worn as a matter of her choice, as it may be the only way her conservative family will permit her to go to school... her hijab is her ticket to education"

How have courts ruled so far on the issue of a hijab?

- In 2015, **at least two petitions were filed before the Kerala High Court** challenging the prescription of dress code for All India Pre-Medical Entrance which prescribed wearing "light clothes with half sleeves not having big buttons, brooch/badge, flower, etc. with Salwar/Trouser" and "slippers and not shoes".

    o Admitting the argument of the **Central Board of School Education (CBSE)** that the rule was only to ensure that candidates would not use unfair methods by concealing objects within clothes, the Kerala HC directed the **CBSE to put in place additional measures for checking students** who "intend to wear a dress according to their religious custom, but contrary to the dress code".

- *In Amna Bint Basheer v CBSE (2016),* the Kerala HC examined the issue more closely. The Court held that the **practice of wearing a hijab constitutes an essential religious practice** but did not quash the CBSE rule.

    o The court once again allowed for the "additional measures" and safeguards put in place in 2015.

- However, on the issue of a uniform prescribed by a school, another Bench ruled differently in *Fathima Tasneem v State of Kerala (2018).*

    o A single Bench of the Kerala HC held that **collective rights of an institution would be given primacy** over individual rights of the petitioner.

How is Religious Freedom Protected under the Constitution?

- Article 25 to 28 of Part-3 (Fundamental Rights) of the Constitution confers Right to freedom of religion.

- **Article 25(1) of the Constitution** guarantees the "freedom of conscience and the right freely to profess, practise and propagate religion".

- It is a **right that guarantees a negative liberty** — which means that the state shall ensure that there is no interference or obstacle to exercise this freedom.

    o However, like all **fundamental rights**, the state can restrict the right for grounds of public order, decency, morality, health and other state interests.

- **Article 26** talks about the freedom to manage religious affairs subject to public order, morality and health.

- **Article 27** states that no person shall be compelled to pay any taxes for the promotion or maintenance of any particular religion.

- **Article 28** states that the freedom to attend religious instruction or religious worship in certain educational institutions.

Way Forward

- In the prevailing political climate, the **Karnataka government mandating either a prescribed uniform or any dress** that was "in the interest of unity, equality and public order" was seen as a **majoritarian assertion in the garb of enforcing secular norms**, equality and discipline in educational institutions.

- A verdict that **legitimises this non-inclusive approach to education and a policy** that may lead to denial of opportunity to Muslim women will not be in the country's interest.

- **Reasonable accommodation should be the course** as long as the hijab or any wear, religious or otherwise, does not detract from the uniform.

2.13 Multi-State Cooperatives

Why in News?

Recently, the Union Cabinet has approved the 'Multi-State Cooperative Societies (MSCS) Amendment Bill, 2022' which seeks to amend the Multi-State Cooperative Societies Act, 2002

What are the Changes Proposed in the Bill?

- The amendments seek to improve ease of doing business, bringing greater transparency and enhance governance.

- It has included provisions relating to **representation of women and Scheduled Caste/Scheduled Tribe members on the board** of multi-state cooperative societies.

- The amendments have been brought to **reform the electoral process,** strengthen monitoring mechanisms and enhance accountability.

- It will also **widen the composition of board and ensure financial discipline**, besides enabling the multi-state cooperative societies to raise funds.

- To improve the governance of multi-state cooperative societies, the Bill has specific provisions for setting up of **Cooperative Election Authority, Cooperative Information Officer and Cooperative Ombudsman.**

- There will also be a **provision for issuing non-voting shares** in multi-state co-operative societies to help them raise funds.

- Further, the newly proposed **Rehabilitation, Reconstruction & Development Fund** will help in revitalising sick co-operative societies.

- The Bill will incorporate the provisions of the **97th Constitutional Amendment.**

▪ Moreover, the provision for stipulating prudential norms will bring in financial discipline. The amendments relating to auditing mechanism will ensure more accountability.

What are the Key Points of MSCS Act, 2002?

▪ **About:**

o **Multi State Cooperative Societies:** Although Cooperatives is a state subject, there are many societies such as those for sugar and milk, banks, milk unions etc whose members and areas of operation are spread across more than one state.

- For example, most sugar mills along the districts on the Karnataka-Maharashtra border procure cane from both states.

- Maharashtra has the highest number of such cooperative societies at 567, followed by Uttar Pradesh (147) and New Delhi (133).

- The MSCS Act was passed to govern such cooperatives.

o **Legal Jurisdiction:** Their board of directors has representation from all states they operate in.

- Administrative and financial control of these societies is with the central registrar, with the law making it clear that no state government official can wield any control on them.

- The exclusive control of the central registrar was meant to allow smooth functioning of these societies, without interference of state authorities.

▪ **Associated Concerns:**

o **Lack of Checks and Balances:** While the system for state-registered societies includes checks and balances at multiple layers to ensure transparency in the process, these layers do not exist in the case of multi state societies.

- The central registrar can only allow inspection of the societies under special conditions.

- Further, inspections can happen only after prior intimation to societies.

o **Weak Institutional Infrastructure of Central Registrar:** The on-ground infrastructure for central registrar is thin — there are no officers or offices at state level, with most work being carried out either online or through correspondence.

- Due to this, the grievance redressal mechanism has become very poor.

- This has led to several instances when credit societies have launched ponzi schemes taking advantage of these loopholes.

2.14 Justice Inside Judiciary

Why in News?

Recently, the debates over the credibility of 'Collegium System' has again started in the Indian Polity.s

What is Collegium System?

1. **Collegium system** is the way by which **judges of the Supreme Court and High Courts are appointed and transferred.**
2. The **collegium system is not mentioned anywhere in the Indian Constitution or in any specific law made by the Parliament,** it has **evolved through judgments of the Supreme Court.**
3. The **Supreme Court's Collegium is a 5 member body,** which is headed by the **Chief Justice of India (CJI) and comprises the 4 other senior most judges** of the SC.
4. A **High Court collegium** is led by the **Chief Justice of the High Court concerned and 2 other senior most judges** of that court.
5. The **government can also raise objections** and seek clarifications regarding the collegium's choices, **but if the collegium recommends the same names again then the government is bound** to appoint them as judges.
6. **Parliament** came with the **National Judicial Appointment Commission (NJAC)** and **99th Constitutional (Amendment) Act** for reforms in **judicial appointments,** but the Supreme Court held it **unconstitutional** and **void by striking down the NJAC and 99th Constitution (Amendment) Act.**
7. Since then, the **Collegium system of appointment and transfer of judges** of the higher judiciary is under debate and controversy.

So, What Does the Constitution Say on the Appointment of Judges?

1. **Articles 124(2) and Article 217** of the **Constitution** deals with the **appointment of judges to the Supreme Court and High Courts.**
2. The **appointments are made by the President,** who is **required to hold consultations with "such judges of the Supreme Court and of the High Courts as he deems necessary".**
3. But the **Constitution does not lay down any process** for making these appointments.

Issues Related to the Collegium System are:

1. **Exclusion of Executive:** The **complete exclusion of the executive** from the judicial appointment process created a system where the few judges are appointing the entire judiciary.
2. **Lack of Accountability**: Also, they are **not accountable to any administrative body** that may lead to the wrong choice of the candidate while overlooking the right candidate.

3. **Chances of Favouritism and Nepotism:** The collegium system **does not provide any specific criteria for testing the candidate for the post of judge** because of which it **leads to wide scope for nepotism and favouritism.**

4. **Against the Principle of Checks and Balances:** The principle of **check and balance is violated** in this system. In India, **all the 3 organs (Executive, Legislature and Judiciary) works independently but they keep check and balance on each other.**

5. **Close-Door Mechanism:** Critics have pointed out that **collegium system does not involve any official meetings**. It is **seen as a close-door affair** with **no public knowledge of how and when a collegium meets,** and **how it takes its decisions.**

6. **Unequal Representation:** The other area of concern is the **composition of the higher judiciary,** women are fairly **underrepresented in the higher judiciary.**

Way Forward

1. **Need to have a Balance Between Independence and Accountability:** The **real issue is not that who appoints the judges,** but the **manner in which they are appointed.** For that, **whatever may be the composition of the Judicial Appointment Commission (JAC), it is important to have a balance between the judicial independence and judicial accountability.**

2. **Justice Inside Judiciary:** Care must be taken to ensure that the **institutional credibility of the court in giving justice should be made inside the judiciary too** with **equality of opportunity and fixed criteria for selection of judges.**

3. **Reconsidering the Establishment of NJAC:** NJAC's Act may be amended to include **safeguards** that would make it **constitutionally valid,** as well as reorganised to ensure that **majority control remains with the judiciary only.**

4. **Gender Diversity and Representative Judiciary: No woman has been appointed as the Chief Justice of India so far**. There is a need to maintain and **promote Gender Diversity in Higher Judiciary**.

2.15 CCI Penalty on Google

Why in News?

Recently, the Competition Commission of India (CCI) has imposed a penalty of Rs. 936 crores on Google for "abusing its dominant position" in market related to the Android mobile device ecosystem.

So, What was the Issue?

1. In **2019, the CCI ordered an investigation against the 'Unfair Business Practices' of Google after consumers complained about Android-based smartphones.**

2. The **allegations against the Google were based on 2 agreements between the Original Equipment Manufacturers (OEMs) of Android OS and Google — the Mobile Application Distribution Agreement (MADA) and the Anti-Fragmentation Agreement (AFA).**

3. The CCI stated that the **Google violated competition law due to mandatory pre-installation of the entire Google Mobile Suite (GMS) under MADA and there was no option to uninstall the same.**

4. GMS is a **collection of Google applications and Application Programming Interface (APIs)** that help support functionality across devices.

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5. GMS includes Google's key offerings such as Google Search, Google Chrome, YouTube, Play Store, and Google Maps.
6. This action of Google amounted to imposition of unfair conditions on the device manufacturers and thereby violated Section 4 of the competition Act. Section 4 of the Competition Act is related to the abuse of dominant position.

About the Competition Commission of India (CCI)

1. It's a **statutory body of the Government of India which is** responsible for enforcing the **Competition Act, 2002**.
2. **CCI was formed in 2009.**
3. The **Monopolistic and Restrictive Trade Practices Act, 1969 (MRTP Act)** was **repealed and replaced by the Competition Act, 2002, on the recommendations of the Raghavan committee.**
4. CCI **consists of 1 Chairperson and 6 Members** who **shall be appointed by the Central Government.**
5. CCI is a **quasi-judicial body** which **works to restrict the Monopolistic practices.**
6. The **Chairperson and other Members of the CCI are the whole-time Members.**

Eligibility Criteria for appointment as a Members of CCI:

1. The Chairperson and every other Member of CCI **shall be a person of ability and integrity,**
2. And who has been, or is **qualified to be a judge of a High Court or has a special knowledge 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.**

Competition Act, 2002

1. This **Act was passed in 2002** and has been **amended by the Competition (Amendment) Act, 2007.**
2. The **Act prohibits any kind of anti-competitive agreements, abuse of dominant position by enterprises and regulates combinations (acquisition, acquiring of control), which causes or likely to cause an adverse impact on competition within India.**
3. In accordance with the provisions of the 2007 Amendment Act, **the Competition Commission of India and the Competition Appellate Tribunal have been established.**
4. **Government replaced Competition Appellate Tribunal (COMPAT) with the National Company Law Appellate Tribunal (NCLAT) in 2017.**

3. INTERNATIONAL RELATIONS

3.1 Conflict in the Korean Peninsula

Why in News?

Recently, North Korea flew 12 warplanes near its border with the South Korea and this incident has increased tensions in the entire world.

So, What is the Conflict between the North and South Korea?

1. The **root of the conflict lies in the Japanese occupation of Korea between 1910- 1945.**
2. **When Japan was defeated in the 2nd World War,** the Allied forces agreed to establish a **"four-power trusteeship over Korea"** at the **Yalta Conference** (1945).
3. But the **USSR (Union of Soviet Socialist Republics) invaded Korea and took control of the north while the south remained under the rest of the allies, mainly the USA.**
4. The **division of the 2 regions was along the 38th parallel north**, which still **continues to be the official border** between the **2 Koreas.**
5. **In 1948**, the **Republic of Korea (South Korea) and the Democratic People's Republic of Korea (North Korea) were established and both tried to enhance their reach, territorially and ideologically and this led to emergence of conflict between the 2 nations.**

About the Korean War's:

1. On **25th June 1950**, **North Korea which was backed by the USSR,** launched **an attack on South Korea** and **occupied most of the country.**
2. In response, the United Nations force **led by the USA retaliated.**
3. In **1951, the US forces led by Douglas MacArthur** crossed the **38th parallel and it led to the entry of China** in support of North Korea.
4. To prevent further escalation, peace **talks began later in 1951 between all the parties.**

5. **India was actively involved in negotiating peace in the Korean peninsula** by engaging all the major stakeholders – **US, USSR and China.**

6. In **1952, the Indian resolution on Korea was adopted at** the United Nations (UN).

7. On **27th July 1953**, the '**Korean Armistice Agreement'** was signed between the **UN Command, the Korean People's Army and the Chinese People's Volunteer Army and it led to an official ceasefire without a Peace treaty. Thus, the war officially never ended.**

8. In **December 1991, North and South Korea signed a pact agreeing to refrain from aggression.**

About the US-North Korea Conflict

1. During the **Cold War era**, the US extended its **Nuclear Umbrella** (guarantee of support during a nuclear attack**) to its allies i.e. South Korea and Japan.**

2. North Korea withdrew from the **Non-Proliferation Treaty (NPT) in 2003** and afterwards, **under present leader Kim Jong-un, it increased nuclear missile testing.**

3. In response to this, the **US started deploying THAAD (Terminal High Altitude Area Defence)** in **South Korea in March 2017.**

4. The **territorial conflict which started between the North and South Korea has transformed into a tussle between the US and North Korea.**

What is India's Position on the Korean Conflict?

a) **Indian's Stand:**

i) India has consistently raised **its opposition to the North Korean nuclear and missile tests.** However, it has **maintained a neutral stance regarding sanctions.**

ii) Earlier, during the Korean War (1950- 53), India played **a major role in a cease-fire agreement signed between the 2 sides.**

b) India's Relations with North and South Korea:

i)In **May 2015,** the **bilateral relationship with South Korea** was upgraded to **'special strategic partnership'.**

ii) India has a major role to play in **South Korea's 'Southern Policy'** under which the **latter is looking at expanding relations beyond its immediate region.**

iii) Similarly, **South Korea is a major player** in **India's 'Act East Policy'** under which **India aims to promote economic cooperation, cultural ties and to develop strategic relationships with the countries in the Asia-Pacific.**

iv) **India has diplomatic relations with North Korea** for over **47 years**, which reflects the legacy of India's commitment to the **Non-Alignment Movement.**

Conclusion

With the post-Covid geopolitical order undergoing major changes and global economic conditions deteriorating, North Korea will try to focus on strengthening its already weak economy, especially when the country has hit hard by the pandemic. Furthermore, it is possible that in future dialogue between North Korea, the United States, South Korea, Japan and other stakeholders on the Korean Peninsula will reopen and at that time, India should try to play a constructive role in promoting peace and security on the Korean Peninsula.

3.2 UN Peacekeeping Forces Fatalities

Why in News?

As per the UN Undersecretary General, the number of fatalities among United Nations Peacekeeping Forces (UNPKF) in direct attacks has grown in recent years

About the UN Peacekeeping Forces

1. When the **UN Security Council approved the deployment of UN military observers** to the **Middle East in 1948**, the **UN Peacekeeping Forces** were established.
2. **UN peacekeeping forces aid nations in negotiating from war to peace.**
3. To carry out several missions approved by the **UN Security Council (UNSC)** and the **UN General Assembly, it deploys soldiers and police from all over the world** and combines them with civilian peacekeepers.
4. **International Day of UN Peacekeepers** is celebrated on date **29th May** every year.
5. **Theme for 2022 is: "People. Peace. Progress. The Power of Partnerships".**

India and the UNPKF:

1. **India is among the countries that send the most number of troops to the UNPKF. For** Example**: India is the 2nd highest military** and **5th highest police** contributing country to the **United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO).**
2. Over **2,60,000 Indians** have served in **49 U.N. Peacekeeping missions since 1948.**
3. In **2007, India became the 1st country to deploy** an **all-women contingent** to a UN Peacekeeping mission.
4. In the last almost **6 decades, 179 Indian soldiers** have died in **UN Peacekeeping operations.** Among the "**blue helmets**", **it has the greatest death toll of any nation.**
5. **Blue Helmets** are the **military personnel of the UN that work alongside the UN Police and civilian colleagues to promote "stability, security, and peace processes".**

Reasons for more Fatalities are:

1. The **atmosphere** in which **peacekeeping operations are taking place is getting worse from both political and security point of view.**
2. Many operations, especially large operations like those in **Africa, engage soldiers against the criminal or terrorist organizations who prefer turmoil and violence over peace and stability.**

So, How can these fatalities be controlled?

1. **Geographical consideration** and **evenness** must be maintained in **peacekeeping operations.**
2. **Forces should be given proper training and should be well equipped.**
3. **Recently,** India has presented a **10-point formula** to address **security** and **operational challenges** faced by **United Nations peacekeeping missions** around the world and these are:

a) To accomplish the objectives of operations, the leadership of a **peacekeeping force must build confidence and ensure efficient cooperation with the host state.**

b) **Countries participating** in peacekeeping missions must **determine the agenda**, not the Security Council.

c) With a thorough **understanding of their limits, peacekeeping missions should be deployed sensibly.**

d) **Clearly defined objectives should be there** that are supported by **adequate resources.**

e) "All-out efforts" should be made to **prosecute those responsible** for **atrocities against peacekeepers.**

f) It is **essential to end violent conflicts and constructing global security against external threats.**

g) Using **cutting-edge technology** in peacekeeping operations **can help in overcoming security issues.**

h) The **military, civilians, and mission leadership** should all **be considered while evaluating a mission.**

i) An "exit strategy" should **be considered for peacekeeping deployments from the beginning.**

j) **The primary duty to safeguard people against non-state groups operating on their soil shall rest with the host government.**

3.3 **Conference on Interaction and Confidence Building Measures in Asia (CICA)**

Why in News?

In October 2022, the **Minister of State for External Affairs addressed the 6th Summit of CICA** in Astana, Kazakhstan.

▪ India is **one of the founding members of CICA.**

About CICA:

1. The **CICA is an intergovernmental forum.**
2. As the name suggests its main **aim is to strengthen regional cooperation** and **safeguarding peace, security, and stability in Asia.**
3. It **was first suggested by** First **President of Kazakhstan, Mr. Nursultan Nazarbayev in 1992.**
4. The **1st CICA summit was held in June of 2002, and has been organized every 4 years**, ever since.
5. Its **Secretariat has been located in Almaty (Kazakhstan)**.
6. Its **main functions** include the **consultations, review the progress of, and to set priorities for CICA activities.**

7. The **meeting of the Ministers of Foreign Affairs is required to be held every 2 years,** even without the conference.
8. CICA members **include 27 Asian countries including Azerbaijan, Bahrain, China, Egypt, India, Iran, Israel, Russia, South Korea, and Turkey**, **9 observer states**, and **5 international organizations.**
9. **India has participated in 2 CICA CBMs** (Confidence Building Measures), and they were:
    - '**Development of Secure and Effective Systems of Transportation Corridors,**
    - **'Energy Security'**

3.4 International Migration Outlook 2022

Why in News?

Recently, 'International Migration Outlook 2022', a report on international migration patterns was released by the Organisation for Economic Co-operation and Development (OECD).

About OECD

1. It's an **inter-governmental economic organisation which was founded to stimulate economic progress and the world trade.**
2. **Most OECD members are high-income countries** with a very high Human Development Index (HDI) and are regarded as developed countries.
3. It was **founded** in **1961** and is **headquartered at Paris (France).**
4. It has a total of **38 members.**
5. The most recent countries to join the OECD are **Colombia (in April 2020) and Costa Rica (in May 2021).**
6. **India is not a member of the OECD** but is a key economic partner of it.
7. **Some Reports and Indices released by OECD are:**
   a) 'Government at a Glance'
   b) 'Better Life Index'

Highlights of the Report are:

1. **Regarding world:**
   a) **After a record decrease in 2020 due to the COVID-19 crisis**, permanent-type **migration to OECD countries bounced back by 22% in 2021.**
   b) **Family migration increased by almost 40% in 2021** and remained the largest category of inflows.
   c) **Migration in free mobility areas** was **less affected** by the pandemic but **still fell by almost 17% in 2020.**
   d) In **2020**, there were almost **4.4 million international students enrolled in the OECD countries**, accounting for **10% of all tertiary students.**
   e) The **most important receiving countries** are the **United States (22%), the United Kingdom (13%) and Australia (10%).**
   f) The **US remained the largest recipient of permanent immigrants in 2021** (8,34,000) which is **43% more than 2020, and 19% less than 2019.**

2.Regarding India:

a) Students from **China (22%) and India (10%) accounts for the largest share of foreign students** in **OECD countries**. About **1/3 of the world's population aged 20-29 live in these 2 countries only.**

b) After looking at the stay rates of Indians and Chinese students who has obtained their education permit in 2015 shows that in nearly every OECD country, including Canada, Germany, Australia, New Zealand, the United Kingdom, and Japan, **Indians have significantly higher retention rate than the Chinese.**

Additional Information

Different Types of Migration are:

1. **On the Basis of Movement Pattern**
a) **Step Migration:** Migration initiating from a **small settlement and moving to a larger one in the urban areas s**uch as movement from a farm to a village, then to a town and subsequently to a sub-urban area and finally into a city.
b) **Circular Migration**: Circular migration happens between an origin and a destination with **at least one migration and return.**
c) **Seasonal Migration** is a very common form of circular migration, **driven by seasonal peaks in labour demand, mostly in agriculture.**
d) **Return Migration** refers to a **one-time emigration and returns after an extended stay outside the host territory.**
e) **Chain Migration: Migration of families at different stages of the life cycle from one location to the next**, which subsequently bring people from their home location to this new place.

2.On the Basis of Decision-making Approach:

a) **Voluntary Migration: Based on a person's free will, initiative, and desire to live in a better place** and to improve their financial status.

b) **Involuntary Migration**: It's **a type of migration in which a person is being forced to leave their home due to certain unfavourable environmental and political situations.**

3.On the Basis of Duration:

a) **Permanent Migration:** When people **migrate to another place over a long distance for a long period, it is called as permanent migration.** For example, a person has moved from Bhopal to Delhi for better job opportunities and has planned to settle there only. This type of migration will be considered as permanent migration.
b) **Temporary Migration:** It's **a type of migration that is not intended to be permanent** and usually undertaken for a specific purpose only.

3.5 6th East Asia Summit Education Minister's Meeting

Why in News?

Recently, India participated in the '6th East Asia Summit Education Minister's Meeting' which was held in Hanoi, Vietnam.

About the East Asia Summit (EAS)

1. It was **established in 2005** as a **forum of 18 regional countries for strategic dialogue** and the **cooperation on the key political, security, and economic challenges in the Indo-Pacific region.**

2. The **concept of an East Asia Grouping was first promoted in 1991 by the then Malaysian PM, 'Mahathir bin Mohamad'.**

3. There are **6 priority areas of regional cooperation** within the framework of the EAS and these are – 1) Environment and Energy 2) Education 3) Finance 4) Global Health Issues and Pandemic Diseases 5) Natural Disaster Management 6) ASEAN Connectivity.

4. It **comprises** the **10 member states of the ASEAN (Association of Southeast Asian Nations)** which are **Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam** along with **8 other countries namely Australia, China, Japan, India, New Zealand, the Republic of Korea, Russia and the USA.**

5. It's an ASEAN-centred forum so it **can only be chaired by an ASEAN member.**

6. The **EAS calendar is being prepared in the annual Leaders' Summit**, which usually held alongside ASEAN Leaders' meetings in the 4th quarter of every year.

7. **Meetings of EAS Foreign Ministers and Finance Ministers are also held annually.**

India and EAS:

1. **India was 1 of the founding members of the East Asia Summit.**

2. At the East Asia Summit which was held in **2019 at Bangkok, India has unveiled India's 'Indo-Pacific Ocean Initiative' (IPOI),** which is aimed at making partnerships to create a secure and stable maritime domain.

So, What are the Issues Related to the Education Sector in India?

7. **Lack of proper Infrastructure in Schools**: According to the '**Unified District Information System for Education' (UDISE)** for **2019-20, only 12% of schools have internet facilities and 30% have computers.**

8. **Still High Dropout Rate:** In India, the **dropout rate is very high at primary and secondary levels.** A lot of students in 6-14 age group leave the school before completing their education.

9. **Very High Brain Drain:** Due to the **cut-throat competition for getting admission in top institutes** like IITs and IIMs, a **challenging academic environment is created for a large number of students in India**, so **they prefer going abroad,** that makes India deprived of good talent.

10. **Mass Illiteracy:** In-spite of the constitutional directives and efforts which are aimed at enhancing education, around **25% of Indians are still illiterate**, which **also leaves them socially and digitally backward.**

11. **Lack of Technical and Vocational Education: Development of technical and vocational education is quite unsatisfactory in India** and due to this only the number of educated unemployed people are still increasing day by day.

12. **Gender-Inequality**: Despite the government's effort to ensure equality of opportunity for education to both men and women in our society, **the literacy rate of women in India, especially in the rural areas, still remains very poor.**

Conclusion

Today, there is a immediate need for the inclusion of problem-solving and decision-making related subjects in the school curriculum to offer a hands-on learning experience to the students and to prepare them to face the outside world when they enter into the workforce

3.6 India- Russia Trade

Why in News?

Recently, the Ministry of Commerce and Industry has released a report which shows that India's bilateral trade with Russia has reached to an all-time high of USD 18.2 Billion in just 5 months (April-August) of FY 2022-23.

INDIA'S TRADE WITH RUSSIA
Trade in $ million

About India-Russia Relations

1. **Historical Background of Relations:**

a) During the **Cold War, India and the Soviet Union** had a **strong strategic, military, economic and diplomatic relations.**

b) Even**, after the dissolution of the Soviet Union, Russia inherited its close relationship with India which resulted in both nations sharing a 'Special Strategic Relation'.**

c) However, **the relations have taken a steep downfall in the last few years.** One of the biggest reason for this is **Russia's close relations with China and Pakistan.**

2. **Political Relations:**
a) In 2019, Russia **awarded PM Narendra Modi with Russia's highest state award– 'The order of St Andrew the Apostle'**. The award was presented to the PM **for his contribution to the development of strategic partnership between Russia and India** and friendly ties between the Russian and Indian people.
b) **2 Inter-Governmental Commissions –**

 i) **Trade, Economic, Scientific, Technological and Cultural Cooperation (IRIGC-TEC)**

ii) **Military-Technical Cooperation (IRIGC- MTC), meet annually.**

3. **Trade Relations:** The **2 countries aim to increase bilateral investment to USD 50 billion and bilateral trade to USD 30 billion by 2025.**

4.Defence and Security Relations:

a) Both countries regularly conduct the **Tri-Services exercise named 'INDRA'.**

b) The **joint military programmes** between India and Russia include:

- **BrahMos cruise missile programme**

- **5th generation fighter jet programme**

- **Sukhoi Su-30MKI programme**

- **Ilyushin/HAL Tactical Transport Aircraft**

- **KA-226T twin-engine utility helicopters**

- **Some frigates**

c) The military hardware **purchased/leased by India from Russia includes:**

- **S-400 Triumf**

- **Kamov Ka-226**

- **T-90S Bhishma**

- **INS Vikramaditya aircraft carrier programme.**

5.Nuclear Relations:

a) **Kudankulam Nuclear Power Plant (KKNPP) is being constructed through the Russia-India Inter-Governmental Agreement.**

b) Both India and Russia are implementing **'Roop Pur Nuclear Power Project' in Bangladesh.**

So, What are the Findings of the Report?

1. The **total annual bilateral trade between the 2 countries** stood at **USD 13.1 Billion in 2021-22, and USD 8.1 Billion in 2020-21.**

2. Pre-Covid, it was **USD 10.1 Billion in 2019-20, USD 8.2 Billion in 2018-19, and USD 10.6 Billion in 2017-18.**

3. Russia has now become **India's 7th biggest trading partner** — up from its **25th position last year.**

4. The **US, China, UAE, Saudi Arabia, Iraq and Indonesia are the 6 countries which recorded higher volumes of trade with India** during **the first 5 months of 2022-23.**

5. Of the **total trade worth USD 18.1 Billion in first 5 months of 2022-23, India's imports from Russia accounted for USD 17.2 Billion, while India's exports to the Russia was only USD 992.73 million**, leaving **a negative trade balance of USD 16.2 Billion.**

6. An analysis of the data shows that **Russia's share in India's total trade has increased to 3.5%, up from 1.2% in 2021-22.** While Russia's share in India's total trade was **2% in 1997-98.**

7. **Biggest reason for this increase in trade** is due to a **sudden jump in imports from Russia, mainly oil and fertilisers,** which began to increase earlier in 2022.

8. There was an over **500% increase in 3 months – 560% in June, 577% in July and 640% in August** – as compared to the same months of the previous year.

9. **Petroleum oil and other fuel items** (mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes) **accounted for 84% of India's total imports** from **Russia.**

10. **Fertilisers and Fuel** together **accounts for over 91% of the total imports** from Russia this year.

Way Forward

1. **Russia will remain a key defence partner of India in the coming days too as both share mutual trust from many decades.**

2. The 2 countries have been discussing that **how they can cooperate in using India as a production base for exporting to 3ʳᵈ countries.**

3. To address this, **Russia has made legislative changes allowing its companies to set up joint ventures in India.**

4. **India should also make efforts to strengthen relations with Russia as Russia is a time tested friend of India.**

3.7 7ᵗʰ ASEAN-India Ministerial Meeting

Why in News?

Recently, the '7ᵗʰ ASEAN-India Ministerial Meeting (AIMMAF) on Agriculture and Forestry' was held virtually.

About ASEAN

1. It is a **regional grouping that works in areas like Economic, Political, and Security cooperation.**

2. It was **established in 1967 in Bangkok (Thailand)** with the signing of the **ASEAN Declaration (also known as Bangkok Declaration)** by the founding members of ASEAN namely **Indonesia, Malaysia, Philippines, Singapore and Thailand.**

3. Its **chairmanship rotates annually,** based on the alphabetical order of the english names of member states.

4. ASEAN countries have a total population of **650 million** people and a combined **Gross Domestic Product (GDP) of USD 2.8 trillion.**

5. It is **India's 4ᵗʰ largest trading partner** with about **USD 87 billion** of trade.

6. Currently **10 South East Asian Nations are its Members** and these are: **1) Brunei 2) Cambodia 3) Indonesia 4) Laos 5) Malaysia 6) Myanmar 7) Philippines 8) Singapore 9) Thailand 10) Vietnam**

ASEAN GROUPING

So, What are the Highlights of this Recent Meeting?

1. **Celebrating 30 Years of Friendship: This year completed the 30 years of India-ASEAN relations. 2022 has been designated as 'ASEAN-India Friendship Year'.**
2. **India's Vision of keeping ASEAN at forefront:**
a) India again announced **its vision of keeping Association of Southeast Asian Nations (ASEAN)** at the center of its **'Act East Policy'.**
b) It also **emphasized mutually close regional cooperation with ASEAN to ensure sustainable** and inclusive growth for agricultural development in the region.

3. **Steps towards Millets Production:**

a) Referring to the **importance of millets as a nutritious food and keeping in mind the 'International Nutritional Cereal Year 2023',** India urged the ASEAN member countries to support the efforts of India in increasing the production, processing, value addition and consumption of millets.

3. **Implementation of Various Programs:** The progress in **implementation of various programs and activities under the 'Medium Term Action Plan of ASEAN-India Cooperation' (Year 2021-2025)** was reviewed.

4.**Cooperation in Agriculture:** The **commitment to ASEAN-India cooperation in agriculture** and **forestry was reaffirmed.**

5.**Covid-19 Pandemic:**

a) In order to **mitigate the impact of the Covid-19 pandemic** by ensuring a seamless flow of safe and nutritious agricultural products to ASEAN and India, both have agreed that **it is necessary to take continuous measures under ASEAN-India cooperation** for the implementation of post-pandemic recovery.

b) India ensured the **commitment to enhance India's cooperation with ASEAN** in **food security**, **nutrition, climate change adaptation, digital farming, nature-friendly agriculture, food processing, value chain, agricultural marketing and capacity building.**

How has Been the ASEAN-India Relations?

1. ASEAN is **considered 1 of the most influential grouping in Southeast Asia.**
2. India and several other countries, including the **US, China, Japan and Australia are its important partners.**
3. The **ASEAN-India dialogue relations (diplomatic ties) started with the establishment of a partnership in 1992.**
4. The relations further upgraded to **full dialogue partnership in 1995 and summit-level partnership in 2002.**
5. Traditionally, the basis of India-ASEAN ties **has been trade and people-to-people ties due to shared historical and cultural roots.**
6. A more recent and urgent **area of talks has been China's rise.**
7. Both **India and ASEAN aim to establish a 'Rule-based World'** for peaceful development and its against China's aggressive policies.

What are the areas of cooperation between India and ASEAN ?

1. **Economic Cooperation:**

a) ASEAN is India's **4th largest trading partner.**

b) India signed **FTA (Free Trade Agreement)** in **goods in 2009** and an **FTA in services and investments in 2014** with ASEAN.

c) India has a **Comprehensive Economic Cooperation Agreement (CECA) with various countries** of the ASEAN region which has resulted in concessional trade(low tax and duties) and a rise in investments in India.

2. **Political Cooperation: ASEAN-India Centre (AIC)** was established **to undertake policy research** with organizations and think-tanks in India and ASEAN.

3. **Financial Assistance:** India provides **financial assistance to the ASEAN nations through various mechanism like ASEAN-India Cooperation Fund, ASEAN-India S&T Development Fund and ASEAN-India Green Fund.**

4. **Connectivity:** India has been doing several connectivity projects like **India-Myanmar-Thailand Trilateral (IMT) Highway and the Kaladan Multimodal Project (connects Kolkata to Mizoram through Myanmar).** India is also trying to **establish a maritime (water based) transportation agreement** with ASEAN and also Plans for a railway link between New Delhi in India to Hanoi in Vietnam.

5. **Socio-Cultural Cooperation:** Programmes to boost **people-to-people interaction with ASEAN are organized** such as inviting ASEAN students to India, Special Training Course for ASEAN diplomats, Exchange of Parliamentarians etc.

6. **Defence Cooperation:** Joint Naval and Military exercises are conducted between India and most ASEAN countries. Vietnam has traditionally been a close friend of India on defence issues, Singapore is also an equally important partner in Defence.

7. In 2022 only, **2nd ASEAN Digital Ministers (ADGMIN) meeting with India** was held, where two sides **finalized India-ASEAN Digital work plan 2022** .

What is the Significance of ASEAN for India?

1. India needs **a close diplomatic relationship with ASEAN nations** both for **economic and security reasons.**

2. Connectivity with the **ASEAN nations can allow India to increase its presence in the region.** These connectivity projects keep the **Northeast India** at the centre, ensuring the economic growth of the north eastern states.

3. Improved trade ties with the ASEAN nations will help in **countering the China's presence in the region and will lead to economic growth** and **development for India.**

4. **ASEAN is the advocate of the rules-based security architecture in the Indo-Pacific region** (it comprises the region of Indian Ocean, the Western and Central Pacific Ocean), which is important for India since most of its trade is dependent on maritime security.

5. Collaboration with the ASEAN nations is necessary for **handling counter insurgency in the Northeast, combat terrorism, tax evasion etc.**

Way Forward

1. As **China have 3 times more commercial flights than India to Southeast Asia, improving air connectivity between India and ASEAN countries is the need of the hour.**

2. There is need to expand the concept of **QUAD (includes India, Japan, Australia and US)** to include **the ASEAN countries and become a QUAD+ arrangement. Vietnam and Indonesia** have expressed **a positive view on QUAD in the region.**

3. Tourism can be **encouraged between India and the ASEAN**.

3.8 Indo-Pacific

Why in News?

Recently, the Defence Minister of India during the "18th Heads of Asian Coast Guard Agencies Meeting" (HACGAM) in New Delhi said that India stands for a open and rule-based maritime borders in the Indo-Pacific.

About Indo-Pacific Region

1. **Indo-Pacific is a recent concept. It was almost a decade ago that the world started talking about the Indo-Pacific.**

2. One of the reasons behind the popularity of this term is an understanding that the **Indian Ocean and the Pacific are linked strategically.**

3. The Asia-Pacific region varies in area depending on context, but it generally includes **East Asia, Russia's Far East, South Asia, Southeast Asia, Australasia and Pacific Islands**.

4. The Indo-Pacific region is 1 of the **most populous and economically active regions of the world** which includes 4 continents: **Asia, Africa, Australia and America.**

5. Almost **60% of the world's population and 2/3rd of the global economic output** makes this region a global economic centre.

6. The region is also a **great source and destination for Foreign Direct Investment (FDI).**

7. There are **vast reserves of marine resources in the Indian and Pacific Oceans**, including **offshore hydrocarbons, methane hydrates, seabed minerals and rare earth metals.**

8. A number of the **world's largest economies are located in the Indo-Pacific region,** including India, U.S.A, China, Japan, Australia etc.

So, What is India's Perspective for the Indo-Pacific Region?

1. **Cooperate with Others for Security Architecture:** A lot of India's special partners, the US, Australia, Japan and Indonesia **want India's presence in the South China Sea, East China Sea, basically to counter China.**

2. India, however, **aims to cooperate for an architecture for peace and security in the region. The common prosperity and security require the countries to work for the common rules-based order for the region.**

3. **Indo-Pacific Extends from Africa to America:** For India, **Indo-Pacific stands for a free, open and inclusive region. It includes all nations in the geography and also others who have a stake in it.** In its geographical dimension, India considers the area from the shores of Africa to the shores of America.

4. **Equal Share in Trade and Investment:** India **supports rule-based, open, balanced and stable trade environment in the Indo-Pacific Region**, which lifts up all the nations in terms of trade and investment.

5. **Unified ASEAN:** Unlike China, **India seeks a unified ASEAN, not a divided one.** China tries to play off some ASEAN members against others, thereby in a way executing 'divide and rule' strategy.

6. **Work in Collaboration with China: India does not agree with the US version of Indo-Pacific, that seeks to check Chinese dominance**. India is rather looking for the ways through which it can work together with China.

7. **Against Dominance of a Single Player:** India is **looking for democratising the region.** Earlier, the region used to be almost like an **'American lake'.** However, there exists a fear that the region will become **'Chinese lake'** now**. India doesn't want hegemony of any player in the region.**

Current Challenges in the Indo-Pacific Region are:

1. **Theatre of Geo-Strategic Competition:** Indo-Pacific is the principal theatre of geo-strategic competition between different multilateral institutions like **QUAD** and **Shanghai Cooperation Organisation etc.**

2. **China's Militarization Move: China can be a challenge to India's interests and stability in the Indian Ocean.** India's neighbours are receiving military and infrastructural assistance from China, including submarines for Myanmar, frigates for Sri Lanka, and its **overseas military base in Djibouti (Horn of Africa).**

3. China has a hold over **Hambantota port (Sri Lanka), which is just a few hundred miles off the shores of India.**

4. **Hotspot For Non-Traditional Issues:** The **region's vastness makes it difficult to assess and address multiple risks, including incidents of piracy, trafficking and terrorism.**

5. **India's Limited Naval Capacity: Indian Navy has limited resources and capacity to strengthen its efforts because of limited allocation of Indian military budget.** Also, lack of overseas military bases creates a logistical challenge for India to maintain its presence in the entire Indo-Pacific.

Way Forward

1. The **countries in the region should have equal access** as a '**right' under the international law to the use of common spaces on sea and in the air** that will give the boost **to freedom of navigation, unrestricted commerce and peaceful settlement of disputes in accordance with international law.**

2. It is important to **establish connectivity in the region based on respect for sovereignty and territorial integrity, consultation, good governance, transparency and sustainability.**

3.9 United Nation's 77ᵗʰ Anniversary

Why in News?

On 24th October 2022, the United Nations (UNs) has celebrated its 77ᵗʰ Anniversary.

Background of the UN

1. **1899**: The '**International Peace Conference'** was held in **The Hague (Netherlands)** to **find out the ways for settling crisis peacefully, preventing wars and to frame rules of warfare.**

2. **1919: 'League of Nations' was established.** This organisation was **formed immediately after the end of the 1ˢᵗ World War under the 'Treaty of Versailles'** to **promote international cooperation and to achieve peace and stability.**

3. **1945: 'United Nations Conference on International Organization' (1945)** was held in **San Francisco (USA).** It was **attended by the representatives of 50 countries and signed the United Nations Charter.**

4. **The UN Charter of 1945** is the **foundational treaty of the United Nations, as an intergovernmental organization.**

About the UN

1. It's an **international organization which was founded in 1945.** Currently, it has a **total of 193 Member States.**

2. It works to maintain **international peace and security, protecting human rights, delivering humanitarian aid, promoting sustainable development and upholding international law.**

3. **It has a total of 6 Organs and these are:**

a) **UN General Assembly**
b) **UN Security Council**
c) **UN Economic and Social Council**
d) **UN Trusteeship Council**
e) **UN International Court of Justice**
f) **UN Secretariat.**

4. **Programmes and Funds of UN are:**

a) **United Nations Children's Fund (UNICEF)**
b) **United Nations Population Fund (UNFPA)**
c) **United Nations Development Programme (UNDP)**
d) **United Nations Environment Programme (UNEP)**
e) **United Nations Human Settlements Programme (UN-Habitat)**
f) **World Food Programme (WFP).**

5. **Specialized Agencies of UN are:**

a) **Food and Agriculture Organization (FAO)**
b) **International Civil Aviation Organization (ICAO)**
c) **International Fund for Agricultural Development (IFAD)**
d) **International Labour Organization (ILO)**
e) **International Monetary Fund (IMF)**

f) **World Bank**
g) **International Maritime Organization (IMO).**
h) **International Telecommunication Union (ITU)**
i) **United Nations Educational, Scientific and Cultural Organization (UNESCO)**
j) **United Nations Industrial Development Organization (UNIDO)**
k) **World Health Organization (WHO)**
l) **United Nations Conference on Trade and Development (UNCTAD)**
m) **United Nations Office on Drugs and Crime (UNODC)**
n) **United Nations High Commissioner for Refugees (UNHCR)**
o) **United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).**

UN's Contributions so Far:

1. **Role in Decolonisation:** In **1960s, it was the UN which played a major role in decolonising many nations and helped around 80 countries in gaining their freedom.**
2. **Involvement with Civil Society:** The **UN is no more an organisation of nations only, as more and more UN bodies have begun engaging with the people, experts, intellectuals, media etc.**
3. **Well Sustained:** The **UN has successfully sustained itself till now**, as compared to the League of Nations, which is an achievement in itself.
4. **Peacekeeping: Till now,** the **UN has successfully prevented World War -3.**

Major Setbacks of UN are:

1. **Arm Races and Cold War:** Although, the WW-3 has been successfully prevented till date but **violence in many parts of the world, arms race, nuclear race are still going on.**
2. **Not a Multipolar Organisation:**
a) The UN has been unable to present itself as a multipolar and multilateral organisation.
b) **At the time of formation, the UNSC was having 5 permanent members with a total of 51 members in UN and presently, it has a total of 193 members but permanent members in the UNSC are still 5.**
3. **Inefficient in front of Powerful Nations**: The history of UN clearly shows that it has **behaved as an "Inefficient body" in front of powerful nations and was not able to take hard actions on them even when they are clearly faulty.**

India and the UN

1. India is **one of the founding members** of the UN.
2. Since, its independence and even before that**, India has been an active participant in all initiatives undertaken by the UN like Millennium Development Goals, Sustainable development goals and various UN summits, including on climate change.**
3. As far as the peacekeeping missions of the UN is concerned, **India is one of largest contributor of forces in UN peacekeeping missions.**
4. India has been elected as a **non-permanent member of the UNSC for 2 years in January 2021.**

5. The non-permanent membership of India can be taken as an opportunity to **convince the like-minded nations for fight against international terrorism.**

6. Even, **India has realised the urgent need of reforms in the UN especially at the UNSC and has raised concerns over the issue.**

Conclusion

The UN has survived and has certainly seen some positive changes in it over the last 75 years but the time has come for the UN to make reforms and change for the better and all the countries should get due representation in it.

3.10 India-UK Relations

Why in News?

Recently, Rishi Sunak took charge as the 57th Prime Minister of the United Kingdom.

Who is Rishi Sunak?
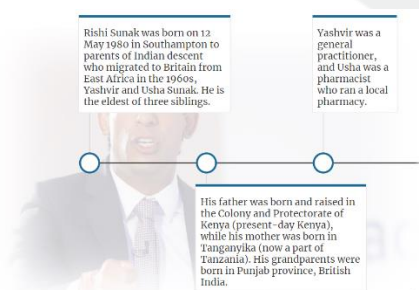
So, What can be the Opportunities for India-UK ties under PM Rishi Sunak?

1. It will be an **opportunity for both India and the U.K to work closely together on global issues** and **implement the 'Roadmap 2030' for bilateral relations** with the **coming of a person of Indian origin as prime minister of the U.K.**

2. His vision for India-U.K. bilateral ties **has gone beyond the opportunity for the U.K. to sell things in India.**

3. **Free Trade Agreement (FTA)** between India and the UK is expected to enhance economic growth and prosperity in both the countries.

What is a Free Trade Agreement (FTA) ?

1. It's an agreement **between 2 or more countries to reduce the barriers on import and export between them.**

2. Under an FTA, **goods and services can be purchased and sold across international borders with little or no government tariffs, quotas, subsidies etc.**

3. The concept of free trade is exactly **opposite to trade protectionism (restrictions on open and free trade).**

About India-UK proposed Free Trade Agreement (FTA) ?

1. The proposed FTA is expected to **boost Indian exports in labour-intensive sectors** such as **leather, textile, jewellery, processed agri-products and marine products, education, pharma and health care.**

2. While UK wants that India should reduce the tariff(tax) on products such as **apples, UK-manufactured medical devices and machinary.**

3. UK companies also want that **India should take measures** to strengthen **data privacy and enforcing the contracts.**

About India-UK Trade

1. UK is the **6th largest investor in India**, with a **total investment** of almost **USD 32 billion during 2000-2022.**

2. This investment by UK accounts for almost **5.5% of the total Foreign Direct Investment (FDI)** into India during **2000-2022.**

3. India's **trade in goods and services** with the UK is almost **USD 31 billion in FY 2022(it was 19.5 billion in 2015).**

4. Currently, almost **620 UK companies are working in India** and they together **employ** approximately **4.5 lakh people** and have a combined **turnover of almost Rs 3,635 billion.**

What are the recent developments in India-UK relations?

1. **Even after the difference in views on Ukraine crisis (UK is the member of NATO and is against the Russian invasion to Ukraine but India till today has not condemned the Russian invasion)**, the **India-UK relationship has been going upward.**

2. In **2021, both signed** the **Comprehensive Strategic Partnership.** This partnership **will provide an ease to UK-India relations** across **health, climate, trade, education, science and technology, defence etc.**

3. Both the countries are regularly engaged in talks on **defence-related trade** and deepening **cyber security** and **defence cooperation** between the 2 countries.

4. Both have agreed to announce a **joint cyber security programme** in the coming days to protect **online infrastructure in India and the UK.**

5. India and the UK is also planning to conduct the **1st 'Strategic Tech Dialogue'. It will be a ministerial-level summit on emerging technologies.**

6. Additionally, the UK and India have agreed to strengthen their cooperation in the **maritime domain (in ocean area) too** as the UK will join **India's Indo-Pacific Ocean Initiative** soon and will become a **major partner on maritime security issues in Southeast Asia.**

7. In January 2022, **India and the UK concluded the 1st round of talks** on **India–UK Free Trade Agreement.**

Importance of India-UK Partnership

1. **For UK:**
a) India is a **key strategic partner of the UK in the Indo-Pacific both in terms of market share and defence**. It is evident from the **signing of the 'Defence and International Security Partnership' between India and the UK in 2015.**
b) For Britain, a successful conclusion of an FTA with India **will provide a boost to its 'Global Britain' ambition as the UK is aiming to expand its markets beyond Europe since Brexit.**

c) **Britain has been trying to capture the opportunities in the growing economies** of the Indo-Pacific to make its place on the global stage as a serious global actor and the Britain will be able to achieve this goal only with good bilateral relations with India.

2.For India:

a) The **UK is a regional power in the Indo-Pacific as it possesses naval facilities** in **Oman, Singapore, Bahrain, Kenya, and British Indian Ocean Territory.**

b) **The UK has also announced USD 70 million to support the usage of renewable energy in India,** which will help in building renewable energy infrastructure and developing solar power in the region.

c) **India needs easy market access for Indian fisheries, pharma,** and **agricultural products besides duty concession for labour-intensive exports.**

What are the Current Major Bilateral Issues between India and the UK?

1. **Issue of Extradition of Indian Economic Offenders:**
a) The issue is **the extradition of Indian economic offenders** who are presently seeking shelter in Britain and using the legal system to their advantage.
b) Offenders like **Vijay Mallya, Nirav Modi and others have long taken shelter under the British system despite clear cut Indian cases against them.**
2. **Non-Acceptance of White Britain:**
a) **It is not easy for the Britain to digest that the country which once they have ruled has leaved them behind in many ways.** India has **left behind Britain as the 5th largest economy in GDP terms and is on the way up.**
b) There is **no difference between a modern and confident Indian and a British colonial Indian in terms of skin colour or the imperial legacy of the British Empire.**
3. Till now, **both countries have failed in finalizing a Free Trade Agreement (FTA).**

Conclusion

The long-standing **ties of culture, history and language already gave UK a potentially strong foundation**. Now, with a whole new set of circumstances, **India and Britain should recognise that they both need each other to achieve their larger goals**.

3.11 Pakistan has been Removed from the FATF Grey List

Why in News?

Recently, the Financial Action Task Force (FATF) has removed Pakistan from the list of countries under "increased monitoring" (Grey List).

India's another neighbour on the grey list, Myanmar, was moved to the "black list" due to actions by the military leadership after the 2021 coup.

About the FATF

1. FATF is the **global money laundering and terrorist financing watchdog**. It also aims **to counter the financing for the weapons of mass destruction**.

2. It was **set up in 1989 out of a G-7 meeting of developed nations which was held in Paris.**

3. Its **secretariat** is located at the **Organisation for Economic Cooperation and Development (OECD) headquarters in Paris.**

4. **Members of the FATF are:**

a) Presently, **it's a 39-member body with 37 countries and 2 regional organisations: the European Commission, and the Gulf Cooperation Council.**

b) **Currently, Indonesia is the only observer country of FATF.**

c) **India joined** with **'observer' status in 2006** and **became a full member of FATF in 2010**.

d) **India is also a member of its regional partners**, the **Asia Pacific Group (APG)** and the **Eurasian Group (EAG)**.

So, What is Grey-listing and Black-listing of Countries by the FATF?

1. The **FATF Plenary** (decision-making body of the FATF) **meets 3 times in a year- in February, June and October, to take decisions on the "Mutual Evaluation Reports" (MERs) of the countries it reviews.**

2. **If a country appears to have major deficiencies in its Anti-Money laundering (AML) and Counter Terrorism regime, then it put that country on a list of "jurisdictions under increased monitoring" (grey list) and if it fails to address the FATF concerns then it put that country on a "high-risk jurisdictions" list (black list).**

3. The **Grey List includes countries that are considered safe heavens for terror funding and money laundering**. Basically, it **serves as a warning that the country may enter the blacklist**.

4. The **Black List includes Non-Cooperative Countries or the Territories (NCCTs) that support terror funding and money laundering activities.**

5. As of now, **Iran, North Korea and Myanmar** are the 3 black listed countries.

6. The enlisted countries are then subjected to **increased financial regulations,** thus making it **difficult for them to procure loans from the financial institutions affiliated to FATF (as observers) such as** the **IMF, World Bank** etc.

Key Points about the Removal of Pakistan from the Grey List

1. **FATF's Stand:**

a) The FATF appreciated **"Pakistan's significant progress"** saying **that the country has completed 2 action plans comprising a 34-point task list in the period since 2018.**

b) Pakistan has been **removed from the list after almost 4 years**.

c) It was **1ˢᵗ put on the FATF Grey list** in **2008** but **removed in 2009 and before adding it again in 2018, it remained under increased monitoring from 2012 to 2015.**

2.India's Response:

a) **India mentioned Pakistan's lack of action against cross-border terror groups responsible for attacks on India,** however, it **agreed to the decision of taking Pakistan off the list,** as the latter had submitted **"documentary evidence" of its actions against designated terrorists.**

b) **India believes that Pakistan must continue to take "credible, verifiable, irreversible and sustainable" action against terror groups emanating from territories under its control.**

4. SOCIAL ISSUES

4.1 World Mental Health Day

Why in News?

On the occasion of World Mental Health Day (10ᵗʰ October), the Lancet released a report titled "Ending Stigma and Discrimination in Mental Health" and called for radical action to end stigma and discrimination associated with mental health.

Why is World Mental Health Day Celebrated?

1. World Mental Health Day is marked on 10ᵗʰ October every year to spread awareness and education about mental health issues across the world.
2. **First time** World Mental Health Day was observed on **10ᵗʰ October, 1992.**
3. Theme for the Year 2022 is: "Making mental health for all a global priority"

Findings of the Report are:

1. **Prevalence of bad Mental Health Condition:**
a) Nearly **1 billion** people **globally are living with a mental health condition.**
b) **1 out of 7** in the age bracket of **10-19 year old suffers from a mental condition.**
c) These people experience **a double threat – the impact of the condition itself** and the **damaging social consequences of stigma and discrimination.**
d) The **Covid-19 pandemic** helped in highlighting the **urgent mental health situation across the world.** There was an **estimated 25 % rise** in the **prevalence of depression and anxiety in the 1ˢᵗ year of the pandemic.**

2.Impact:

a) **90%** of the people **living with mental health conditions feel negatively impacted by stigma and discrimination**.

b) Stigma can **cause social exclusion and disempowerment of people with mental health conditions** leading to **discrimination and human rights violations,** including problems in accessing healthcare, challenges in securing employment, and increased likelihood of health complications leading to early death.

3.Findings regarding India:

a) Though **there is a gradual reduction of stigma in India** but then also it continues to be a **real and present problem.**

b) Women with a diagnosis of severe mental disorder and their family members do face more stigma as it leads to problem **in marriage and employment.**

c) The **Indian media, especially the visual media like television serials continue to portray mental illness negatively.**

What are the Suggestions given in the Report?

1.There should be an **immediate action from governments, international organisations, employers, healthcare provider and media organisations, along with active**

contributions from people with lived experience, to work together to eliminate mental health stigma and discrimination.

2. Employers should **promote full access to educational opportunities**, **work participation and return-to-work programmes for people with mental health conditions** and the **school curriculum should include sessions** for students to improve understanding of mental health conditions.

3. There is a need to empower and support **people with lived experience of mental health conditions to play active roles in stigma reduction efforts.**

Initiatives taken by India to Promote Mental Health are:

1. **National Mental Health Program:** To **address the huge burden of mental disorders and shortage of qualified professionals** in the field of mental health, the government has been implementing the National Mental Health Program (NMHP) since **1982.**

2. **Mental HealthCare Act 2017:** It came into force in **2018** to meet the **requirements of the 'United Nations Convention on the Rights of Persons with Disabilities'** which was **ratified by India in 2007.**

3. **Kiran Helpline:** It offers **mental health rehabilitation services** with the objective of **early screening, first-aid, psychological support, distress management, promoting positive behaviours, etc.**

4. **Manodarpan:** The **Ministry of Human Resources Development** (MHRD) **(now Ministry of Education)** launched it under **Atmanirbhar Bharat Abhiyan.** It **aimed to provide psychosocial support to students, family members and teachers** for their mental health and well-being during the times of Covid-19.

5. **Mental Health and Normalcy Augmentation System (MANAS):** In **2021, the government of India launched MANAS (Mental Health and Normalcy Augmentation System) mobile App** to promote mental wellbeing across different age groups.

Conclusion

To address the issue of mental health situation in India, it needs active policy interventions and resource allocation by the government. To reduce the stigma around mental health, we need measures to train and sensitize the society. Another thing is India also needs a constant stream of funds for educating and creating awareness about mental health and the issues around it.

4.2) Revised Beti Bachao Beti Padhao Scheme

Why in News?

Recently, the Central Government expanded the mandate of its flagship scheme - 'Beti Bachao Beti Padhao' (BBBP Scheme) by announcing the inclusion of skilling of girls in Non-Traditional Livelihood (NTL) options.

About Beti Bachao Beti Padhao (BBBP) Scheme

1. It was **launched** by PM in **2015** to **address the declining Child Sex Ratio** (CSR).

2. It is **a Tri-ministerial effort** of the **Ministries of Women and Child Development (MW&CD), Ministry of Health & Family Welfare (MH&FW), and Ministry of Education.**

3. **Main Objectives of the scheme are:**
a) Prevention of gender-biased sex-selective elimination.
b) Ensuring survival & protection of the girl child.
c) Ensuring education and participation of the girl child.
d) Protecting rights of Girl child.

4.**Innovative Initiatives taken under BBBP:** Innovations that have created a positive ecosystem/ enabling environment for girls include:

a) **Guddi-Gudda Boards**: **Display of Birth Statistics** (number of Girls born vis-à-vis number of Boys) in public. For Eg: **Jalgaon district, Maharashtra** has installed digital Guddi-Gudda Display Boards.

b) **Breaking Gender Stereotypes & Challenging Son-centric Rituals: Celebrating the birth of girl child, dedicating special day on value of girl child, plantation drives symbolizing nurturing and care for girl child. Example: Selfie with Daughters (Jind district, Haryana).**

What are the New Changes in the BBBP Scheme?

1. **Ensuring 1% increment in enrolment at the secondary level** particularly in **STEM (Science, Technology, Engineering, Mathematics) subjects.**

2. **Skilling of girls and women every year** (mainly in non-traditional livelihoods)

3. Raising awareness about **safe menstrual hygiene.**

4. Complete **elimination of child marriages.**

5. The Ministry of women &Child welfare (MW&CD) also emphasised the **convergence between various departments for providing quality education (including vocational) to empower girls.**

6. A MoU was signed between the MW&CD Ministry of Skill Development and Entrepreneurship and Minority Affairs Ministry to **ensure adolescents complete their education, build skills, and enter the workforce** in a diverse range of professions.

7. **A national committee headed by the Secretary of MW&CD will review the implementation of the BBBP scheme** with states and UTs.

Additional Information

 Other Initiatives to Support Girl Child are:

1. **Beti Bachao Beti Padhao**
2. **Sukanya Samriddhi Yojana**
3. **CBSE Udaan Scheme**
4. **National Scheme of Incentive to Girls for Secondary Education**
5. **National Girl Child Day**
6. **Scheme for Adolescent Girls**
7. **Sukanya Samridhi Yojana**

What are Non-Traditional Livelihoods (NTL)?

"Non-Traditional Livelihoods" (NTLs) are those sectors and jobs where participation of women is and has historically been low or absent. Like STEM (Science, Technology, Engineering, Mathematics) subjects due to gender-based categorization of the work, in the society.

4.3 International Day of Rural Women

Why in News?

On 15th October, 'International Day of Rural Women' was celebrated.

About the International Day of Rural Women

1. The **idea of honouring rural women with a special day was put forward by international NGOs at the 4th World Conference on Women which was held in Beijing in 1995.**

2. The **1st International Day of Rural Women was observed on 15th October 2008.** This new international day was **established by the UN General Assembly in its resolution 62/136 in 2007.**

3. The day aims to **create awareness about the fact that the engagement of rural women diversifies** family livelihood, yet their efforts largely go unappreciated.

4. It recognizes **"the critical role and contribution of rural women, including indigenous women, in enhancing agricultural and rural development, improving food security and eradicating rural poverty."**

5. **Theme for 2022:** "Rural Women, key for a world free from hunger and poverty."

So, What are the Challenges Faced by Rural Women Workers in India?

1. The rural economy suffers when **women stop looking for work** because they believe that there is no work available, often incorrectly described as "dropping out" or "Leaving the market".

2. In the field of manual labour work, **women are being paid less than men** due to physical constraints in lifting heavy weights.

3. Majority of women construction workers are not registered as **"Construction Workers" and therefore ineligible for any benefit** accruing to them from the Construction Workers' Welfare Board.

4. The **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which is a** labour demand-driven programme, is limited to providing only 100 days of paid labour on public work projects per year. For the rest of the period, **women workers have to continuously look for alternative sources of income to meet the** expenses.

5. Whatever the women earn from multiple tasks, for which there are no fixed rates is in no way equal to the amount of labour they do. So, **due to non-availability of sufficient funds and lack of knowledge,** they're most vulnerable to fall in debt traps.

Initiatives taken for the upliftment of Rural Women Workers are:

1. **e-Shram Portal: It** was **launched to register 38 crore unorganised workers such as construction labourers, migrant workforce, street vendors, and domestic workers, among others.**

2. **Mahila Kisan Sashaktikaran Pariyojana (MKSP): It was launched in 2011,** with the aim of **imparting skill development and to increase the capacity building** of rural women. This scheme was introduced as a sub-component of **DAY-NRLM (Deendayal Antyodaya Yojana — National Rural Livelihoods Mission)** and was implemented through **State Rural Livelihoods Mission (SRLM) across India.**

3. **Pradhan Mantri Kaushal Vikas Yojana (PMKVY): It was launched in 2015** with the **aim to train over 40 crore people in India in different skills by 2022.** It aims to provide vocational training and certification to Indian youth for a better livelihood and respect in the society.

4. **Pradhan Mantri Jan-Dhan Yojana (PMJDY)**: It has **boosted confidence and the chances of rural women participation in economic activities.** The Jan Dhan campaign has ensured access to financial services, viz, banking/ savings and deposit accounts, remittance, credit, insurance, pension in an affordable manner to rural women.

5. **Some Other Initiatives are**:
a) **Pradhan Mantri Matru Vandana Yojana (PMMVY)**
b) **Pradhan Mantri Garib Kalyan Ann Yojana**
c) **Sub-Mission on Agricultural Mechanization Scheme**
d) **PM-KISAN Scheme**

Conclusion

Women constitutes almost 50% of the world population, so their development in every aspect can only ensure the overall development of the society in real sense. So, it's the time for the world to provide the equality of status and opportunities to every women out there.

4.4   Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

Why in News?

According to a **study** conducted **by Azim Premji University**, the MGNREGA scheme **has helped in compensating 20-80% of the income losses happened due to Covid-19.**

About the study:

1. The study was conducted in **4 states namely Bihar, Karnataka, Maharashtra and Madhya Pradesh.**
2. Approx. **39% of the surveyed households didn't get a single day of work in the Covid-19 year** due to **lack of availability of work**.

About MGNREGA:

1. It is a **poverty alleviation** (lessening) **programme** of the **Government of India.**
2. It provides the **legal Right to Work in exchange for money** to **the citizens of the country.**
3. Approx. **1.5 crore people work under MGNREGA daily.**
4. It aims to **enhance livelihood security** in **rural areas by providing at least 100 days of guaranteed wage employment** in a **financial year** to **every household whose adult members volunteer to do unskilled work.**

5. The funds under the scheme are shared **between the Centre and the states.** The Central Government **bears:**
    - **100% of the cost of unskilled labour**
    - **75 % of the cost of semi-skilled and skilled labour**
    - **75% of the cost of materials**
    - **6% of the administrative costs**

6. The **Union Budget 2021-22,** has **allocated Rs. 73,000 crores for the MGNREGA.**

    - It is **nearly 34.5% lower than the 2020s** allocations of Rs. 1.11 lakh crore.

Features of MGNREGA:

1. The Act provides a **legal right to employment for adult members of rural households.**
2. The **scheme ensures that,** at **least 1/3rd of beneficiaries have to be women.**
3. It **also considers the welfare of labourers** as the **wages must be paid according** to the **Minimum Wages Act, 1948.**
4. Employment must be provided within **15 days, and if the state fails to do so an 'unemployment allowance' must be given.**

    - [Unemployment allowance is the **financial aid given by government in case of non-availability of work.]**

5. **Panchayats** are **responsible for planning, implementation and monitoring of the works** that are undertaken.
6. **Gram Sabhas must recommend the work** to be done and at **least 50% of the work must be executed through MGNREGA.**
7. There is proactive opening of the job/work through **wall writings, Citizen Information Boards, Management Information Systems etc.** (conducted by Gram Sabhas).

Recent Issues:

1. More than **1.59 lakh workers are registered under the scheme but almost 75% of them does not get work.**
2. **Increasing mechanisation** (work by machines) is one such **big issue** which is **reducing the availability of the jobs.**
3. **According to an audit report there has been a misappropriation of almost** Rs **935 crore in NREGA schemes in the last 4 years.**

Significance OF MGNREGA:

1. It is a **social security scheme** to **generate employment** for the **rural poor and ensure livelihood for people in rural areas.**
2. The scheme **works for welfare of people** by **ensuring participation of women, Scheduled Castes (SCs) and Scheduled Tribes (STs**) and other **marginalised sections of society.**
3. It **increases the wage rate in rural areas** and **strengthens the rural economy through the creation of infrastructure assets.**
4. It enables **sustainable development by its contribution in the direction of water conservation.**

▪ For example, Over the last 15 years, **3 crore assets related to water conservation** have been **created through the rural jobs scheme**.

Challenges to MGNREGA:

1. **Low Wage Rates under MGNREGA** have **resulted in a lack of interest among workers**.
2. The **funds allocated to MGNREGA are not sufficient** in many States which **affects the work in peak season.**
3. **There are very little** funds available as **compared to the actual funds allocated** for the schemes due to high corruption.
4. **There are several cases of discrimination against women and people** from the **backwards groups** are reported from several regions of the country and a vast number goes unreported.
5. There is a **huge pendency in the number of unemployment allowances**.
6. **There is lack of awareness among people, especially women** about this scheme and its provisions, which **leads to uninformed choices** or **inability to get the benefits of the scheme.**
7. **Improper scrutiny** (investigation) and **lack of timely resources** result in **poor quality assets.**

Suggestions for effective functioning of MGNREGA:

1. The **participation of women and backwards** classes must be **increased by raising awareness, which will make it more inclusive.**
2. There is a **need to carry out regular social audits as per rules.**
3. People should be **sensitised to stand up for the discrimination against them.**
4. **actions should be initiated against officers** who are found **guilty of stealing funds.**
5. **The poor utilisation of funds** should be **analysed and steps must be taken to improve them.**

Way Forward:

The welfare schemes like MGNREGA are very important for the holistic development of India. Government should increase the funds towards welfare schemes along with regular audits so that efficiency of these types of schemes can be maintained and their real purpose to uplift people can be fulfilled.

4.5 International Girl Child Day

Why in News?

On **11th October**, the **world has celebrated the International Girl Child Day (IGCD).**

About IGCD:

1. 11th October 2022 was the **10th anniversary of the International Day of the Girl (IDG).**
2. The **Beijing Declaration and Platform for Action in 1995**, **proposed an action plan to advance the rights of girls.**
3. The **United Nations General Assembly has declared 11th October as the International Day of the Girl Child in 2011.**
4. **Theme of 2022** IGCD is '**Our time is now—our rights, our future.'**
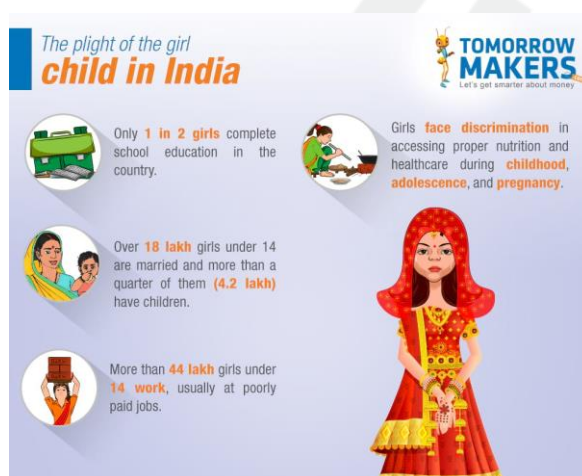
Challenges faced by women and girls globally:

1. **Lack of sensitization** about women issues.
2. **Investments in girl's rights** remain limited.
3. **Lack of time bound investigation** of the **reported cases.**
4. **Inadequate implementation of laws.**
5. **Female infanticide and** Sex-selective **Abortions.**
6. **Lack of education** and **awareness about women's rights.**
7. **Forced prostitution**.
8. Harassment-like **rape threats, online harassment, cyber-stalking, blackmail, trolling etc.**
9. **Sexual harassment at workplace.**

Measures Taken for girl child globally:

1. **1995 World Conference on Women adopted the Beijing Declaration and Platform for Action** for advancing the rights of the women and the girls.
2. **There is the Spotlight Initiative of UN and EU,** which works **to eliminate all forms of violence against** women and **girls.**
3. **2030 Agenda for Sustainable Development** is also focus on **gender equality and women's empowerment.**

Measures taken for girl child in India:

1. **Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013**
2. Prohibition of **Child Marriage Act, 2006**
3. Protection of **Women from Domestic Violence Act, 2005.**
4. **Criminal Law (Amendment) Act 2018** based "**Investigation Tracking System for Sexual Offences**" to monitor and track time-bound investigation in sexual assault cases
5. **National Database on Sexual Offenders (NDSO)** to **facilitate investigation and tracking of sexual offenders**

Way Forward:

Governments should boost the **community-based child protection mechanisms** starting from the village level, **also measures should be taken to strengthen the police, judicial and legal systems more proactive.**

4.6   Global Hunger Index 2022

Why in News?

In **October 2022,** The **Global Hunger Index** (GHI) 2022 **has ranked India at 107th out of 121** countries.

About the Global Hunger Index (GHI)

1. The GHI **measures the hunger at global, regional, and national levels.**
2. It **reflects multiple dimensions of hunger by** including **different indicators of health.**
3. The **1st GHI report was published in 2006.**
4. It gets **published every year jointly by, Concern Worldwide** and **Welthungerhilfe.**

How does the GHI score get calculated?

1. It is calculated **based on a formula combining 4 indicators**.
2. The **4 indicators** are:
   - **Undernourishment**
   - **Child Stunting**
   - **Child Wasting**
   - **Child Mortality**
3. The **score calculated, gets further classified according to a scale below**:

GHI Severity Scale				
≤ 9.9 low	10.0–19.9 moderate	20.0–34.9 serious	35.0–49.9 alarming	≥ 50.0 extremely alarming

India Specific Key Findings Global Hunger Index (GHI):

In 2021 India **had slipped to 101st position from its 94th position in 2020 and now, in 2022 it has further slipped to 107ᵗʰ position, with a score of 29 putting it under the "serious category".**

Indicators	Definition	India's Performance
Undernourishment	**Share of the population with insufficient caloric intake.**	**Undernourishment** has **increased from 14%** to **16% in 2018-21.**
Child Stunting	**Share of the children under age 5 who have low height for their age.**	**Child stunting** has **declined from 38.7% to 35.5% in 2014-2022.**
Child Wasting	**Share of the children under age of 5 who have low weight for their height.**	**It is 19.3%, which is worse than earlier levels.** (Also, highest for any country in the world)
Child Mortality	Share of children **who die before completing age of 5, because of inadequate nutrition and unhealthy environments.**	**Child mortality** has **dropped from 4.6% to 3.3% in period 2014-22**

Global Scenario of the Index:

1. Top rankings in **GHI are dominated by European nations including Croatia, Estonia, and Montenegro etc.**
2. Yemen **lies at the lowest position (121).**
3. In Asia, **only China and Kuwait are ranked at the top of the list.**

Hunger Issues in India:

1. **Food and Agriculture Report, 2020** stated that India has 24% of the total undernourished people of the world.
2. **The National Health Survey (NHS) says that** approx. **19 crore people in India sleep with empty stomach every night.**
3. Approx. **4500 children of under-five age, die every day due to hunger and malnutrition.**

Causes of Hunger and Malnutrition

4. Despite the **government having surplus of foodgrains, there is improper allocation** and **distribution** of grains, which causes **calorific deficiency.**
5. The **yearly allocated budget for nutritional needs is not fully utilized.**
6. **Pulses are a major solution to address protein hunger** but the **lack of budgetary funds for inclusion of pulses in Public Distribution System (PDS)** is one major issue.
7. **Micronutrient deficiency which is also known as hidden hunger** is also **one of the major causing factors for the malnutrition in India.**
8. **Other Causes which have indirect impact on nourishment:**

- **Non-affordability** of fruits, nuts, eggs, meat for poor.
- **Poor access** to safe drinking water and sanitation (especially toilets).
- **Lack of education** in women regarding the importance of a holistic diet.
- Vicious cycle of **poverty, hunger and indebtedness.**
- **Low levels of immunization** against communicable diseases.
- **Ineffective market** and transport linkage.
- **Post-harvest losses** and rotting, wastage in warehouses.

Government Initiatives to curb the hunger issues:

1. **Eat Right India Movement:** It is **organized by** the Food Safety and Standards Authority of India **(FSSAI) for citizens to encourage them to eat right.**
2. **POSHAN Abhiyan**: It is **launched by the Ministry of Women and Child Development in 2018,** which **targets the issues like stunting, undernutrition, anaemia** (among **young children, women and adolescent girls).**
3. **Pradhan Mantri Matru Vandana Yojana:** It is **centrally sponsored** (Partially funded) **scheme, launched by the Ministry of Women and Child Development** to provide the **maternity benefits to women.**
4. **Food Fortification:** Food Fortification is the **addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple (main) foods** such as **rice, milk** and salt to improve their nutritional content.
5. **Integrated Child Development Services (ICDS) Scheme**: It aims **to serve children in the age group of 0-6 years and pregnant & lactating mothers.**

Way forward:

It is the high time for India to work aggressively on its food security missions while maintaining the affordability, accessibility along with the availability of food, because only a healthy citizen can contribute to a healthy and prosperous nation.

4.7 Global Hunger Index 2022

Why in News?

In **October 2022,** The **Global Hunger Index** (GHI) 2022 **has ranked India at 107th out of 121** countries.

- A score of 29.1 puts **India in the "serious" category.**

About the Global Hunger Index (GHI)

5. The GHI is **designed to measure and track hunger at global, regional, and national levels.**
6. By including different indicators, **it reflects multiple dimensions of hunger.**
7. The **1ˢᵗ GHI report was published in 2006.**
8. **GHI is published annually.**
9. It is **published jointly by Concern Worldwide** and **Welthungerhilfe.**
10. India **had slipped to 101st position of 116 countries from its 94th position in 2020.**
11. **Now, in 2022 it has further slipped to 107ᵗʰ position, putting it in the serious category.**

Food for thought

India's score of 29.1 in the 2022 Global Hunger Index falls under the "serious" category in the hunger meter. It ranked 107 out of the 121 countries analysed below Rwanda and Ethiopia

29.1				
=< 9.9 low	10-19.9 moderate	20-34.9 serious	35-49.9 alarming	>= 50 extremely alarming

Rankings	Country			
102	Rwanda		106	Sudan
103	Nigeria		107	India
104	Ethiopia		108	Zambia
105	Republic of Congo		109	Afghanistan
			110	Timor-Leste

<u>**How does the GHI score gets calculated?**</u>

4. It is **calculated based on a formula combining 4 indicators that together capture the multidimensional nature of hunger.**
5. **The 4 indicators are:**
    - **Undernourishment**: It measures the **share of the population with insufficient caloric intake.**
    - **Child stunting:** It is the share of **children under age 5 who have low height for their age.**
    - **Child wasting**: It is the share of **children under age 5 who have low weight for their height.**
    - **Child mortality**: the share of children **who die before their 5th birthday**, reflecting **inadequate nutrition and unhealthy environments.**

<u>**India Specific Key Findings Global Hunger Index (GHI) 2022:**</u>

1. **India's child wasting rate** is recorded **19.3%,** which is **worse than earlier levels**. Also, it is the **highest for any country in the world.**
2. **Undernourishment** has **also risen in India from 14.6%** in 2018-20 to **16.3% in 2019-2021.**
    - Approx. **224.3 million people in India are considered undernourished.**
3. **India (29)** has **ranked lower than all South Asian countries- Sri Lanka (64), Nepal (81), Bangladesh (84), and Pakistan (99); except war-torn Afghanistan (109).**
4. **There are indicators which have shown Improvement also, those are:**
    - **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 period.**

<u>**Global Scenario of the Index:**</u>

4. Top rankings in **GHI are dominated by European nations including Croatia, Estonia, and Montenegro etc.**
5. Yemen **lies at the lowest position (121).**
6. In Asia, **only China and Kuwait are ranked at the top of the list.**

<u>**Hunger Issues in India**</u>

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9. **Food and Agriculture Report, 2020** stated that of the **821 million undernourished people in the world**, India houses 195.9 million accounting for approximately 24% of the world's hungry.
10. **Undernourishment levels** in India is **14.8% higher than both the global and Asian average.**
11. **The National Health Survey 2020 says that** approx. **19 crore people in the country sleep with empty stomach every night.**
12. **Under-five hunger and malnutrition:** Approx. 4500 children of under-five age, die every day due to hunger and malnutrition.

Causes of Hunger and Malnutrition

1. There is **calorific deficiency because of improper allocation** and distribution despite the government having surplus of foodgrains.
2. The **yearly allocated budget for nutritional needs is not fully utilized.**
3. **Pulses are a major solution to address protein hunger** but the **lack of budgetary allocation for inclusion of pulses in Public Distribution System (PDS)**.
4. **Micronutrient deficiency which is also known as hidden hunger** is also one of the major causing factors for the malnutrition in India.
5. **Other Causes which have indirect impact on nourishment:**
   - **Non-affordability** of fruits, nuts, eggs, meat for poor.
   - **Poor access** to safe drinking water and sanitation (especially toilets).
   - **Lack of education** in women regarding the importance of a holistic diet.
   - Vicious cycle of **poverty, hunger and indebtedness.**
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9. **Food Fortification:** Food Fortification is the **addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple (main) foods** such as **rice, milk** and salt to improve their nutritional content.
10. **Integrated Child Development Services (ICDS) Scheme**: It was **launched in 1975**, and aims **to serve children in the age group of 0-6 years and pregnant and lactating mothers.**

Way forward:

It is the high time; India needs to work aggressively on its food security missions while maintaining the affordability and accessibility along with the availability, because only a healthy citizen can contribute to a healthy and prosperous nation.

4.8) ISRO's NextGen Launch Vehicle

Why in News?

Indian Space Research Organisation (ISRO) is developing a **Next-Gen Launch Vehicle (NGLV)** to **replace ongoing systems like the Polar Satellite Launch Vehicle (PSLV).**

About Launch Vehicles:

1. Launch Vehicles are **used to carry spacecraft to space**.
2. **India has 2 operational launchers**:
    - Polar Satellite Launch Vehicle **(PSLV)**
    - Geosynchronous Satellite Launch Vehicle **(GSLV)**

What is NextGen Launch Vehicle (NGLV)?

1. Through NGLV, ISRO is looking at a **cost-efficient solution for launching vehicles.**
2. ISRO is **focusing to build a reusable heavy-lift vehicle with a payload capability of 10 tonnes to Geostationary Transfer Orbit (GTO).**
3. Its healthy and **strong design will allow the bulk manufacturing and modifications in systems and sub-systems of vehicle.**
4. It will be equipped with a **semi-cryogenic engine.**
   [Semi Cryogenic engine use refined kerosene as fuel with liquid oxygen as oxidiser]

Applications of NGLV:

NGLV **can be used in**:

- **Communication satellites**
- **Deep space missions**
- **Future human spaceflight and cargo missions**
- **Defence Operations**

What are other Launch Vehicles Developed by ISRO?

1. **Satellite Launch Vehicle (SLV):**

- The **1ˢᵗ rocket developed by ISRO** was **simply called Satellite Launch Vehicle (SLV).**

2. **Augmented Satellite Launch Vehicle (ASLV):**
   - It came after SLV and operated till 1990s, before PSLV came on the scene in 1994.

3. **Polar Satellite Launch Vehicle (PSLV):**
   - It has been **ISRO's main rocket ever since**.
   - **PSLV's of current day are is improved** and way more powerful than the ones used in the 1990s.
   - It is the **1ˢᵗ Indian launch vehicle** to be **equipped with liquid stages.**
   - PSLV is the **most reliable rocket used by ISRO till date**, with 52 out of 54 flights being successful.
   - It has **successfully launched 2 spacecraft namely Chandrayaan-1** in 2008 and **Mars Orbiter Spacecraft** in 2013.

4. **Geosynchronous Satellite Launch Vehicle (GSLV):**
   - It is **much more powerful rocket than any previous ones.**
   - It was **built to carry heavier satellites much deeper into space.**
   - GSLV rockets have **carried out 18 missions till date, out of which 4 ended in failure.**
   - It **can take 10,000 kg of satellites to lower the earth's orbits.**
   - It has been **developed many times resulting into GSLV Mk II, with indigenously developed Cryogenic engine.**
   - **Mk-III** versions have **made ISRO entirely self-sufficient in launching its satellites.**
   - **Before MK-III**, **India was dependent** on the **European launch vehicle** to take its heavier satellites into space.

5.   ECONOMY

5.1   First Solar Powered Village of India

Why in News?

In October 2022, **the Prime Minister declared Modhera of Gujarat as India's 1ˢᵗ solar-powered village.**

About Modhera Village:

1. Modhera is famous for its **Sun temple.**
   - **[**Sun temple is **a protected ancient site**, which is **situated on the river Pushpavati** and built by **King Bhima-I of the Chalukya dynasty in 1026-27.]**
2. The village **would be self-sufficient in solar energy generation, by utilising 1000 installed solar panels on the roofs** of the village houses.
3. The project is **developed through Ground Mounted Solar power plant** and **more than 1300 Rooftop solar systems** on **residential and Government buildings.**
4. All the **panels used in this project are combined with** the **Battery Energy storage systems (BESS).**
   - **[**BESS is a **type of energy storage system that uses batteries to store and distribute energy in the form of electricity.]**

India and its Present Solar Power capacity:

1. India is **gifted with vast solar energy potential.**
2. The **energy of almost 5,000 trillion kWh per is incident over India's land area which is huge if utilised better.**
3. **45 solar parks** of **average capacity 37 GW have been approved in India.**
4. **3 solar parks** are included **in the top 5 operational solar parks of 7 GW capacity in the country.**
   - Pavagada (2 GW),
   - Kurnool (1 GW)
   - Bhadla-II (648 MW)

5. The **world's largest renewable energy park of 30 GW capacity solar-wind hybrid project is under installation in Gujarat.**

Future of Solar Power in India:
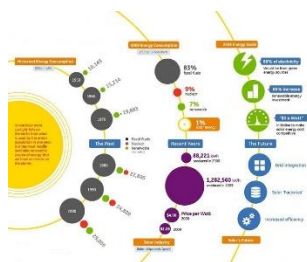
What are the Challenges?

1. India **doesn't have enough units and PV cell manufacturing capacity.**
2. There is gap between **manufacturing capacity and production of solar power generation in India.**
3. There is **lack of modern technology adoption** and **only few manufacturing units are able to generate efficient solar power.**
4. India has **shortage of the raw material needed for the Solar power generation.**
   - For example, the **silicon wafer**, a **most expensive raw material**, is **not manufactured in India.**
   - **India imports 100% silicon wafers** and around **80% cells**.
   - **Key materials** like **silver and aluminium metal pastes** for making electrical contacts**, are also almost 100% imported.**

Solar energy Initiatives of which India a part:

1. **National Solar Mission:** It is one of the **key missions of govt. of India for better solar power generations.**
2. **INDC's target:** It targets installing **100 GW grid-connected solar power plants by the year 2022.**
   - [**India's Intended Nationally Determined Contributions (INDCs)** target to **reduce the emission intensity of its GDP by 33 to 35% from 2005 level by 2030.**]
3. **International Solar Alliance (ISA):** It was launched by **Prime Minister of India** and the **President of France in 2015** for better use of solar energy.
4. **One Sun One World One Grid (OSOWOG):** It is cross-border power grid plan **which aims to transfer solar power generated in one region to feed the electricity demands of others.**

Government Schemes:

1. **Modified Special Incentive Package Scheme (M-SIPS), a scheme** of the Ministry of Electronics & Information Technology. The **scheme mainly provides a subsidy for capital expenditure on Pv cells.**
2. **PLI scheme to Support Manufacturing of high-efficiency solar PV modules** by **providing Production Linked Incentive (PLI) on sales of such solar PV modules.**
3. Govt. has **initiated many other schemes such as:**
   - Solar Park Scheme
   - Canal bank & Canal top Scheme
   - Bundling Scheme
   - Grid Connected Solar Rooftop Scheme

Way Forward:

1. Government **should increase the indigenous manufacturing capacity** of **basic raw materials needed for solar power plants.**
2. **Private sector should be encouraged** to participate in **solar power generation sector to ensure the availability of financial resources.**
3. There should be **additional investment to improve research and development** in solar power generation sector **so that better solution of the issues can be obtained.**

India should upgrade its technology in the solar power generation units so that they can function with their full capacity, also aware its people about the benefits of solar power to increase its demand and ensuring good market for power generators.

5.2 World Economic Outlook: IMF

Why in News?

Recently, the 'International Monetary Fund' (IMF) has released the latest edition of 'World Economic Outlook 2022'.

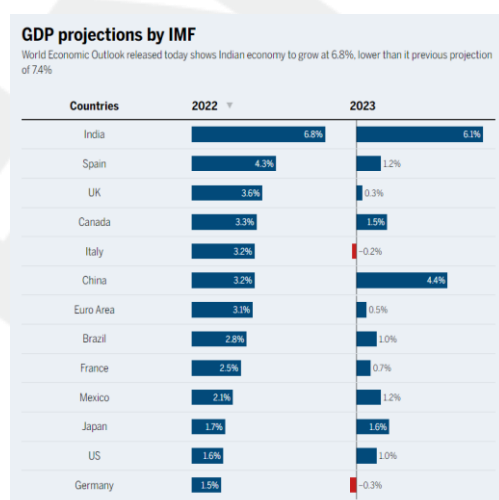**Highlights of the World Economic Outlook:**

1. **Related to India:**
a) It **cut its forecast for India's Gross Domestic Product (GDP) growth in 2022** to **6.8%** from **7.4% predicted for India in the beginning of the fiscal year that started in April 2022.**
b) For **2023**, India has been **projected to grow at 6.1% by IMF.**

2.Related to World:

a) Global growth is forecasted to slow from **6% in 2021 to 3.2% in 2022 and 2.7% in 2023.**
b) This is the **weakest growth profile since 2001**, except for the global financial crisis and the acute phase of the Covid-19 pandemic.
c) The **global growth is expected to slow further in 2023.** The **worst is yet to come and, for many people 2023 will feel like a recession.**
d) A **slowdown in the Euro area is expected to deepen in 2023**, and growth in China is projected to hit its lowest rate in decades.

3. Inflation:

a) **Global inflation is forecasted to rise from 4.7% in 2021 to 8.8% in 2022 but to decline to 6.5% in 2023 and to 4.1% by 2024.**

b) The **slowdown in global economic activity is broad-based and sharper-than-expected,** with inflation higher than seen in decades.

GDP projections by IMF
World Economic Outlook released today shows Indian economy to grow at 6.8%, lower than it previous projection of 7.4%

Countries	2022	2023
India	6.8%	6.1%
Spain	4.3%	1.2%
UK	3.6%	0.3%
Canada	3.3%	1.5%
Italy	3.2%	-0.2%
China	3.2%	4.4%
Euro Area	3.1%	0.5%
Brazil	2.8%	1.0%
France	2.5%	0.7%
Mexico	2.1%	1.2%
Japan	1.7%	1.6%
US	1.6%	1.0%
Germany	1.5%	-0.3%

IMF's Recommendations are:

1. **Fighting Inflation:** The **priority must be to tackle inflation, normalize central bank balance sheets, and raise real policy rates above their natural level** and fast enough and for long enough to keep inflation and inflation expectations under control.

2. **Coordination between Monetary and Fiscal Policy:**
   a) **Fiscal policy also needs to support monetary policy** in softening demand in economies.
   b) Without price stability, any gains from future growth are at risk of being eaten up by a **renewed cost-of-living.**

3. **Protecting the Vulnerable during the Adjustment:** As the **cost of living continues to rise, policymakers will need to protect the most vulnerable** members of society from the impact of higher prices.

4. **Climate Policies:**
   a) **Without proper remedial action, climate change will eventually have catastrophic impacts on health and economic outcomes** the world over.
   b) **Current global targets are not aligned with global temperature goals.** Meeting these goals will require emission cuts of at least 25% by the end of the decade.
   c) The **ongoing energy crisis has also sharpened the energy security benefits** countries can derive from transforming to clean and reliable energy sources.

About International Monetary Fund (IMF)

1. It was **set up along with the World Bank after the 2nd World War to assist in the reconstruction of war victim countries.**

2. The **2 organizations were born in 1944** from a **conference in Bretton Woods in the US.** Hence, they are known as the '**Bretton Woods twins'.**

3. The **IMF is governed by and accountable to the 190 countries** that make up its near-global membership.

4. **India joined IMF in 1945.**

5. The **IMF's primary purpose is to ensure the stability of the international monetary system** — the system of exchange rates and international payments that enable countries (and their citizens) to transact with each other.

6. **Reports by IMF are:**
   a) **Global Financial Stability Report.**
   b) **World Economic Outlook.**

5.3 ISRO v/s Agriculture

Why in News?

In October 2022, ISRO has purposed dedicated satellites for supporting the country's agriculture sector.

About these satellites:

1. **2 satellites will be launched to guarantee the proper coverage** of the entire agricultural area of the country.

2. These satellites will h**elp in various farm-related activities like crop forecasting, pesticide application, irrigation, soil data,** and **generation of critical data related to drought.**

3. The satellites will be owned by **the Department of Agriculture** and **ISRO** will provide only the **technical support.**

4. **'Earth Observation Council'** will be **created for addressing the current deficiencies** in earth observation capabilities and data utilization.

How can these satellites help in Agriculture:
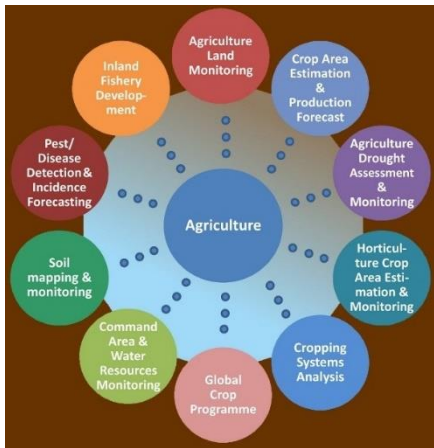
ISRO's role in agriculture sector:

1. Various **satellites of ISRO have been used for** crop **forecasting, drought management, horticultural and crop insurance.**

2. ISRO has helped in **getting Idea of the yield in advance through FASAL** (Forecasting Agricultural output using **Space, Agro-meteorology and Land-based observations)**

3. Also, the issues like **water shortage and droughts** are being **better handled by NADAMS** (**National Agricultural Drought Assessment and Monitoring Systems).**

4. The **allied activities like horticulture** etc., are **better coordinated now by programmes like CHAMAN** (Coordinated Horticulture Assessment and Management)

5. **Crop Insurance is also done by using Space technology and Geoinformatics** (KISAN).

6. These **projects were integrated into a single entity in 2017, name of the entity is the National Programme on use of Space Technology for Agriculture (NPSTA).**

Way Forward:

Though agriculture is a state subject but considering the vast population i.e., 46% into agriculture, central government should also act proactively by investing in research and development in agriculture and adopting better technologies and practices from other countries, only then the vision of prosperous India can be fulfilled.

5.4 Prime Minister's Development Initiative (PM-DevINE) for North-East Region

Why in News?

In October 2022, government has approved a Scheme **for development of North East Region,** with name **Prime Minister's Development Initiative (PM-DevINE).**

▪ PM-DevINE **was announced in the Union Budget 2022-23**.

About PM-DevINE Scheme:

1. It is a **Central Sector Scheme** (100% Central funding)
2. It **will be implemented during** period 2022-26 with an **outlay of Rs.6,600 crore.**
3. The **PM-DevINE will add to the existing resources** for the **development of the NE region.**
4. It will **not be a substitute for existing central and state schemes.**
5. It will be implemented by the **Ministry of Development of North Eastern Region through North Eastern Council or Central Ministries/ agencies.**
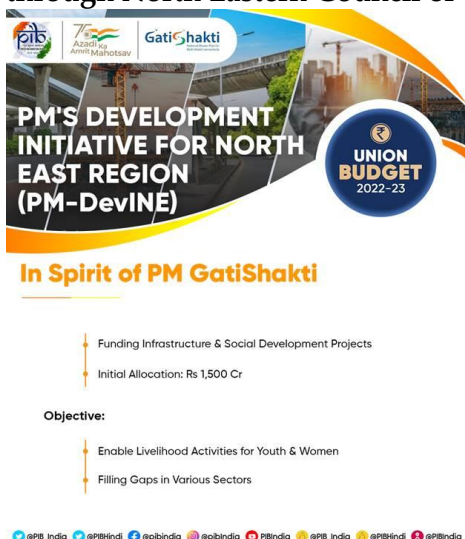
Objectives of PM-DevINE:

1. To **Fund the infrastructure projects** in the spirit of **PM Gati Shakti**.
2. **Support social development projects**.
3. **Enable livelihood activities** for youth and women.
4. **Fill the development gaps** in various sectors.

What are Current Challenges to North-East India?

1. **The region is Isolated from the Rest of India due to geographical reasons and underdeveloped transport,** which **impacts its accessibility.**
2. The **human development and economic growth of North-East** is lagging behind the rest of the country due to **lack of Efficient Infrastructure.**
   ▪ **Physical infrastructure:** Roadways, Waterways, Energy etc.
   ▪ **Social infrastructure:** educational institutions, health facilities etc.
3. North-East India has **remained historically underdeveloped in terms of industrial growth due to long negligence.**
4. There are **various inter-state, intra-state and international conflicts** within the Northeast, which adds to its backwardness.
   ▪ **Example: Assam-Mizoram Border Dispute.**

What is the Significance of North East for India?

1. **Economic Significance:**
   ▪ North-East **region (NER) is rich in natural resources like Tea, Oil, and Timber ("TOT").**

- NER has huge **hydroelectric power potential** and large reserves of **fossil fuels.**

2. **Ecological Significance:**
   - NER is a part of Indo-Burma **biodiversity hotspot**, representing **one of the highest avian and plant biodiversity of the Indian subcontinent.**
   - It **has all bear species present in India.**

3. **Strategic Significance:**
   - North-East India is the doorway to **South-East Asia** and also serves as a **land-bridge of India to Myanmar.**
   - **NER is also crucial for India's Act East Policy**.

Way Forward:

Northeast India is an integral part of India and is very crucial to its holistic development, schemes like PM-DevINE is the step in right direction to uplift the socioeconomic condition of NER and taking it along with the mainstream development.

5.5 Underutilisation of Coal Mines

Why in News?

India is **experiencing severe coal crises** and **one of the several major reasons is underutilisation of coal mining.**

Existing Status of availability of coal:

1. Approx. **100 out of 285 thermal power plants have seen fall in coal stocks below the critical mark of 25%.**

   - **[Critical mark of the stock is minimum stock of coal required in a thermal plant to run it.]**

2. Also, **there are almost 50 plants, in which the availability of coal is extremely poor and that is below 10% of what is required.**
3. The **coal shortage has been so low** that it **led to power shortages in several States, including Andhra Pradesh, Jharkhand, Uttarakhand and Madhya Pradesh.**

Coal mines and related issues:

1. Currently, **99 coal mine projects are under development** and **these projects are expected to yield 427 million tonnes of coal per annum.**
2. These **99 projects threaten to displace** (relocate) **at least 165 villages** and **affect 87,630 families,** of which the **major population is from the tribal communities.**
3. These **coal mines will have serious impact on some natural resources also,** such as:
   - **22,686 hectares** (ha) **of agricultural land**
   - **19,297 ha of forest land.**
   - **Consumption of at least 168,041 kilolitres of water per day.**
4. Coal **mining also faces serious competition from availability of alternate renewable energy resources like solar power.**
5. **The coal mining industry is also facing the lack of infrastructure like roads for the transportation of coal from coal mining area to thermal power plant.**

6. **Some other issues are:**
    ▪ **Deforestation**
    ▪ **Land use change**
    ▪ **Water pollution**
    ▪ **Displacement and rehabilitation**
    ▪ **Underutilisation of existing mines**

How can India solve the issue of energy security?

1. India should promote **renewable energies like solar, wind etc., so that the availability of energy can be maintained in the crisis situation also.**
2. There **should be efficient use of coal mines** with **proper infrastructure and technology.**
3. Setting up new **mines without finding solutions for the existing problems will not be much effective.**

Way Forward:

Government should invest more in the research and development in Coal mining sector so that we can have better solutions for existing problems, along with efforts should be there to reduce the dependency on coal by adopting alternate renewable energy resources, which will help in achieving India's climate targets too.

5.6 Purple Revolution

Why in News?

In **October 2022**, the **Union State Minister for Science and Technology** stated that the **Purple Revolution can potentially aid to growth of start-ups.**

▪ The **Purple Revolution was initiated in 2016 by the Ministry of Science and Technology** through the **Aroma Mission of the Council of Scientific and Industrial Research (CSIR).**

What is Purple Revolution?

1. It **aims to promote the indigenous aromatic crop based agro-economy.**
2. Under the Purple Revolution the **producers were offered free lavender seedlings**, and **those who had previously produced lavender were paid Rs. 5-6 per plant.**

3. The **CSIR-Aroma Indian Institute of Integrative Medicine (IIIM)**'s **Initiative have begun lavender cultivation** in the **Ramban district of Jammu and Kashmir.**

4. **Lavender farming** is **done in nearly all of Jammu and Kashmir's 20 districts.**

5. The districts **like Kathua, Udhampur, Doda, Kishtwar, Rajouri, Srinagar, Bandipora, Budgam, Ganderbal, Anantnag, Kulgam, Baramulla etc. have made huge progress in this direction.**

6. Some **main products of purple revolution are**:
   - The **Lavender oil** which sells for at least Rs. 10,000 per litre.
   - **Lavender water, which gets separated from lavender oil,** is used to make incense sticks.
   - **Hydrosol**, which is **formed after refinement from the flowers**, is **used to make soaps and room fresheners.**

Significance of Purple Revolution:

1. It would help in **achieving the government's objective of doubling agricultural earnings by 2022.**

2. It would provide a **livelihood for farmers and start-ups based on agriculture.**

3. **It would strengthen the** programmes like start-up India & Make in India and **encourage an entrepreneurial spirit in the region.**

4. Over **500 young people would be benefited** from the **purple revolution, which eventually led to the doubling of their income.**

What is Aroma Mission?

1. The CSIR's Aroma Mission **aims to bring about transformational change in the aroma sector.**

2. It will implement the **targeted initiatives in agricultural, processing, and product development**, to **boost the aroma industry.**

3. It will **encourage the development of aromatic crops** for the **production of essential oils,** which **are in high demand in the aroma sector.**

4. It is **expected** to make India a **global leader in production and export of various essential oils.**

5. Aroma Mission is **drawing entrepreneurs and farmers from all across the country.**

6. In the **Phase I of the mission**, CSIR has assisted in the **cultivation of 6000 hectares of land in 46 Aspirational districts** across the country. Also, almost **44,000 employees were trained under the mission.**

7. The CSIR **has started Phase II of the Aroma Mission**, which **will include over 45,000 skilled human resources and help over 75,000 farming families.**

Way Forward:

India has vast cultivable land, ample labour and youth to derive value from the land's production hence, it should harness the values of its existing resources in order to get transformed into a developed nation.

5.7 India's First Aluminium Freight Rake

Why in News?

In October 2022, the **Union Minister for Railways has inaugurated** India's **1st aluminium Freight Rake** at **Bhubaneswar Railway Station.**

▪ This **freight rake has been named as 61 BOBRNALHSM1.**

About the New Aluminium Rakes:

1. **These** are **reportedly 180 tonnes lighter than the steel rakes, which are being used currently.**
2. The carrying **capacity of the new design** is **said to be 5%-10% more than their steel rakes.**
3. Also, **they consume lesser energy as compared to steel rakes.**

What is the Significance of Aluminium Freight Rakes?

1. **It would help in Make in India program** as it has been **fully designed and developed indigenously.**
2. It will **reduce carbon footprint** by **lowering the consumption of fuel due to light weight.**
   ▪ A single rake can **save over 14,500 tonnes of carbon dioxide over its lifetime.**
   ▪ [Carbon footprint is **the total amount of greenhouse gases** (including carbon dioxide and methane) **generated by our activities**.]
3. The **iron industry consumes a lot of Nickel** (Ni) and **Cadmium** (Cd) which **comes from imports** hence, using **aluminium in place of Ni & Cd** will **reduce the import bill.**
4. **Encouraging** the **production of aluminium wagons** (carriers) **will result in reduction of the imports.**
5. Increased use of aluminium **would also boost the local aluminium industry also.**
6. It **would help the Indian Railways to achieve net zero Carbon Emissions by 2030 to become the world's largest Green Railway.**

Way Forward:

India should learn from the best practices of the world and try to implement them back in India to cut down on its logistics costs. Also, private players should be encouraged to take part in the indigenous business models to transform the vision of Make in India into a reality.

5.8 **Multidimensional Poverty Index 2022**

<u>**Why in News?**</u>

In October 2022, the Multidimensional Poverty Index has been released by United Nations Development Programme (UNDP) and Oxford Poverty Human Development Initiative (OPHI).

<u>**Global Multidimensional Poverty Index:**</u>

1. The **global MPI is an international measurement of acute** (serious) **multidimensional poverty.**
2. It is termed as **multidimensional because it measures various dimensions of poverty like health, education, and living standards etc.,** rather than only the monetary poverty.
3. It gets **published every year.**
4. It **covers more than 100 developing countries.**
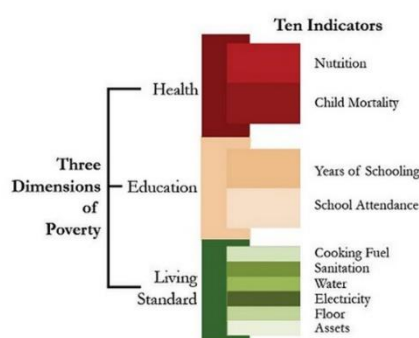
<u>**Findings of the Index:**</u>

1. India has the **largest number of poor people in the world i.e., 22.8 crore, followed by Nigeria at 9.6 crore.**
2. Approx. **41.5 crore people have managed to exit poverty** in **India in last 15-years (2005-21).**
3. Index has **reported a fall in the Incidences of poverty from 55.1% in 2005-06 to 16.4% in 2019-21.**
4. Deprivations in all **10 MPI indicators saw significant reductions, which have led to** reduction **in MPI value and poverty by 50%.**
5. Bihar has seen the **fastest reduction in MPI value, which was recorded the poorest State in 2015-2016.**
   - **[The Poverty in Bihar fell from 77.4% in 2005-06 to 34.7% in 2019-21.]**

<u>**What was new in the outcomes?**</u>

1. **Improvement in MPI for** India has **contributed to the decline in poverty in South Asia.** It is the **first time in the history that the South Asian region is not the region with highest number of poor people i.e., 38.5 crore.**
2. **Now, the Sub- Saharan Africa is the region having largest no. of poor people i.e., 59 crores.**

<u>**Significance of MPI:**</u>

The **indicators measured through** the MPI **holds international** importance and **significance. All 10 indicators** discussed above have **direct or indirect link to the 17 Sustainable Development Goals (SDGs) decide by UN for the betterment of world as a**

Indian Efforts:

1. India releases the National level **Multidimensional Poverty Index (MPI).**
   - NITI Aayog is the **nodal agency for the MPI.**
2. Global MPI is part of **Government of India's decision to monitor the performance of the country in 29 select Global Indices.**
3. India is a part of the "**Global Indices to Drive Reforms and Growth (GIRG)**" exercise:
   - ["Global Indices to Drive Reforms and Growth (GIRG)" works **to monitor India's performance on various important social and economic parameters.]**
4. India runs a parameter dashboard and a **State Reform Action Plan (SRAP) to track the performance on leading indicators like health and education etc.**
5. Niti Aayog **influences the monitoring mechanism of the Global Multidimensional Poverty Index.**

Way Ahead:

This year's Multidimensional Poverty Index (MPI) reminds us of the need for a complete picture of how people are being affected by poverty, who they are and where they live. There is a need to design effective responses that leave no one behind.

5.9   One Nation One Fertilizer Scheme

Why in News?

In October 2022, Prime Minister has inaugurated 600 Kisan Samridhi Kendra and One Nation One Fertilizer Scheme (ONOF).

About the ONOF Scheme:

1. Under the scheme, **Prime Minister will launch Bharat Urea Bags.**
2. **These bags will help companies to sell fertilisers under the single brand name 'Bharat'.**
3. All **subsidised soil nutrients** like **Urea, di-ammonium phosphate (DAP), Muriate of Potash (MoP),** will be **promoted in these bags under the single brand Bharat**.
4. Also, the bags will have **common design across the country like Bharat urea, Bharat DAP, Bharat MOP and so on.**

A view at design of the bags:

1. New **brand name and logo with subsidy title, Pradhanmantri Bhartiya Janurvarak Pariyojana, will occupy two-thirds** of the **printable area on the bag.** (Front)
2. **One-third** area of the bag will be used **for putting details of the fertilizer companies** and **its symbol with other information.** (backside)

About Kisan Samruddhi Kendras (PM-KSK):

1. These will **act as a one-stop-shop for farmers**, to **buy products and getting multiple services related to the agriculture sector.**
2. The **PM-KSK will supply agri-inputs like seeds, fertilisers, and farm implements.**
3. These will **provide testing facilities for soil, seeds and fertilisers.**
4. KSKs **will also aware farmers by giving them information about the government schemes.**
5. The government is **considering to convert more than 3.3 lakh fertiliser retail shops** in the country into **PM- Kisan Samruddhi Kendras (PM-KSK) in a phased manner.**

Benefits of the Scheme:

1. A **single brand name** will **help in the reduction of cargo** (Load) **charges by lessening the multiple movement of fertilizers from one place to other**
2. **Along with the reduction in cost**, it **will also reduce** the **transportation time**.
3. It will **help in the ensuring the availability of fertilizers** throughout the year irrespective of brand preferences, **by restricting the diversion of urea for industrial purposes.**
4. The Government gives a **huge subsidy on these products** and the **information about these subsidy** schemes will also be **mentioned on the bag which would help in awareness.**

5.10 India's Cyber Space

What is Cyber Security?

It is the set of techniques for protecting computers, networks and data from attacks that are aimed at exploitation of cyber-physical systems (CPS) **and critical information infrastructure** (CII).

What are Cyber-Physical Systems?

1. **CPS is a system** which **integrates sensing, calculation, control and networking of physical objects and infrastructure and** connect them to the Internet, also to each other.
2. **For example:**
   - **Driverless cars** that **communicate through sensors and other technologies with each other on smart roads**
   - **There are sensors in the homes to detect changing health conditions.**
   - **CPS is improving agricultural practices** and **scientist's ability to address issues arising out of climate change.**

What is Critical Infrastructure?

1. It is also **known as Critical Information Infrastructure (CII).**
2. It **refers to a physical** or **cyber-based system**, **whose destruction** shall have **devastated** (very bad) **impact on national security, economy, public health.**
3. **National Critical Information Infrastructure Protection Centre (NCIIPC)** is the **nodal agency** to protect CIIs.
4. Under **Information Technology (IT) Act, 2000**, the **govt. has the authority to declare any data, database,** IT network or communications infrastructure **as CI to protect the digital database of country.**

What are the Major Terminologies Related to Cyber Threats?

Terminologies	Definitions
Clickjacking:	Act of **attracting internet users to click links containing malicious software** or unknowingly **share private information on social media sites.**

Denial of Service (DOS) Attack:	It is the act of **overloading a specific website** from **multiple computers and routes to disrupt** its service.
Man in Middle Attack:	In this the **messages between two parties are leaked during transfer.**
Ransomware:	It is a **form of malware** which first **hijacks a computer's data and thereafter posts a message demanding money** (usually in the form of bitcoins) to restore it.
Spyware:	Malware that **secretly displays a user's computer activity.**
Zero Day Vulnerability:	It **is a fault in the machine's operating system or application software which can be exploited by a hacker who is aware of it.**

What are the Challenges Related to India's Cyber-Space?

1. **There is a big problem of Internet Polarisation as there are no common rules for internet in the country which** enables the **monopoly of a website over others** through **ad-based technologies etc.**
2. The number of illegal activities ranging from **selling drugs, fake currency and intellectual property thefts** also **posing major concern to national security.**
3. **Data has become a new "oil" for the world,** which can be used **to burn cyberwarfare at any time so,** the growing importance od data is one of the major threats.
4. The **supply chains are increasingly interconnected.** This makes a **company's data security more vulnerable.**
5. There are **state sponsored cyber-attacks also** like, the **growing tension between India and China is leading to incidences of cyberattacks against India's** digital infrastructure **by China.**
6. India has become more vulnerable to cyberattacks due to its **overdependence on foreign and particularly Chinese hardware**.
7. **India has no dedicated law for Internet of Things (IoT) when every second organisation or business is using IOT.**
8. The **growing internet intermediaries** (3rd party), has **resulted in the rise of** fake news with **often serious consequences in the real world.**
9. **Lack of awareness and digital illiteracy** are making people **even more vulnerable to cyber threats.**

What are the Recent Government Initiatives for Cyber Security?

1. **National Cyber Security Policy, 2013**
2. **National Cyber Security Coordination Centre (NCCC)**
3. **Cyber Swachhta Kendra**
4. **Indian Computer Emergency Response Team (Cert-In)**

Way Forward:

The centre and states must commit adequate funds to develop much-needed cyber infrastructure also, India needs to build up its diplomatic partnerships with other "techno-democracies" to get the ideas and resources for tackling the cross border cyber threats and move towards secured global cyberspace.

5.11) Enhanced Access & Service Excellence (EASE) Reforms

Why in News?

As a part of the 'Enhanced Access & Service Excellence' (EASE) reforms, the government is planning to allow Regional Rural Banks (RRBs) to expand their area of work.

What are the Regional Rural Banks (RRBs) ?

1. **RRBs are the financial institutions which ensure adequate credit for agriculture and other rural sectors.**

2. Regional Rural Banks were **set up on the recommendations of the Narsimhan Working Group (1975).**

3. The **1ˢᵗ Regional Rural Bank "Prathama Grameen Bank"** was set up on **2nd October, 1975.**

4. **The RRBs are required to provide 75% of their total credit as 'Priority Sector Lending' (PSL).**

5. **Priority sector lending** is **lending to those sectors of the economy which may not otherwise receive timely and adequate credit.**

6. **Generally, t**his role is assigned by the RBI to the banks for providing a specified portion of the bank credit to the few specific sectors like **agriculture, micro- and small enterprises, education, housing for the poor etc.**

7. The **equity (shares) of a regional rural bank are held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35 respectively.**

What are EASE Reforms?

1. They were **launched in January 2018 jointly by the Government of India and the Public Sector Banks (PSBs).**

2. **Aim was to make reforms in PSBs to improve profitability, asset quality, customer service and digital capabilities.**

3. Various Stages under **EASE Reforms Agenda are:**

a) **EASE 1.0:** The EASE 1.0 report showed **significant improvement in PSBs performance in resolution of Non-Performing Assets (NPAs).**

b) **EASE 2.0:** EASE 2.0 was **built on the foundation of EASE 1.0 and introduced new reforms across 6 themes** to make reforms journey irreversible, strengthen processes and bring outcomes. The **6 themes are:**

- **Responsible Banking,**

- **Customer Responsiveness,**

- **Credit availability,**

- PSBs as Udyami Mitra,

- Financial Inclusion & Digitalisation,

- Governance and Human Resource (HR).

c) **Ease 3.0:** It **aims to enhance ease of banking in all customer experiences, using technology** like:

- Dial-a-loan and PSBloansin59 minutes.com,

- Partnerships with FinTechs and E-commerce companies,

- Credit@click,

- Tech-enabled agriculture lending,

- EASE Banking Outlets

d) **EASE 4.0:** It **aims to make PSBs tech-enabled and simplified**. It also **focused on collaborative banking** to fulfil the agenda of **customer-centric digital transformation.** Following major themes were proposed under this:

- 24x7 Banking,

- Focus on North-East,

- Bad Bank,

- Raising Funds Outside the Banking Sector,

- Leveraging Fintech Sector.

e) **EASE 5.0**: Under this, **PSBs will continue to invest in new-age capabilities and deepen the ongoing reforms to respond** to **evolving customer needs, changing competition and the technology environment.**

Key Points Related to Recent Announcements Made by the Government are:

a) The **initiatives and targets will be part of the EASE reforms.**
b) RRBs will be **asked to look beyond crop loans and also provide loans for tractors, small businesses in rural areas, education and housing loans** too in rural areas.
c) The Center is working on a proposal to **raise the guarantee limit for education loans from Rs 7.5 lakhs at present to Rs 10 lakhs to ensure banks restart lending to the education sector.**
d) The government's plan is to remain focused on **improving the profitability of RRBs**. After almost 2 consecutive years of losses during the **Covid-19 pandemic** period, RRBs reported a **net profit of Rs 1,682 crore in the year 2021-22, with 30 out of 43 RRBs reporting net profits.**

Significance of this Decision

1. It **will help RRBs in expanding their business** by taking advantage of **their huge rural network** and **local understanding.**
2. **Asking RRBs to lend towards education, housing and small businesses will help in easy credit availability to these sectors.**

3. It will guide RRBs towards becoming **more competitive and business friendly.**
4. **It will also help in overall development of the Rural India.**

5.12 Indian Currency Design Management

Why in News?

Recently, some political parties asked the central government to put pictures of Goddess Lakshmi and Lord Ganesh on currency notes in order to bring "prosperity" to the country.

So, Who are involved in the Design and Issuance of Indian Bank Notes and Coins?

1. The **Reserve Bank of India (RBI)** and the **Central Government** decides the **changes in the design and form** of bank notes and coins.
2. Any change in design of a currency note has to be **approved by the RBI's Central Board** and **the central government**.
3. **RBI's Role in Issuing Notes:**
a) **Section 22** of **Reserve Bank of India (RBI) Act, 1934**, gives RBI the **"sole right"** to **issue banknotes** in India.
b) The central bank **internally works out on a design,** which is then put before the **RBI's Central Board**.
c) **Section 25** states that **"the design, form, and material of bank notes shall be such as may be approved by the Central Government after consideration of the recommendations made by the RBI's Central Board".**
d) The **RBI's Department of Currency Management,** currently headed by the **Deputy Governor**, has the responsibility of **administering the core function of currency management**.
e) If the design of a currency note has to change, the **Department works on the design and submits it to RBI,** which recommends it to the central government. **The government gives the final approval.**
4. **Central Government's Role in minting of coins:**
   a) **The Coinage Act, 2011** gives the **central government the power to design and mint coins** in **various denominations.**
   b) The role of the **RBI is limited to the distribution of coins** that are supplied by the central government.
   c) The government **decides on the quantity of coins** to be minted on the basis of estimate received from the RBI on a yearly basis.
   d) Currently, Coins are minted in 4 mints which are owned by the Government of India and these are located in **Mumbai, Hyderabad, Kolkata and Noida**.

What is RBI's Currency Management System?

1. **RBI, in consultation with the central Government and other stakeholders,** estimates **the quantity of banknotes that are likely to be needed denomination-wise in a year,** and **places order with the various currency printing presses** for their supply.
2. **2 of India's currency note printing presses (Nasik and Dewas)** are **owned by the Government of India** while, **2 others (Mysore and Salboni)** are **owned by the RBI through its wholly owned subsidiary, 'Bharatiya Reserve Bank Note Mudran Ltd' (BRBNML).**

3. Notes that are received back from circulation are examined, after which those fit for circulation are reissued, while the soiled and mutilated notes are destroyed.

Types of Notes Issued in India So Far:

1. **Ashoka Pillar Banknotes:** The **1st banknote issued in independent India was the Re 1 note which was issued in 1949**. While retaining the existing design, the **new banknote replaced the portrait of King George with the symbol of the Lion Capital of the Ashoka Pillar at Sarnath.**
2. **Mahatma Gandhi (MG) Series, 1996:** All the banknotes of this series has the **portrait of Mahatma Gandhi** on the **obverse (front) side**, **in place of the symbol of Lion Capital of Ashoka Pillar**, which was moved to the left, next to the watermark window. These banknotes **contain both the Mahatma Gandhi watermark as well as Mahatma Gandhi's portrait.**
3. **Mahatma Gandhi Series, 2005:** The **"MG series 2005"** notes **were issued in denominations of Rs 10, Rs 20, Rs 50, Rs 100, Rs 500, and Rs 1,000.** They contain some additional/ new security features as compared to the 1996 MG series. **The Rs 500 and Rs 1,000 notes of this series were withdrawn from the midnight of November 8, 2016.**
4. **Mahatma Gandhi (New) Series, 2016:** These **notes highlights the cultural heritage and scientific achievements of the country like Rs 2000 note has a picture of 'Mangalyan' on it**. Being of reduced dimensions, these notes are more wallet friendly, and are expected to incur less wear and tear.

5.13) Internationalisation of Rupee

Why in News?

The Deputy Governor of the Reserve Bank of India (RBI) recently emphasized on the advantages and the risks associated with the internationalization of the rupee.

So, What is Internationalisation of Rupee?

1. Internationalisation of the rupee is a **process that involves increasing use of the local currency in cross-border transactions**.
2. It involves **promoting the rupee for import and export trade** and then other **current account as well as capital account transactions**.
3. **Current account and the Capital account are the 2 components of 'Balance of payment'**.
4. While the **current account deals mainly with the import and export of goods and services, the capital account deals with the cross-border movement of capital by way of investments and loans.**
5. As far as the rupee is concerned, it is fully convertible in the current account, but partially in capital account.

What is the Need for Internationalisation of Rupee?

1. The **dollar accounts for almost 88% of global foreign exchange market** turnover, followed by the **euro, Japanese Yen and Pound Sterling; the rupee accounts for a mere 1.7%.**

2. In case of the dollar, which is an international currency, the privileges include immunity from Balance of Payment crisis as the USA can pay for its external deficits with its own currency.

Various Advantages from Internationalisation of the Rupee are:

1. Use of Rupee in cross-border transactions **reduces currency risk for Indian businesses**. **Protection from currency volatility not only reduces cost of doing business, it also enables better growth of business, improving the chances for Indian business to grow globally.**

2. It **reduces the need for holding foreign exchange reserves**. While reserves help manage exchange rate volatility but they **also impose a cost on the economy.**

3. Reducing dependence on foreign currency makes India **less vulnerable to external shocks**.

4. As the use of Rupee becomes significant, the **bargaining power of Indian businesses will improve** and **it will provide weight to the Indian economy, enhancing India's global stature and respect.**

Various Challenges from the Internationalisation of Rupee are:

1. India is a **capital deficient country,** and hence needs **foreign capital to fund its growth**. **If a substantial portion of its trade is in Rupee, non-residents will hold Rupee balances in India which will be used to acquire Indian assets. Large holdings of such financial assets could increase vulnerability to external shocks, managing which will necessitate more effective policy tools.**

2. A reduced role of convertible currencies in external transactions **could lead to reduced reserve of foreign currencies.**

3. A global risk-off phase could lead **non-residents to convert their Rupee holdings** and move out of India.

Steps taken by India for the Internationalisation of Rupee are:

1. **In July 2022,** the RBI has **introduced a mechanism to facilitate international trade in rupees**.

2. Enabling **external commercial borrowings in Rupees** (especially **Masala Bonds**).

3. The **'Asian Clearing Union'** is also exploring a scheme of using domestic currencies for settlements.

5.14 RBI Injected Liquidity into the Banking System

Why in News?

Recently, the **Reserve Bank of India (RBI)** injected **Rs 72,860 crore of liquidity into the banking system, the highest since April 2019.**

So, What is Liquidity?

1. Liquidity in the banking system refers to the readily available cash that banks need to meet short-term business and financial needs.

2. Suppose on a given day, **if the banking system is a net borrower from the RBI under Liquidity Adjustment Facility (LAF), the system liquidity is said to be in**

deficit. If the banking system is a net lender to the RBI, the liquidity is said to be in surplus.

About the Liquidity Adjustment Facility (LAF)

1. A LAF is a **monetary policy** tool used in India by the RBI through which it injects or absorbs liquidity into or from the banking system.

2. LAF was introduced as a part of the outcome of the '**Narasimham Committee on Banking Sector Reforms of 1998'.**

3. Basically, **LAF has 2 components - repo (repurchase agreement) and reverse repo.**

4. When **banks need liquidity to meet its daily requirement**, they **borrow from RBI through repo.** The **rate at which they borrow funds is called the repo rate.**

5. When **banks are having excess liquidity, then they park it with the RBI through the reverse repo mechanism at reverse repo rate.**

6. ENVIRONMENT

6.1 Slender Loris

Why in News?

In October 2022, the Tamil Nadu government has notified the Kadavur Loris Sanctuary, in Karur and Dindigul districts.

About Slender Loris (SL):

1. Slender loris is a **small nocturnal** (does not sleep at night) **& arboreal** (spend most of their life on trees) **mammal**.
2. It is **native to India and Sri Lanka.**
3. SL acts as a **biological predator of pests in agricultural crops.**
4. It generally **eats insects, reptiles, plant shoots, and fruits.**
5. It is found **in tropical rainforests, scrub forests, semi-deciduous forests, and swamps.**
6. There are **2 types of Slender Loris:**
   - **Red Slender Loris** (Loris tardigradus)
   - **Grey Slender Loris** (Loris lydekkerianus)
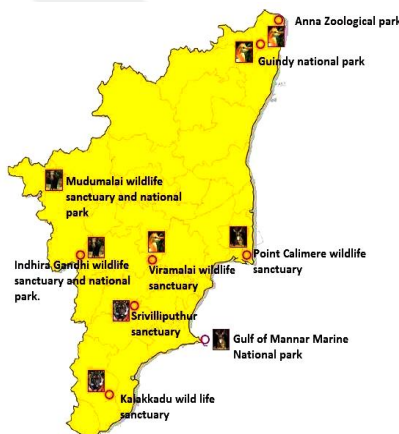
Tamil Nadu & Slender Loris:

1. In Tamil Nadu, Slender loris **species are found in the Kadavur hills**.
2. Kadavur Hills **are part of Eastern Ghats**.
3. Tamil Nadu **government notified:**
   - **India's first Dugong Conservation Reserve** in the Palk Bay
   - **Kazhuveli Bird Sanctuary**
   - **Nanjarayan Tank Bird Sanctuary**
   - **Elephant Reserve at Agasthyamalai**

What are threats to Slender Loris?

1. They have **medicinal properties** and they are captured and sold for their medicinal benefits.

2. **They are illegally smuggled due to the** great demand for keeping these animals as pets.
3. **Habitat loss** of Loris is also one of the major reasons of their **decreasing populations.**
4. **Electrocution** (accident) of **live wires and road accidents.**

Protection Status of slender Loris:

1. It is listed as **Endangered on red list of IUCN.**
2. It is included under Schedule I of **Wildlife (Protection) Act of India, 1972:**
3. It is covered under **Appendix II of CITES.**

Other protected areas in Tamil Nadu:

6.2 Mainstreaming Biodiversity Forest Report

Why in News?

In **October 2022**, **Food and Agriculture Organization released report titled "Mainstreaming Biodiversity in Forestry Report".**

What is Mainstreaming Biodiversity?

1. It is the **process of implanting (inclusion) biodiversity considerations into policies, strategies, and practices.**
2. It is done **to promote the conservation and sustainable use of natural resources.**

What are the Recommendations of the Report?

1. **Forest occupancy of Indigenous Peoples** and **local communities** should be realized to **enhance the equitable sharing of benefits.**
2. Governments should **prevent the conversion of natural forests into monospecific forest plantations.**
3. The **sustainable management of harvested species** should be there **to control overharvesting** of plants and wildlife.
4. Governments should provide **economic incentives and** compensations **to promote biodiversity benefits.**
5. **Public–private partnerships** should be there to **complete the corporate social responsibility commitments.**

What are the Threats to Mainstreaming Biodiversity?

1. Deforestation is **continuing at a disturbing rate of 10 million ha per year.**
   - Deforestation is done **mainly for agricultural expansion.**
2. Illegal **timber harvesting is estimated to account for 15–30% of global timber production.**
3. The **conservation outside the protected areas** is **very low** due to negligence.
4. **Developing countries struggle** to enforce forest and biodiversity regulations **due to lack of resources.**
5. There is **lack of participation** by **Indigenous People** and **local community** leading to inefficient conservation.

6. **Weak governance** is one of the **biggest roadblocks** for biodiversity conservation in protected areas.

What is the State of Forest and Biodiversity Conservation in India?

1. According to **India State of Forest Report, 2021**, India has **7,13,789 square kilometres of total Forest and Tree cover.**
2. **Madhya Pradesh** has the **Largest Forest Cover followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra, in order.**
3. **42nd constitutional amendment act has transferred** the **protection** of wild animals and birds **from State to Concurrent** List.
4. **Article 48 A** of **Directive Principles of State policy,** directs that the State shall work towards **protection and improvement of the environment** and **wildlife** of the country.
5. **Article 51 A (g)** says that it shall be **fundamental duty of every citizen to protect** and improve the natural environment including **forests and Wildlife.**

Way Forward:

An integrated multi-stakeholder approaches is needed for biodiversity mainstreaming in the forest sector, involving **prioritising forest policies, plans, programmes, projects and investments** which **can have positive impact on biodiversity at the ecosystem, species and genetic levels.**

6.3 LiFE Movement

Why in News?

In October 2022, the **Union Minister of Power and New & Renewable Energy has launched the Agni Tattva - Energy for LiFE campaign.**

- **Lifestyle for the Environment - LiFE**

Energy for LiFE campaign.

1. It **was launched to create awareness about the Agni Tattva.**
2. **Agni Tattva** is an **element that is identical to energy.**
3. **Agni Tattva is of the 5 elements** of Panchmahabhoot.
4. **The Panchmahabhoot includes Earth (Prithvi), Water (Jal), Fire (Agni), Air (Vayu) and Aether/ Space (Aakash).]**

| Energy	Composition	
Potential Energy (Kapha)	Earth +	Water
Thermal Energy (Pitta)	Fire +	Water
Kinetic Energy (Vata)	Air +	Ether

About the Agni Tattva Campaign?

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1. It would serve as a **platform of discussion about the learnings and experiences of** specialists.
2. It would **work to explore solutions for a sustainable future for all.**
3. Further, it **would focus on health, transport, consumption and production, security, environment, and spirituality.**

About the LiFE Movement?

1. The idea of LiFE **was introduced by India.**
2. It was introduced during the **26th United Nations Climate Change Conference of the Parties (COP26)** in Glasgow in 2021.
3. LiFE **encourages an environmentally conscious lifestyle.**
4. It focuses on '**mindful utilisation'** of environmental resources.

How can the LiFE movement bring environmentally friendly changes?

1. With the launch of LiFE the ongoing "**use-and-dispose**" **economy which is governed by mindless consumption will be replaced by a circular economy**.
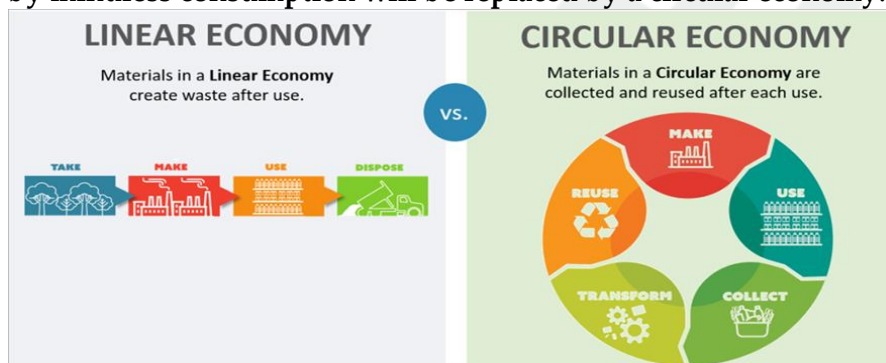
2. It would **influence the social networks to influence social norms** related to climate.
3. The Mission **plans to create and nurture a global network of individuals**, namely **'Pro-Planet People' (P3).**
4. **P3** will have a **shared pledge to promote environment friendly lifestyles.**

What are the Other Related Initiatives?

- **National Afforestation Programme (NAP)**
- **National Mission for a Green India (GIM)**
- **National Action Plan on Climate Change (NAPCC)**
- **National Biodiversity Action Plan**

6.4 Sloth Bear

Why in the News?

The 1st sloth bear day was observed on 12 October 2022 to generate awareness and strengthen conservation about them.

About Sloth bear?

1. **The scientific name of sloth bear is Melursus ursinus.**
2. It is a **forest-dwelling member of the family Ursidae** (comprises 8 species of bears).
3. It is found in the **tropical or subtropical regions** of **India and Sri Lanka.**
4. Sloth bears mainly **eat termites** (small insects) **and ants.**
5. **They routinely carry their cubs on their backs.**
6. They **love eating honey a lot** hence, they **are also known** as **"honey bear".**
7. Sloth bears **do not hibernate.**
   [**Hibernate is way to survive cold, dark winters without having to forage for food or migrate to somewhere warmer**.]
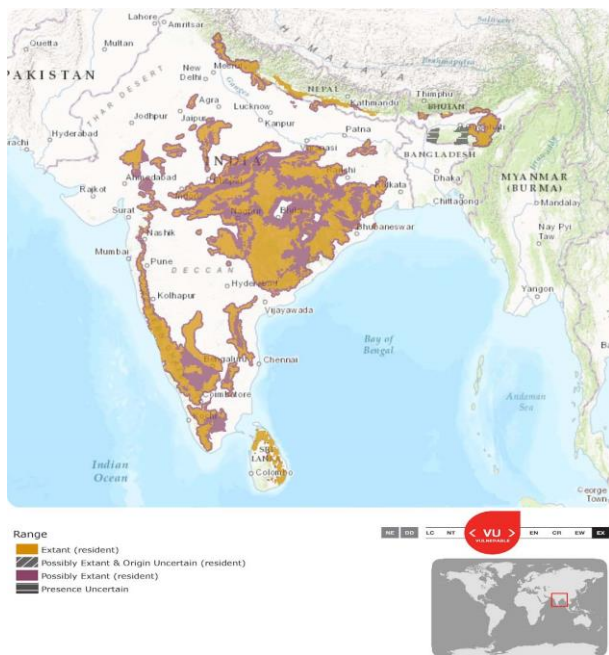
Protection status of Sloth Bear:

1. They are listed as **Vulnerable in Red List of IUCN.**
2. Also listed as **Appendix I on CITES.**
3. Sloth bears are covered under **Schedule I of Wild Life Protection Act, 1972**

Threats to Sloth Bear:

- **Habitat loss**
- **Poaching** for **body parts**
- **Sometimes captured for use at Circuses (shows).**
- They **got hunted because** of their **aggressive behaviour and destruction of crops.**

6.5 Snow Leopard

Why in News?

In **October 2022, a person from Namdapha National Park of Arunachal Pradesh, claimed of having a skin which could have been of a snow leopard.**

- **Till now no survey has ever reported the snow leopards' presence in eastern most region of the country.**

<u>**About Snow Leopard:**</u>

1. **Panthera uncia** is its **scientific name.**
2. They are also known as **Ghost of Mountains due to the furry skin, they carry like an overcoat**
3. They **act as an indicator species for mountains.**
   - [Indicator species of an ecosystem tells us about the health of that ecosystem.]
4. Snow Leopards are **found in the mountainous regions of central and southern Asia.**

<u>**Their geographical range consists:**</u>

1. **Western Himalayas: Jammu and Kashmir, Himachal Pradesh.**
2. **Eastern Himalayas: Uttarakhand and Sikkim and Arunachal Pradesh.**
3. **Hamis National Park** (biggest National Park in India) **is known as Snow Leopard capital of the world.**

<u>**Protection Status of Snow Leopard:**</u>

1. It is listed **as Vulnerable** on the **IUCN-World Conservation Union's Red List** of the **Threatened Species.**
2. Snow Leopard is listed among **Appendix I on the Convention on International Trade of Endangered Species (CITES).**
   Trading of animal body parts (fur, bones and meat) is **illegal.**
3. It is listed in **Schedule I of the Indian Wildlife (Protection) Act 1972.**
   (An act on conservation of wildlife including plants and animals.)
4. It is listed in the **Convention on Migratory Species (CMS)** which affords the **highest conservation status to the species, both globally and in India.**
5. It is also **protected by several national laws** in **its range countries.**

<u>**Conservation Efforts by India:**</u>

1. India has identified the snow leopard as a **flagship species**. [Flagship species are **the species that are on the verge of extinction**. They are therefore used as an ambassador to draw society's attention towards the need to conserve them. The Bengal Tiger, Asian Elephant, African Elephant, and Giant Panda are a few flagship species used by the World Wildlife Fund.]

2. India is also party to the **Global Snow Leopard and Ecosystem Protection (GSLEP) Programme since 2013.**
   (An international conservation programme for both the ecosystem and snow leopard)
3. **Govt. of India** has launched the **Himal Sanrakshak (2020),** which is a **community volunteer programme**, to protect snow leopards.
4. **First National Protocol** on snow **leopard assessment** was also launched in 2019. This Assessment has been **very useful for monitoring populations**.
5. India has included Snow Leopard in the list of **21 critically endangered species for the recovery programme** of the **Ministry of Environment Forest & Climate Change (MoEFCC).**
6. **Breeding Programme is also started for** Snow Leopard conservation at **Padmaja Naidu Himalayan Zoological Park, Darjeeling, West Bengal.**

6.6 Additional Information:

About Namdapha National Park:

1. Namdapha National Park is **India's 4ᵗʰ largest national park by area.**
2. It is situated **between Patkai and Dapha bum ranges of Mishmi Hills in the Eastern Himalayan Sub-region.**
3. NNP is located **on the international border between India and Myanmar, along the raging Noa-Dihing River.**
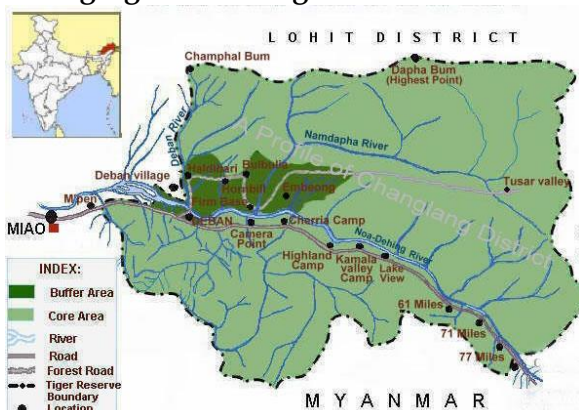
4. Namdapha was **designated as a wildlife sanctuary in 1972.**
5. In **1983**, it was **designated as a tiger reserve and national park**.
6. It is the **world's only park with the four catlike species of big cat:**
   - **The Tiger** (Panthera Tigris)
   - **Leopard** (Panthera Pardus)
   - **Snow Leopard** (Panthera Uncia)
   - **Clouded Leopard** (Neofelis Nebulosa)
7. The park is **also home to a variety of primate species such as Assamese macaque, pig-tailed macaque, stump-tailed macaque, and a large number of the distinctive Hoolock Gibbons which is India's only "ape" species.**

6.7 Galapagos Islands

Why in News?

According to a recent study, **Cold Ocean currents** have **protected the Galápagos Islands from global warming.**

About Galapagos Archipelago?

1. The **Galapagos Islands, spread over almost 60,000 sq. km.**
2. These **are part of Ecuador.**
3. These are **located in the Pacific Ocean and are** around **1,000 km away from the South American continent.**
4. In **1935**, Ecuador **selected a part of the Galapagos Islands as wildlife sanctuary** which later became the **Galapagos National Park in 1959.**
5. In **1978**, the islands became **UNESCO's first World Heritage Site.**
6. It **contains aquatic species like manta rays and sharks**.
7. It also **hosts a wide array of aquatic wildlife, including marine iguanas, and waved albatrosses.**
8. Galápagos is **home to the critically endangered — Galápagos penguin, Galápagos fur seal and Galápagos sea lion.**

Significance of Galapagos Islands:

1. The **British naturalist Charles Darwin in 1835, shaped his theory of evolution and described the islands as a "world in itself".**
2. Corals **do not bleach and die in these waters off the west coast of Ecuador which helps in attaining good coral growth.**

What are Ocean Currents?

1. Ocean currents are the **continuous and directional movement of seawater.**
2. It is a **massive movement of ocean water** that is **caused and influenced by various forces like temperature, salinity & wind speeds etc.**

What are the Types of the Ocean Currents?

1. **Cold currents:**
   - It **brings cold water into warm water areas.**
   - These **currents are usually found on the west coast of the continents** in the **low and middle latitudes** (in both hemispheres).
   - These are **also found on the east coast** in the **higher latitudes in the Northern Hemisphere.**
   - Examples: **Canary Current, California Current, Benguela Curren etc.**

2. **Warm currents:**
   - It **brings warm water into cold water areas**.
   - It is **usually observed on the east coast of continents** in **the low and middle latitudes (true in both hemispheres)**.
   - Examples: **North Atlantic, Gulf Stream, the Kuroshio Current etc.**
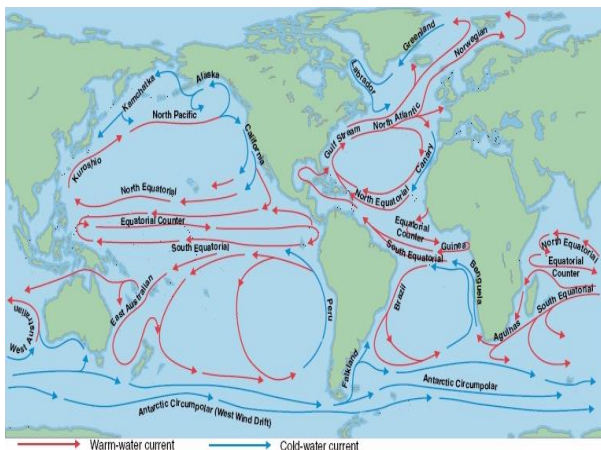
How does the cold current protect Galapagos Islands?

The cold current **protects the Galapagos, from an otherwise warming of Pacific Ocean by supplying cold water to it**.

   - [The **cold equatorial undercurrent in the Pacific Ocean** is **bound to the equator by the force of the planet's rotation**. Under the **ocean's surface, a swift circulation of cold, nutrient-rich water flows from west to east near Galapagos Islands.**]

6.8 New Life Forms (Animals and plants)

Context:

The recent changes in ''Anthropocene'' has resulted in a rapid increase in the rate of extinction of species but there are still new species, which are being discovered.

   - **[The geological era that we live in is known as Anthropocene.]**
   - **Almost 1000 species have actually gone extinct in last 400 years.**

About New Species:

1. **New species are still being found and recognized.**
2. **5 new frog's species have been discovered from the Western Ghats.**
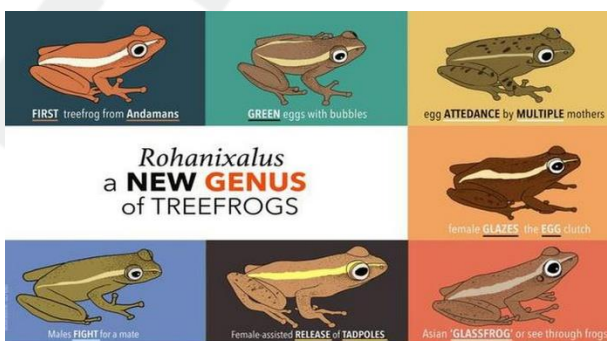
3. Recently, **Zoological Survey of India** (ZSI) **have published the mitochondrial genome sequence** (genes information of species) **of Nicobar tree shrew.**
   - **It is a rare mammal endemic** (found only at one place) **to the Nicobar Islands.**
   - **Tree shrews is not really shrew, rather it is closer to squirrels.**
   - **Tree shrews can have the potential benefits in the studies of HINI influenza & Hepatitis Virus infections.**

About Narcondam shrew:

1. **Shrew is a private animal** who **lives in hidden places.**
2. **It is found on the Narcondam island of Union Territory of Andaman and Nicobar.**
3. This shrew **is found nowhere else.**
4. Few shrew **species are poisonous,** which is a **rare property in the case of mammals.**
5. **A few studies, have indicated that this venom** (poison) **have chemical properties which can help the health professionals.**

We do not have a complete list of the animals and plants on our planet yet, and there are species who are still getting recognized for the first time, having so many benefits for humans and the biodiversity at large.

6.9   6 Varieties of Neelakurinji identified in Western Ghats

Why in News?

Recently, the researchers has identified 6 Varieties of 'Neelakurinji' in Santhanpara region of Western Ghats.

Alongside **Strobilanthes kunthiana**, the types of neelakurinji flowers that have been identified from the hill ranges include **Strobilanthes anamallaica, Strobilanthes heyneanus, Strobilanthes pulnyensis, Strobilanthes neoasper.**

About the flower

1. **It' a shrub that is found in the shola forests of the Western Ghats in Kerala, Karnataka and Tamil Nadu.**
2. **Locally known as 'Kurinji', the flower grows at an altitude of 1,300 to 2,400 metres.**
3. **Nilgiri Hills,** which literally mean the '**blue mountains', got their name from the purplish blue flowers of Neelakurinji that bloom only once in 12 years.**
4. **Kurinjimala Sanctuary** of Kerala protects the kurinji in approximately **32 square km core habitat in Kottakamboor and Vattavada villages in Idukki district.**

5. **Kurinji Andavar temple** located in **Kodaikanal of Tamil Nadu** dedicated to Tamil God **Murugan** also preserves these plants.

6. The **Paliyan tribal people living in Tamil Nadu used it as a reference to calculate their age.**

7. **Karnataka has around 45 species of Neelakurinji** and each species blooms at intervals of 6, 9, 11 or 12 years.

8. Besides the Western Ghats, **Neelakurinji can also be seen** in the **Shevroy Hills in the Eastern Ghats, Sanduru hills** of **Bellary district of Karnataka.**

About The Shola Forest

1. **'Sholas' is the local name for patches of stunted tropical montane forest found in valleys** amid rolling grassland in the higher montane regions of South India (Tamil Nadu, Kerala & Karnataka).

2. These patches of shola forests are **found mainly in the valleys and are usually separated from one another by montane grassland.**

Distribution of Shola Forest in India:

Shola forests are found in the **higher elevation hill regions of the Nilgiris, Anaimalai, Munnar, Palani hills, Meghamalai, Agasthyamalai to the south and the Malnad and associated ranges in parts of Wayanad, Coorg, Baba Budhangiri hills and Kudremukh in the north, in the states of Karnataka, Kerala and Tamil Nadu.**

Shevroy Hills of Eastern Ghats:

1. Shevaroy Hills are named after the local deity **'Servarayan' in Tamil Nadu.**

2. Shevaroy Hills is a **towering mountain range (1620 m) near the city of Salem, in Tamil Nadu.** It is one of the major hill stations in Tamil Nadu and the Eastern Ghats.

6.10 E-Waste

Why in News?

On **14th of October International E-Waste Day was celebrated.**

About the International E-waste Day:

1. The day was **initiated in 2018 by the WEEE Forum.**

- **WEEE stands for waste electronic and electrical equipment.**
- WEEE is a **non-profit organisation working for management of E-waste by extending producers responsibilities.**

2. The aim of celebrating this day is to **promote the disposal of e-waste throughout the world by increasing re-use, recovery and recycling rates.**

3. **This year's theme is 'Recycle it all, no matter how small'.**

What is E-waste?

1. E-Waste is **short form of Electronic-Waste.**

2. It includes the **old and discarded electronic devices along with** their **components, parts and spares.**

3. E-waste **is categorised into 21 types under two broad categories:**

- **Information technology** and **communication equipment i.e., mobile phones etc.**
- **Consumer electronics i.e., scanners, camera and copiers etc.**

4. Electronic waste (E-waste) is the **fastest-growing stream of waste.**

5. **The Global E-Waste Monitor** says that **nearly 3 million tons of electronic waste was generated in India.**

Recycling of E-waste:

1.

Production   Usage   Discard

2. E-WASTE RECYCLING

Recover   Process   Collect
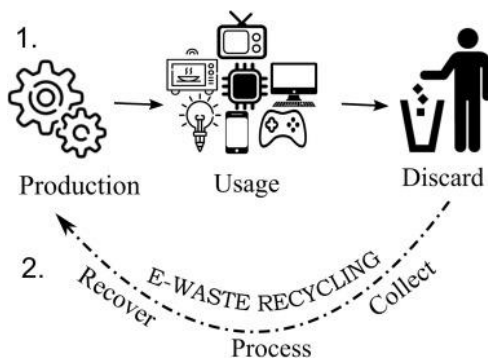
Impacts of E-waste on Environment and health:

1. There are various **toxins and heavy metals present** in the E-waste which get leached into environment and **degrade the environmental and human health.**

Cadmium

Arsenic   Mercury

Toxic in E-Waste

Lead   Chromium
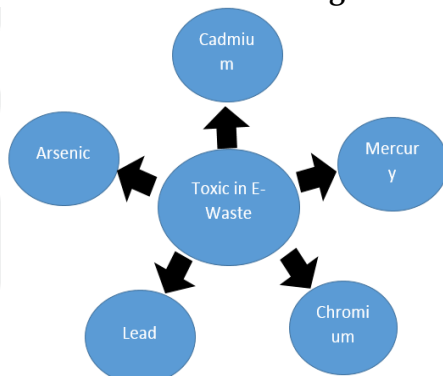
2. Some major **effects of E-waste on the environment** include:
- **Groundwater pollution.**

▪ **Acidification of soil.**
▪ **Air pollution due to the burning of plastic and other leftovers.**

3. It also **impacts health and cause serious illnesses such as:**
   ▪ **Lung cancer**
   ▪ **Respiratory problems**
   ▪ **Brain damages**, etc.

Reasons behind High E-Waste Generation:

1. India is one of the **largest consumers of electronic gadgets in the world which causes high generation of E-waste.**
2. The products have **shorter life cycle, as the previous electronic gadgets becomes outdated as soon as the new models get launched in the market.**
3. There are also **limited repair options** in the market as many **manufacturers don't allow repair and reuse** facilities.
4. Most **consumers are still unaware of how to dispose** (arrange) **of their e-waste.**

How can we manage the E-waste?
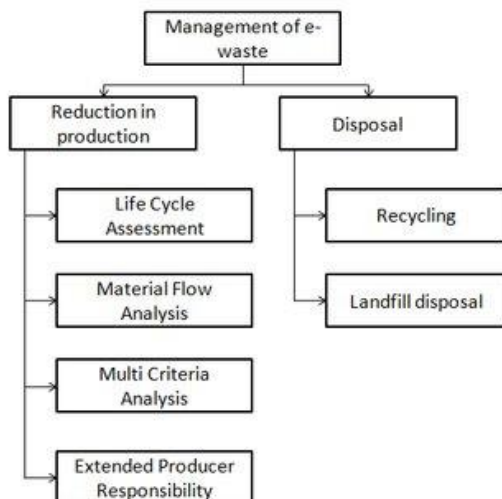
Challenges in E-waste Management and Recycling:

1. The **recycling potential of our country is poor mainly due to:**
2. There is lack of data available on consumption and generation of e waste.
3. **The lower collection of E-waste is also one of the major issues of E-waste management as** approx. **90 % of our E-waste is handled by the informal and unorganised sector.**
4. We still use **non-scientific and dangerous methods for the extraction of the resource from E-waste.**
5. **The financial health of municipalities is also not good** to invest in the collection and treatment of E-waste.
6. There are **lack of safety measures and health awareness** for **personals working** on E-waste management sites.

Way Ahead:

Effective awareness along with **Strict implementation** of the rule, **training for required skill sets and providing affordable technology** to **the informal sector could be a game-changer.**

6.11) Organic Fertilizers

Why in News?

Today, India is 1 of the fastest-growing economies of the world. So, with the right policy and actions, India can become the hub of Organic Fertilizer production too.

So, What are Organic Fertilizers?

1. An organic fertilizer is a fertilizer that is **derived from organic sources, including organic compost, cattle manures, poultry droppings and domestic sewage etc**
2. Organic fertilisers **can be categorised into 2 segments** and these are: **Biofertilizers and Organic Manure.**
3. **Bio-fertilizers:**
a) Bio-fertilizers **composed of living microorganisms which are attached to solid or liquid carriers** and are useful for cultivable land, as **these micro-organisms helps in increasing the productivity of soil.**
b) Examples: **Rhizobium, Azospirilium, Azotobacter, Phosphobacteria, Blue Green Algae (BGA), Mycorhiza, Azolla.**
4. **Organic manure:**
a) Organic manure, on the other hand, **refers to partially decomposed organic matter like digestate from a biogas plant, compost and vermicompost, which provides nutrients to the soil / crops and improves yield.**

What is the Potential of Organic Fertilisers in India?

1. **Utilizing Municipal Solid Waste:**
a) **India produces more than 150,000 tonnes of municipal solid waste (MSW) each day.**
b) After **considering collection efficiency of 80%** and **organic part of MSW to be 50%, total organic waste generated per day in India comes to around 65,000 tonnes per day.**
c) **Even if half of this is diverted to the biogas industry**, the **government can leverage this by reducing in import of fossils and fertilisers.**
2. **Utilizing Biogas Effluents:**
a) There is also a great value in the organic fertiliser also known as **'digestate', which is the biogas plant's effluent.**
b) This **Biogas can be utilised for heating, electricity and even vehicular purposes (after upgrading).**
3. **Increases Soil Fertility:**
a) **Digestate can provide organic carbon** to the continuously depleting soil, apart from its standard nutrition value.
b) At present, **India's bio-fertiliser production is just over 1,10,000 tonnes** (carrier-based 79,000 tonnes and liquid-based 30,000 tonnes) and 34 million tonnes of organic manure, composed of farmyard manure, city compost, vermicompost etc.
4. **Organic Farming getting more popular:**

a) The **popularity of organic farming has grown in the domestic market** in recent years.

b) The **market size for Indian organic packaged food is expected to grow at a rate of 17%.**

c) The significant rise of this sector is linked to **growing awareness about the harmful effects of synthetic fertiliser on soil, rising health concerns,** expanding urban population base and an increased consumer expenditure on good quality food items.

Additional Information

Some Related Initiatives taken by the Government are:

1. **Sustainable Alternative Towards Affordable Transportation (SATAT) scheme.**
2. **Paramparagat Krishi Vikas Yojana**
3. **Sub-mission on Agro-Forestry**
4. **National Mission on Sustainable Agriculture**
5. **Rashtriya Krishi Vikas Yojana**

6.12 Mission LiFE (Lifestyle for Environment)

About Mission LiFE:

1. Mission LiFE **has been launched recently in October 2022 at the statue of Unity in Gujarat.**
2. It was **directed by NITI Aayog** and **implemented by the Union Ministry of Environment, Forest and Climate Change (MoEFCC).**
3. Its aim is **to mobilise at least 1 billion Indians to take Individual and collective actions for conserving the environment in the period 2022-28.**
4. It **has been launched in line with the global LiFE Movement.**

About the LiFE Movement:

5. It was **introduced by Prime Minister of India,** during the **26th United Nations Climate Change Conference of the Parties (COP26)** in Glasgow, in **2021.**
6. LiFE **encourages an environmentally conscious lifestyle.**
7. It focuses on **'mindful utilisation'** of environmental resources.

Approach to achieve LiFE:

1. **Focus on Individual Behaviour- i.e., individual responsibility.**
2. **Co-create Globally - i.e., Joint efforts like International Solar Alliance (ISA).**
3. **Influence Local Culture – For example: Open Defecation Free villages.**

How can the LiFE movement bring environment friendly changes?

5. With the launch of LiFE the ongoing "**use-and-dispose**" economy which is governed by **mindless consumption will be replaced by a circular economy.**
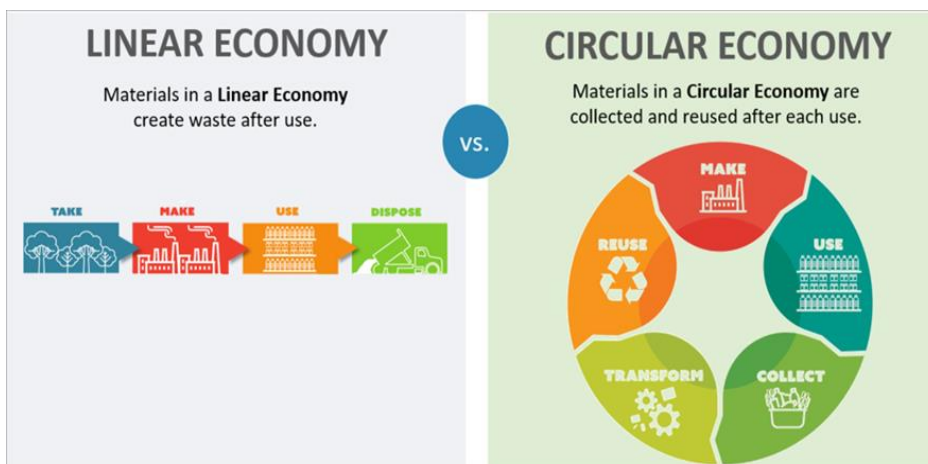
6. It would **influence the social networks to influence social norms** related to climate.
7. The Mission **plans to create and nurture a global network of individuals**, namely **'Pro-Planet People' (P3).**
8. **P3** will have a **shared pledge to promote environment friendly lifestyles.**

Examples Set by India:

1. **Swachh Bharat Mission (SBM)** has led to the use of more than **100 million toilets in rural India in last 7 years.**
2. **Ujjwala Scheme** has **increased** the number of **households with LPG connections from 62% in 2015 to 99.8% in 2021.**
3. **Traditional Indian practices** such as **architectural forms that minimise the electricity consumptions** and **dietary preference for plant-based foods** and **millets can serve as foundations for LiFE.**

What are the Other Related Initiatives?

1. **National Afforestation Programme (NAP)**
2. **National Mission for a Green India (GIM)**
3. **National Action Plan on Climate Change (NAPCC)**
4. **National Biodiversity Action Plan**

Way Forward:

LIFE is a global vision and India is an excellent place to start it. If **we achieve a true jan andolan here with the joint efforts of 1.3 billion people, the momentum generated will be huge.**

6.13 Blue Flag Certification

Why in News?

In October 2022, the **Blue Flag certification has been given to 2 new beaches, Minicoy Thundi Beach and Kadmat Beach-** both in **Lakshadweep**.

- With these **new additions, now there are 12 beaches certified under the Blue Flag certification.**

What is Blue Flag Certification?

1. It is an **internationally recognised eco-label.**
2. **It is given based on 33 criteria** divided into **4 major criteria namely**:
   ▪ Environmental education and information
   ▪ Bathing water quality
   ▪ Environmental management
   ▪ Conservation and safety services in the beaches
3. Blue Flag beaches are **considered the cleanest beaches of the world**.
4. It is an eco-tourism **model working to provide the tourists the clean and hygienic water, facilities**, a **safe and healthy environment** and **sustainable development of the area.**
5. It is given by the international jury composed of important members of:
   ▪ **United Nations Environment Programme** (UNEP)
   ▪ **United Nations World Tourism Organisation** (UNWTO)
   ▪ Denmark-based NGO Foundation for Environmental Education (FEE)
   ▪ **International Union for Conservation of Nature** (IUCN)
6. On the **lines of Blue Flag certification**, India has **also launched its own eco-label BEAMS (Beach Environment & Aesthetics Management Services)**.

Other 10 Beaches which have Received the Certification are:

1. Shivrajpur (**Gujarat**)
2. Ghoghla (Daman & Diu)
3. Kasarkod (Karnataka)
4. Padubidri beach (Karnataka)
5. Kappad (Kerala)
6. Rushikonda (Andhra Pradesh)
7. Golden beach (Odisha)
8. Radhanagar beach (Andaman and Nicobar)
9. Kovalam (Tamil Nadu)
10. Eden (Puducherry)

What are BEAMS?

1. It is **short form of Beach Environment & Aesthetics Management Services.**
2. It comes under **ICZM (Integrated Coastal Zone Management) project**.
3. BEAM was **launched by the Society of Integrated Coastal Management** (SICOM) and the **Union Ministry of Environment, Forest and Climate Change** (MoEFCC).

Objectives of BEAMS program:

1. **Decrease pollution** in coastal waters.
2. Promote **sustainable development of beach facilities.**

3. **Protect & conserve** coastal ecosystems & natural resources.
4. **Maintain high standards** of cleanliness.
5. **Hygiene & safety for workers** in accordance with coastal environment & regulations.

Way Forward:

India has a vast coastline providing huge potential for tourism coming from beaches hence, India should strive to improve its position in initiatives like Blue Flag Certification which will be beneficial for the environment and economy at large.

6.14 Lancet Countdown on Health and Climate Change

Why in News?

Recently, a report was released titled 'Lancet countdown on health and climate change: health at the mercy of fossil fuels', showing that from 2000-2004 to 2017-2021, heat-related deaths increased by almost 55% in India.

1. The report represents the **work of almost 99 experts from 51 institutions,** including the **World Health Organization (WHO)** and the **World Meteorological Organization (WMO)**.

About the Lancet Countdown on Health and Climate Change Report

1. **This report is published annually by the Lancet (it's an independent, international weekly general medical journal founded in 1823) and is an international, multidisciplinary report which is dedicated to monitor the impacts of climate change over health.**
2. The countries considered in the study represents **50% of the world's population and 70% of the world's emissions – Brazil, China, Germany, India, Indonesia, Nigeria, South Africa, the UK and the US.**
3. The Lancet Countdown report was **established after the formation of Lancet Commission on Health and Climate Change in 2015.**
4. It tracks **43 indicators across 5 key domains**: 1) Climate Change impacts 2) Exposures and Vulnerability 3) Adaptation 4) Planning and Resilience for health 5) Mitigation actions and health co-benefits.

So, What are the Findings of the report?

1. **System of Subsidies Causing Global Problems:**
a) **Subsidies to fossil fuel consumption** in **many countries are causing global problems, including deterioration of air quality, decline in food output and increased risk of infectious disease linked to higher carbon emissions.**
b) In **2021,** almost **80% of the countries reviewed were providing some form of fossil fuel subsidy, totaling USD 400 billion.**
c) In **2019, India spent a USD 34 billion on fossil fuel subsidies.**
d) **Over 3,30,000 people died in India in 2020** as a result of exposure to **fossil fuel pollutants**.

2.Effects of Rising Temperature on Age Groups:

a) From **2012-2021, infants under 1 year age experienced an average of 72 million more person-days of heatwaves per year, compared to 1985-2005.**

b) While, **Adults over the age of 65** in India **experienced 301 million more person-days during the same time period.**

c) From **2000-2004 to 2017-2021, heat-related deaths increased by almost 55% in India**.

3.Impact on GDP: In **2021, Indians lost 167.2 billion potential labour hours** due to heat exposure with **income losses equivalent to almost 5.4% of national GDP.**

4.Vector borne disease Transmission: From **1951-1960 to 2012-2021**, the **number of months suitable for dengue transmission rose by 1.69%, reaching 5.6 months each year.**

Recommendations of the Report are:

1. **Overall Improvement in air quality will help in preventing deaths from exposure** to **fossil fuel-derived particulate matter.**

2. We should **try to develop climate solutions** that are **proportionate to the scale of the problem**. The **climate crisis are endangering not only the health of the planet, but also the health of people everywhere**, through toxic air pollution, decreased food security, increased risks of infectious disease outbreaks, extreme heat, drought, floods, etc.

3. **Governments should pay more attention to and invest more resources towards environmental protection.**

4. **Burning of dirty fuels needs to be minimized as soon as possible** to reduce its health impacts.

Additional Information

Some Initiatives taken by India for Controlling Air Pollution are:

a) **System of Air Quality and Weather Forecasting and Research (SAFAR) Portal**
b) **Air Quality Index**
c) **Graded Response Action Plan (for Delhi)**
d) **BS-VI Vehicles**
e) **Push for Electric Vehicles (EVs)**
f) **New Commission for Air Quality Management**
g) **Turbo Happy Seeder (THS) Machine for reducing stubble burning.**
h) **National Air Quality Monitoring Programme (NAMP)**
i) **National Solar Mission**
j) **National Wind-Solar Hybrid Policy 2018**

7. SECURITY

7.1 Report by RBI on Big Techs

Why in News?

As per a latest report by the Reserve Bank of India (RBI), large non-financial technology firms, referred to as "big techs," poses great challenges to financial stability.

What are the Big Techs?

1. **Big techs are the companies that are having a very huge market base and they are financially as well as technologically strong.**
2. Big techs include companies such as **Alibaba, Amazon, Facebook, Google etc.**
3. **Increasing Role of Big Techs:**
a) Big techs**, given their pervasive adoption as third-party service providers, generally become the platform on which a host of services are offered.**
b) This **unique position let the big techs to easily acquire data from many sources** which can be used for generating innovative product offerings, making them dominant players in the market.
c) The **pervasiveness (present everywhere) of big techs provides them with a large client base**.
d) Besides the technological advantages, the **big techs typically also have the financial power to face the competitive pressure.**

Steps taken by India in this direction are:

1. In India, **efforts have been made for local storage of payment data and to bring critical payment intermediaries** into the **formal framework and with law.**
2. Initiatives are also underway to **increase the payment acceptance infrastructure and create a data protection law.**

So, What are the Risks associated with the Big Tech Sector in Financial Services?

1. **Complex Governance Structure:** The complex governance structure of big techs **limits the scope for effective regulation.**
2. **Barriers in Creating Level Playing Field:** Big Techs are a **barrier in creating a level playing field to promote innovation in the fintech space.**
3. **Data Privacy Issues:** There is a **lack of transparency in how tech companies process user data, which has raised serious privacy concerns.**

Conclusion

To facilitate fairness in the fintech space, **regulators should reframe their regulatory frameworks** while managing the possible risks posed by big-techs. With the increasingly complex inter-linkages between financial institutions and tech-companies, the regulatory frameworks **need to keep up the pace with innovations to tackle the issues** that may arise.

7.2 States to have NIA office by 2024

Why in News?

Recently, the Union Home Minister announced that all states in the country will have National Investigation Agency (NIA) offices by 2024 as a strategy to counter terrorism.

About the National Investigation Agency (NIA)

1. NIA is the **Central Counter-Terrorism Law Enforcement Agency** of India which is mandated **to investigate all the offences** affecting the **sovereignty, security and integrity of India**. **It includes:**

   a) Friendly relations with foreign states,

   b) Against atomic and nuclear facilities,

   c) Smuggling of arms, drugs and fake Indian currency and infiltration from across the borders,

   d) The offences under the statutory laws enacted to implement international treaties, agreements, conventions etc.

2. It was formed under the **National Investigation Agency (NIA) Act, 2008**.

3. The **agency is empowered to deal with the investigation of terror related crimes across states without special permission from the states.**

4. It's **Headquarter is located in New Delhi.**

Highlights of the Home Minister Speech are:

1. **NATGRID: States have been suggested to utilise the National Intelligence Grid (NATGRID) that is operational now**. **NATGRID brings datasets of 11 agencies on a common platform.**

2. **Rationalising Criminal Justice System:** Parliament will soon be presented with **amendments to the Indian Penal Code (IPC) and Code of Criminal Procedure (CrPC).**

3. **Increase Coordination:**

   a) To ensure border and coastal security, **border states should coordinate with the central agencies and security forces**.

   b) There is a **need for optimal and rational utilisation of internal security resources to fight challenges before the nation.**

   c) **One Data One Entry:** Following the principle of **"one data, one entry", the NIA has been entrusted to maintain a national terror database and** the **Enforcement Directorate (ED) to maintain a dataset on financial crimes and the Narcotics Control Bureau (NCB) on narco crimes.**

4.**Amendments to FCRA:** The **amendments to the Foreign Contribution Regulation Act (FCRA) in 2020 successfully prevented the misuse of foreign funding and effective monitoring became possible.**

So, What are the Issues with the Law-and-Order Situation in India?

1. **Poor General Administration:**

   a) Various government agencies lack coordination.

   b) Poor enforcement of laws and general failure of administration.

2. Problems Related to Police:

a) Unscientific organisational structure and bad infrastructure are the biggest problems.

b) High political interference

c) Lack of modern technology and methods of investigation

d) High corruption at every level

e) Insensitive to human rights

f) Absence of transparent recruitment and personnel policies

3. Problems Related to the Judicial Process:

a) A large number of cases are pending

b) Low conviction rates

Related Constitutional and Legal Provisions are:

1. **As the Law and Order is a State subject under the '7ᵗʰ Schedule' of the constitution,** the constitution provided that the **Ministry of Home Affairs (MHA) can intervene in matters concerning national security.**

2. **So,** it is the primary **duty of the state governments** to **prevent, detect, register and investigate crime and prosecute the criminals.**

3. **Central Government, however, supplement** the **efforts of the state governments by providing them with financial assistance for modernization** of their Police Forces.

4. Further**, intelligence inputs are regularly shared** by the **Central Security and Intelligence Agencies with the State Law Enforcement Agencies** to prevent crime and law and order related incidents.

5. The **National Crime Records Bureau (NCRB),** a **nodal agency under the MHA, is engaged in the process of collecting, compiling and analysing the crime statistics with a view to help the states to form appropriate strategies for better prevention and control of crime.**

Way Forward/Conclusion:

Today, the nature of crimes has changed and they are becoming borderless, that is why the coordination of all States and the agencies is the need of the hour.

8.   CULTURE

8.1   Sattriya (Assam)

About the Sattriya Dance:

1. The Sattriya dance form was **introduced in the 15th century A.D.**
2. It **was introduced by** the **Vaishnava saint and reformer of Assam, Sankaradeva.**
3. **It was inspired by Bhakti movement.**
4. It serves as a **medium for propagation of the Vaishnava faith.**
5. The **dance form evolved** and **expanded as a distinctive style** of **dance later on.**
6. Sattriya was **named so because of its association with the Sattras.**
   - [Sattras were Vaishnava maths or monasteries.]
7. It was **given the status of a classical dance** in the year **2000 by the Sangeet Natak Akademi.**
8. Other **classical dances of India are:**
   - Bharatnatyam (Tamil Nadu)
   - Kathakali (Kerala)
   - Kuchipudi (Andhra Pradesh)
   - Kathak (North India)
   - Mohiniyattam (Kerala)
   - Manipuri (Manipur)
   - Odissi (Odisha)

Features of Sattriya:

1. Sattriya dance has **strict principles** about **hastamudras, footworks, aharyas, music etc.**
2. This tradition, **has 2 different streams:**
   - **One is Bhaona** which goes from Gayan-Bhayanar Nach to the Kharmanar Nach.
   - **Secondly the dance numbers** such as Chali, Rajagharia Chali, Jhumura, Nadu Bhangi etc., **which are independent from each other.**
3. **Chali is characterized by gracefulness and elegance, while the Jhumura is marked by beauty.**
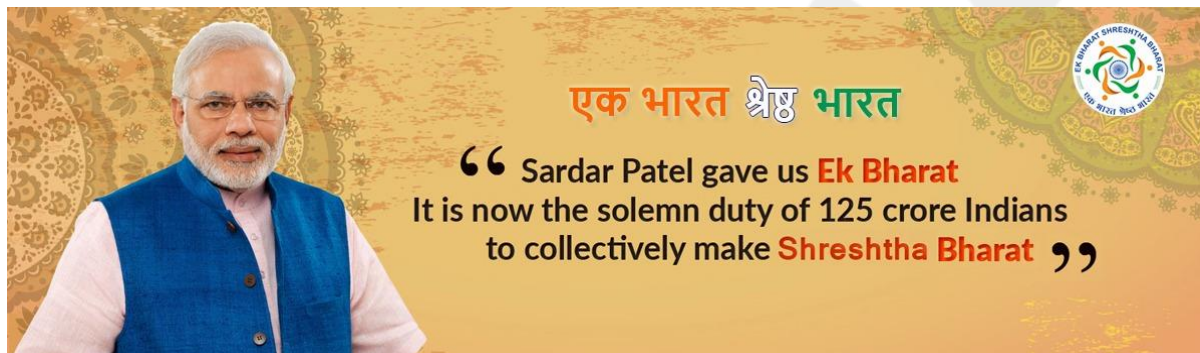
8.2   Ek Bharat Sreshtha Bharat

Why in News?

In October 2022, the Government of India has **announced a programme named the 'Kashi-Tamil Sangamam'**.

More about News:

1. It is a **month-long programme to strengthen the cultural and civilisational bond** between Tamil Nadu and Varanasi.
2. This programme **would be a part of the Ek Bharat Sreshtha Bharat** initiative.

What is Ek Bharat Shreshtha Bharat (EBSB)?

1. **It is an initiative to promote interactions** between the **people of different States/UTs.**
2. Its aim **is to improve the mutual understanding between people** of **diverse cultures** to **secure stronger unity and integrity of India.**
3. EBSB was **launched in 2015 by the Ministry of Education.**
4. Under the initiative every **State and UT would be paired with another State/UT** for a fixed time period, to **do the possible coordination in the fields of language, literature, cuisine, festivals, cultural events, tourism etc.**

Objectives:

1. Create the **"Unity in Diversity" of our Nation**.
2. To **strengthen the traditionally existing emotional bonds between the people of our Country.**
3. **Promote the Spirit of National Integration** through a **deep and structured engagement between all Indian States/UTs.**
4. **Showcase the rich Heritage, Culture, Customs & Traditions** of States to make people **appreciate the diversity of India.**
5. **To promotes learning between States** by **sharing best practices** and **experiences.**

Way Forward:

India is one of the highest populated and diverse countries in the world & initiatives like Ek Bharat Sreshtha Bharat are very crucial to maintain the unity in the diversity of India.

**8.3** **Worlds Earliest known Dock (Port)**

Why in News?

In October 2022, the Prime Minister has reviewed the **construction of the National Maritime Heritage Complex (NMHC) site at Gujarat's Lothal.**

<u>**What is the National Maritime Heritage Complex?**</u>

1. **The project will have several innovative** features **such as mini-Lothal recreation.**
2. **Mini Lothal recreation will recreate Harappan architecture and lifestyle**.
3. The **project began in March 2022,** and is being **developed at a cost of Rs 3,500 crore.**
4. It has **4 theme parks**:
    ▪ Memorial theme park
    ▪ Maritime and Navy theme park
    ▪ Climate theme park
    ▪ Adventure and Amusement theme park
5. It **will act as a centre for learning and understanding India's maritime** (Oceanic) **history.**
6. Its **aim** is to **show the diverse maritime heritage of India to make Lothal a world-class international tourist** destination.
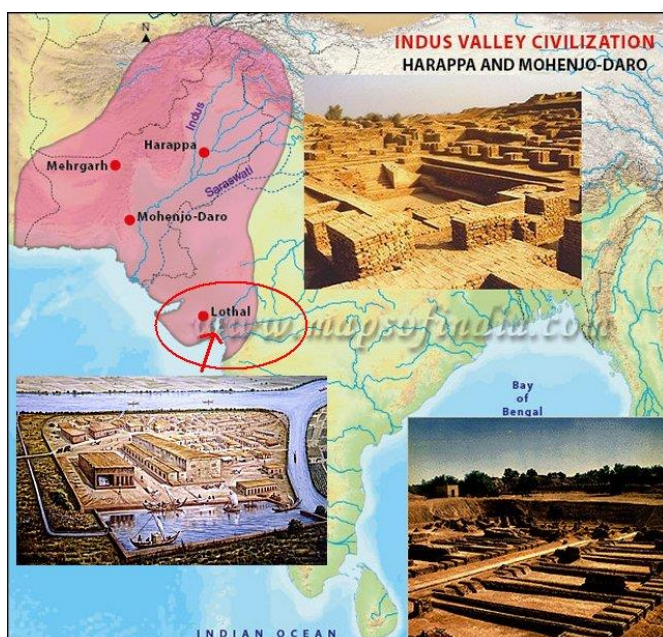
<u>**About Lothal:**</u>

1. Lothal is a **port city**, believed to **have been built in 2,200 BC.**
2. **It** was one of the **southernmost sites of the Indus Valley civilization (IVC).**
3. Lothal was **located in the Bhāl region** (now known as Gujarat).
4. It was an **important trade** center of **beads, gems and ornaments reaching West Asia and Africa, in ancient times.**
5. **Lothal** is a combination of Loth & thal in Gujarati which means **"the hill of the dead.**
6. Lothal had the **world's earliest known dock.**
7. **It is** connected the **city by an ancient course of the Sabarmati River** on the **trade route between Harappan cities in Sindh and the peninsula of Saurashtra** (Maharashtra).

<u>**Discovery of the Lothal Dock**</u>:

1. **Post-1947** the **search** for cities of the Harappan Civilisation **was started in Gujarat's Saurashtra.**

2. **Archaeologist SR Rao with his team** of archaeologists have **discovered a number of Harappan sites** at the time, including the **port city of Lothal.**

3. **Identification of Dockyard:**

4. The **National Institute of Oceanography in Goa discovered that the sea water** was once there which was definitely **a dockyard** and **found marine microfossils, salt, gypsum crystals** from site through excavation.

5. In later excavations, Archaeologists discovered **hill, a township, a marketplace, and the dock.**

6. There is an **archaeological site museum** also, where some of the **most important collections of Indus-era antiquities** (old things) **in India are displayed.**

<u>**What is the Heritage Value of Lothal?**</u>

1. Lothal was **nominated as a** <u>**UNESCO World Heritage Site,**</u> in April 2014.

2. The **excavated site of Lothal** is the ''**only**'' port-town of the Indus Valley Civilisation.

3. Its **heritage value is equal** to **other ancient port-towns of the world including:**
    - Xel Ha (Peru)
    - 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

4. **In the region**, it can be **compared with other Indus port** towns such as:
    - **Balakot (Pakistan)**
    - **Khirasa (in Gujarat's Kutch)**
    - **Kuntasi (in Rajkot)**

Way Forward:

India has a vast history and earliest civilisations of world which makes it a soft power in itself, requiring consistent efforts in form of recreation & protection to conserve the heritage of India.

9. MISCELLANEOUS

9.1 Indian Foreign Services (IFS)

Why in News?

Every year, Indian Foreign Service (IFS) Day is celebrated on 9ᵗʰ October.

Why is Indian Foreign Service (IFS) Day Celebrated?

1. Indian Foreign Service Day is **celebrated to remember the day of origin of the Foreign Services in India.**
2. The **Indian government established** the Indian Foreign Service **(IFS) on 9th October 1946.**
3. It **can be traced back** to the times to Britishers, **when the Foreign Department was created to conduct business with the "Foreign European Powers".**
4. It comes **under Ministry of External Affairs of government of India.**

Ministry of External Affairs

Government of India

Offices under IFS:

▪ **Ambassador**
▪ **High Commissioner**
▪ **Consul General**
▪ **Permanent Representative of India to the United Nations**
▪ **Foreign Secretary**

Above written **are some of the offices** held by the members of the Indian Foreign Service apart from other associates.

How do Foreign Service Officers Contribute to the Country?

1. The Foreign Service Officers are **required to project India's interests, at abroad on various issues.**
2. The **major issues include:**
    ▪ **Bilateral political and economic cooperation**
    ▪ **Trade and investment promotion**
    ▪ **Cultural interaction**

- **Press and media connection**

3. During the **Russia-Ukraine war,** the way in which IFS officers have overcome the challenges of **Operation Ganga was appreciated by the entire nation.**
   - **[Operation Ganga was an evacuation (being out) operation by India to evacuate the Indian citizens from Ukraine, during Russia-Ukraine conflict]**

4. Recently, under **Vande Bharat Mission**, lakhs of Indians have been **brought back to India.**

5. IFS has been **producing Presidents, Vice Presidents, Speaker of Lok Sabha, Ministers and** Parliamentarians, since independence an even earlier.

9.2 Birth Anniversaries of Jayaprakash Narayan and Nanaji Deshmukh

Why in News?

On 11th October, PM has paid tributes to the 'Loknayak Jayaprakash Narayan' and 'Nanaji Deshmukh' on their birth anniversary.

About Jayprakash Narayan

1. He was **born on 11th October, 1902 in Sitabdiara (Bihar).**
2. **He was highly influenced by the Marxist ideas** and the **Gandhian ideology.**
3. In **1929, he joined the Indian National Congress (INC).**
4. In **1932**, he was **imprisoned** for a year for participation in the **civil disobedience movement.**
5. In **1939**, he was **imprisoned again** for his **opposition to Indian participation in World War II** on the side of Britain but **he escaped from the jail.**
6. He played a **key role in the formation of the Congress Socialist Party (1934)**, a **left-wing group within the Congress Party.**
7. In **1948**, he **left the Congress Party** and initiated an **anti-Congress Campaign.**
8. In **1952**, he **formed the 'Praja Socialist Party' (PSP).**
9. In **1954**, he devoted his life exclusively to the '**Bhoodan Yajna Movement' which was started by Vinoba Bhave and aim of this movement was to provide land to the landless.**
10. In **1959**, he argued for the **"reconstruction of Indian polity"** by means of a **4- tier hierarchy** at **village, district, state, and union** level **(Chaukhamba Raj).**
11. **Total Revolution: He led the movement against the Indira Gandhi regime as she was found guilty of violating electoral laws by the Allahabad High Court.**
12. He **advocated a program of social transformation** which he termed **'Sampoorna Kranti' (total revolution) in 1974 against corruption in public life.**
13. **His Total Revolution** has **7 component revolutions**, namely- **political, social, economic, cultural, ideological or intellectual, educational and spiritual.**
14. **The objective was to bring the change in the existing society** that is in **tune with the ideals of the Sarvodaya** (Gandhian philosophy- progress for all).
15. Jayaprakash Narayan was **posthumously (after death) conferred** with **India's highest civilian award**, the **Bharat Ratna (1999),** for his "**invaluable contribution to the freedom struggle and the upliftment of the poor.**

About Nanaji Deshmukh

1. He was **born on 11th October 1916 in Maharashtra's Hingoli district.**
2. He was highly **influenced by Balgangadhar Tilak** and **Dr. Keshav Baliram Hedgewar, founding Sarsangha-chalak(head) of the Rashtriya Swayamsevak Sangh (RSS).**
3. He actively **participated in** Acharya Vinoba Bhave's '**Bhoodan Movement'.**
4. Deshmukh was the **main force behind Jayaprakash Narayan's agitation for total revolution.**
5. He was a **social reformer with focus on health, education** and **rural self-reliance.**
6. He established **'Chitarkoot Gramoday Vishwavidyalaya'** in **Chitrakoot** which was **India's 1st rural university** and also served as its Chancellor.
7. He did great work towards the **anti-poverty** and **minimum needs programme in rural areas.**
8. He was one of the **main architects of the Janata Party.**
9. He **won 1977 Lok Sabha elections from the Balrampur constituency of UP.**
10. He was **nominated to the Rajya Sabha in 1999** in recognition of his service to the nation.
11. He was **awarded Padma Vibhushan** in **1999.**
12. He **died on 27th February, 2010.** In **2019, the President of India, conferred** the **Bharat Ratna upon him (posthumously)** for his services to the nation.
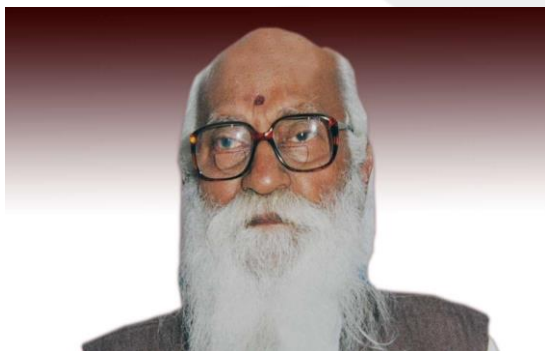
9.3 Energy for LiFE campaign

Why in News?

In October 2022, the **Union Minister of Power and New & Renewable Energy has launched the Agni Tattva - Energy for LiFE campaign.**

- **Lifestyle for the Environment - LiFE**

Energy for LiFE campaign.

5. It **was launched to create awareness about the Agni Tattva.**

6. **Agni Tattva** is an **element that is identical to energy.**
7. **Agni Tattva is of the 5 elements** of Panchmahabhoot.
8. **The Panchmahabhoot includes Earth (Prithvi), Water (Jal), Fire (Agni), Air (Vayu) and Aether/ Space (Aakash).]**

Energy	Composition
Potential Energy (Kapha)	Earth + Water
Thermal Energy (Pitta)	Fire + Water
Kinetic Energy (Vata)	Air + Ether

About the Agni Tattva Campaign?

4. It would serve as a **platform of discussion about the learnings and experiences of** specialists.
5. It would **work to explore solutions for a sustainable future for all.**
6. Further, it **would focus on health, transport, consumption and production, security, environment, and spirituality.**

9.4   Shri Mahakal Lok Corridor

Why In News?

In October 2022, the **Prime Minister has inaugurated** the **Mahakal Lok corridor** at the **Mahakaleshwar temple, Ujjain.**

About Mahakaleshwar temple:

1. The **Mahakaleshwar temple** is dedicated to Lord Shiva.
2. It **is one of the 12 Jyotirlingas (representation of Lord Shiva) in India.**

About Mahakal Lok corridor project:

1. **The Mahakaleshwar Temple Corridor Development Project** will **provide better facilities for visitors.**
2. The corridor has around **108 aesthetically decorated pillars.**
3. The pillars are made of **sandstones** and **carved beautifully with:**
   - **Anand Tandav Swaroop** (Lord Shiva's dance form).
   - **200 statues and murals** (painting) of **Lord Shiva** and **goddess Shakti.**
4. Corridor have **overflowing fountains surrounded by creative sculptures of the deity** (goddess) as well as **53 well-lit** (lightening) **murals showing stories from the Shiv Puran.**
5. The **corridor is expected to significantly boost tourism in this city of Madhya Pradesh.**

Mahakal Maharaj Mandir Parisar Vistar Yojna (MMMPVY):

1. It is a plan for the **expansion and enhancement** of the **Mahakaleshwar temple** and its **adjoining area in Ujjain district.**
2. According to the plan the Mahakaleshwar **temple area is being increased from 2.82 hectares to 47 hectares**.
3. The **development will be in 2 phases** by the **Ujjain district administration**.
4. This **will include the 17 hectares of Rudrasagar lake**.

Other Jyotirlings in India:

Other major temple upliftment projects:

1. Mahakal temple is the 3rd 'jyotirlinga' site after the **Vishwanath temple in Varanasi and the Kedarnath shrine in Uttarakhand** to see a **major upliftment exercise.**
2. The **Mahakal corridor is 4 times the size of the Kashi Vishwanath corridor**, which was **inaugurated late last year.**

9.5   4th Heli-India Summit 2022

Why in News?

Recently, the Minister of Civil Aviation has inaugurated the '4th Heli-India Summit 2022' in the Union Territory of Jammu and Kashmir.

Highlights of the Summit are:

1. Announcing the **achievements in the Civil Aviation sector, Minister of Civil Aviation said that the country was having only 74 airports from 1947 to 2014, but it now has reached to 141, with 67 added in the last 7 years.**
2. It is **proposed to build a civil enclave in Jammu** and the **Srinagar's present terminal will be expanded by 3 times.**
3. It was announced to develop **'Fractional Ownership Model'** and '**HEMS' (Helicopter Emergency Medical Services)** .
4. **Fractional Ownership Model**: It helps to grow the non-scheduled operations. It will lower the barrier on the cost of acquisition of helicopters and airplanes through pooled capital by multiple owners.
5. **HEMS** will be started under the **'Project Sanjeevani'** and under it the **helicopters will be deployed to provide emergency medical services** at **AIIMS Rishikesh.**
6. The helicopter will be based at the hospital at 20-minute notice and will have a service covering an area of 150 km radius.

Status of the Civil Aviation Sector of India

1. The civil aviation industry in India has emerged as **one of the fastest growing industries in the country during the last 3 years** and can be broadly classified into **scheduled air transport service which includes domestic and international airlines, non-scheduled air transport service which consists of charter operators and air taxi operators, air cargo service etc.**
2. India is currently the **7th largest civil aviation market in the world** and is **expected to become the 3rd largest civil aviation market within the next 10 years.**
3. **As per the International Air Transport Association (IATA),** India is expected to overtake **China and the US as the world's 3rd largest air passenger market in the next 10 years.**
4. In FY22**, airports in India reached the domestic passenger traffic to 166.8 million** which is a 58.5% increase, and **international passenger traffic to be 22.1 million** which is a 118% increase, as compared to FY 2020-21.
5. **Government has allowed 100% Foreign Direct Investment (FDI)** under the **'Automatic route'** for **ground handling services and Maintenance, Repair and Overhaul services (MRO)** for both green and brownfield projects.
6. **At present, t**he Indian civil Aviation MRO market stands at around **USD 900 million** and is expected to grow to USD 4.33 billion by 2025 by increasing at a CAGR of about 14-15%.
7. **India's airplane fleet is projected to increase to approximately 2500 airplanes by 2038.**
8. The **government aims to develop 100 airports by 2024** (under the UDAN Scheme) and create world-class civil aviation infrastructure to be at par with global standards.

Conclusion

Civil Aviation has now become the need of the hour not only for India but for humankind across the world as it always brings with it 2 important multipliers: the economic multiplier and the employment multiplier. The industry stakeholders should engage and collaborate with the policy makers to implement efficient and rational decisions to boost India's civil aviation industry and this will lead India to achieve its vision of becoming the third-largest aviation market by 2020.

9.6) Booker Prize 2022

Why in News?

In October 2022, **Sri Lankan writer Shehan Karunatilaka** won the **Booker Prize** 2022 for his novel **"The Seven Moons of Maali Almeida".**

- The book is **about a war photographer who is dead and is on a mission in his afterlife.**

About the Man Booker Prize:

1. The Booker Prize is the **world's leading award given every year for a single work of fiction.**
2. It **was founded in the UK in 1969 as Booker Prize.**
3. In its **initial years** it was awarded to the **writers only from the commonwealth countries** but **now it covers the globe & is open to anyone regardless of origin.**
4. It **is awarded according to the opinion of the judges, which is the best sustained work of fiction written in English** and **published in the UK and Ireland.**

Additional Information:

Difference between Man Booker Prize and International Booker Prize:

Award Name	Coverage	Awarded to: (in2022)
Man Booker Prize	**It is awarded to a book which is "written in English" covering the globe.**	**Shehan Karunatilaka** from Sri-Lanka for his novel **"The Seven Moons of Maali Almeida".**

International Booker Prize	It is **different from the Man Booker Prize,** which is **awarded to a work which is ''written in an international language and later translated to English''**	**Gitanjali Shree** from India for her book ''**Tomb of Sand**''

9.7 THE World University Rankings 2023

Why in News?

Recently, the 'Times Higher Education' (THE) released 'World University Rankings 2023'.

About the Times Higher Education (THE)

1. **Formerly, it is known** as '**The Times Higher Education Supplement' (THES).**
2. It's a **magazine which reports specifically on news and issues related to higher education.**
3. The **'Times Higher Education World University Rankings' include a total of 1,799 universities across 104 countries and regions.**
4. It is **based on 13 performance indicators that measures an institution's performance across many areas like**: teaching, research, knowledge transfer and international outlook and is trusted worldwide by students, teachers, governments and industry experts.

Key Highlights of the Ranking are:

1. The parameters based on which the institutes are ranked are **teaching (30%), research (30%), citations (30%),** i**nternational outlook (7.5%),** and **industry outcome (2.5%).**
2. **In teaching and research**, almost **15% weightage each is based on a reputational survey.**
3. The **University of Oxford** has emerged as the **best institute among 1,799 universities from 104 countries.**
4. **About Indian Institutions:**
a) India is the **6th most represented country in 2023 rankings with 75 ranked universities.**
b) The **Indian Institute of Science (IISc)** is at **the top position among Indian institutes,** for its performance score for teaching and research. IISc was the top-ranking Indian Institute in the **2022 rankings** as well.
c) The **2nd position** among Indian institutions has been taken by Himachal Pradesh based **Shoolini University of Biotechnology and Management Sciences**.
d) **IIT Ropar which was the 2nd highest ranking Indian institute in 2022 rankings, slipped to 6th position.**
e) The **3rd position is backed** by **Tamil Nadu's Algappa University** (a public institution)

Response from IITs

1. It has been **boycotted by most Indian Institutes of Technology (IITs)** for the **3rd** consecutive year over transparency concerns.
2. **Last time major IITs participated in the rankings was in 2019 when IIT Bombay and IIT Delhi were placed in the 401-500 overall band behind IIT Ropar and IIT Indore.**

INDIAN UNIVERSITIES IN THE TOP 500

Institution	2023 Rank	2022 Rank	Change
Indian Institute of Science	251-300	301-350	up 1 group
JSS Academy of Higher Education and Research	351-400	351-400	no change
Shoolini University of Biotechnology and Management Sciences	351-400	NR	
Alagappa University	401-500	501-600	up 1 group
Mahatma Gandhi University	401-500	601-800	up 2 groups

Additional Information

 Some Related Indian Initiatives are:

1. **Institutions of Eminence (IoE) Scheme:** It's a government scheme to provide the **regulatory architecture for setting up or upgrading 20 Institutions** (10 from the public sector and 10 from the private sector) **as world-class teaching and research institutions called 'Institutions of Eminence'.**
2. **National Education Policy, 2020: It aims to introduce several changes in the Indian education system** - from **school to college** and **make India a global knowledge superpower.**
3. **Impacting Research Innovation and Technology (IMPRINT):** It's a **first-of-its-kind Pan-IIT and IISc joint initiative** which aims to **develop a new education policy and a roadmap for research to solve major engineering and technology challenges** that **India must address and champion to enable, empower and encourage the nation for inclusive growth and self-reliance.**

9.8 Dr. A.P.J Abdul Kalam

Why in News?

Recently, the PM paid tribute to the former **President APJ Abdul Kalam** on his 90th birth anniversary.

About Dr A. P. J. Abdul Kalam

1. He was **born on 15th October 1931 at Rameswaram in Tamil Nadu.**
2. Every year **his birth anniversary is celebrated as the 'National Innovation Day' and 'World Students' Day'.**
3. He **graduated in Science from St Joseph's College, Trichy in 1954** and specialized in **Aeronautical Engineering from Madras Institute of Technology (MIT) in 1957.**
4. He is one of the most distinguished scientist of India with the **honour of receiving honorary doctorates from 48 Universities and institutions** from India and the abroad.
5. He was **sworn-in as India's 11th President in 2002** and completed the full term in 2007.
6. He **planned programmes to produce a number of successful missiles**, which helped him in earning the nickname **"Missile Man of India".**
7. He was **awarded the highest civilian awards of India** like **Padma Bhushan** (1981) and **Padma Vibhushan (1990) and the Bharat Ratna (1997).**
8. He **died on 27th July 2015 at Shillong, Meghalaya.**

Literary Works of Dr. Kalam are:

1. "Wings of Fire"
2. "India 2020 - A Vision for the New Millennium"
3. "My journey"
4. "Ignited Minds - Unleashing the power within India"
5. "Indomitable Spirit"
6. "Guiding Souls"
7. "Envisioning an Empowered Nation"
8. "Inspiring Thoughts"

So, What are the biggest Contributions of Dr A. P. J. Abdul Kalam?

1. **Contributed in developing the Fiberglass Technology:** He was a **pioneer in fiberglass technology** and led a young team to initiate this effort in **ISRO from design and development to the production of composite rocket motor cases.**
2. **Satellite Launch Vehicle (SLV-3):**
a) He made a **significant contribution as the project director to develop India's 1st indigenous Satellite Launch Vehicle (SLV-3) which successfully injected the 'Rohini satellite' into Near-Earth Orbit in July 1980** and made India an exclusive member of Space Club.
b) He was **also responsible for the evolution of ISRO's launch vehicle programme**, particularly the **PSLV configuration.**
3. **Indigenous Guided Missiles:**
a) After **working for almost 2 decades in ISRO and mastering launch vehicle technologies**, he **took up the responsibility of developing Indigenous Guided Missiles at the DRDO.**
b) He was also the Chief Executive of '**Integrated Guided Missile Development Programme' (IGMDP).**
c) He also **led to the weaponization of strategic missile systems** and the **Pokhran-II nuclear tests** in collaboration with the Department of Atomic Energy, which made India a nuclear weapon State.

4. **Technology Vision 2020:**

a) In **1998**, he put forward a countrywide plan called '**Technology Vision 2020'** in which he **described a road map for transforming India from a under developed to a developed society in 20 years.**

b) The plan called for, among other measures, **increasing agricultural productivity, emphasising technology as a vehicle for economic growth, and widening access to health care and education.**

5. **Medical and Healthcare:**

a) **Dr. Kalam in collaboration with cardiologist B. Soma Raju designed a cost-effective coronary stent known as 'Kalam-Raju-Stent' for coronary heart disease** which made healthcare accessible to all.

b) The device led to reduction of prices of imported coronary stents in India by more than 50%.

6. **Light Combat Aircraft project:**

a) He was deeply involved in country's **Light Combat Aircraft project.**

b) He was also associated with avionics and he became the 1st **Indian 'Head of State 'to fly a fighter plane.**

c) His first **aeronautical project** led him to designing **India's first indigenous hovercraft 'Nandi".** A hovercraft is a vehicle that can travel over land, water, mud and ice by lifting itself off the ground with large blowers that create an air cushion beneath the craft.

7. **Some Other Contributions are:**

a) He was also passionate about **bringing rural prosperity through PURA (Providing Urban Amenities to Rural Areas)**, in which science and technology has to play a key role.

b) Based on his diverse experience he propagated the concept of '**World Knowledge Platform'** which aims to help in creating solutions and products to tackle the challenges of the 21st century.

9.9 World Food Day

Why in News?

On 16th October, the World Food Day was celebrated to commemorate the establishment of the United Nations 'Food and Agriculture Organisation' (FAO).

About FAO

1. It was **established on 16th October,1945.**

2. **FAO is a specialised agency of the United Nations (UN).**

3. **It leads international efforts to defeat hunger.**

Key Highlights of World Food Day 2022

1. World Food Day is observed **annually** to **address the problem of global hunger.**

2. Even the **Sustainable Development Goal 2** (SDG 2) talks about **Zero Hunger.**

3. **Theme for 2022 is "Leave No One Behind".**

Significance of World Food Day

1. As a global community**, we all have a role to play in bringing forward those who are left behind by making our agrifood systems more inclusive and sustainable.**

2. It **promotes worldwide awareness** and action for those who suffer from hunger and the need to ensure healthy diets for all.

3. This day also **educate people about malnutrition and obesity**, both of which causes major health consequences.

So, What is the Status of Global Hunger according to Various Reports?

1. **The Hunger Hotspots Outlook (2022-23)**: It's a report which is released by the '**FAO**' and '**World Food Programme' (WFP)** . It says that **over 205 million people across 45 countries will need emergency food assistance to survive** in the coming years**.**

2. **The Global Report on Food Crisis 2022 which was** released in May this year by the **'Global Network against Food Crisis'** underscored that **almost 180 million people across 40 countries will face inescapable food insecurity very soon.**

3. **Global Hunger Report, 2022:** Globally, the **progress against hunger has largely stagnated in recent years**, with a **global score of 18.2 in 2022** as compared to **19.1 in 2014.**

4. **Other than Afghanistan, India has performed worse than all the countries in the South Asian region in the Global Hunger Index 2022. India was ranked 107 out of 121 countries.**

Additional Information

Some Related Indian Initiatives are:

1. **'Eat Right India' and 'Fit India Movement' along with 'Swachh Bharat Abhiyan', 'Jal Jeevan Mission'** and **other such efforts will improve the overall health of Indians.**

2. **Introduction of 17 new biofortified varieties of crops** to overcome the shortcomings of the common variety of crops which lacks important micronutrients.
   Example: MACS 4028 Wheat, Madhuban Gajar, etc.

3. **Food Security Act, 2013**

4. **Amendments** to the **APMC (agricultural produce market committee) Acts were done** to make them more competitive.

5. Steps to ensure that **farmers get atleast one and a half times the cost of produce as Minimum Support Price** (MSP), which along with the government procurement is an important part of ensuring the country's food security.

6. **Development of a large network** of **Farmer Producer Organisations** (FPOs).

7. **Amendments in the Essential Commodities Act, 1955** to **deal with the issue of grain wastage in India.**

8. The government is making efforts to **make India 'Trans Fat free' by 2022 only**, a year ahead of the **World Health Organisation** (WHO) target. **Trans Fat** is a **food toxin** present in **Partially Hydrogenated Vegetable Oils** (PHVOs) (e.g., vanaspati oil).

9. FAO **supported India's proposal to declare 2023** as the **International Year of Millets.**

10. For improving food access, especially for vulnerable populations, the Government of India has launched programme named **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).**

9.10 PM Kisan Samman Sammelan

Why in News?

Recently, PM inaugurated the 'PM Kisan Samman Sammelan', 2022 at the Indian Agricultural Research Institute in New Delhi.

So, What is PM Kisan (Pradhan Mantri Kisan Samman Nidhi)?

1. It was **launched in Nov 2018 to supplement the financial needs of land holding farmers.**
2. Under this scheme, **financial assistance of Rs 6000/- per year in 3 equal instalments is transferred into the bank accounts of farmers across the country through Direct Benefit Transfer (DBT) mode.**
3. **Initially, the scheme was meant for Small and Marginal Farmers (SMFs) having landholding upto 2 hectares** but later the scope of the scheme was **extended to cover all landholding farmers.**
4. It's a **Central Sector Scheme** with 100% funding from the Government of India.
5. It is being **implemented by the Ministry of Agriculture and Farmers Welfare.**
6. **Objectives of the scheme are:**
1. To supplement the **financial needs of the small and marginal farmers in procuring various inputs to ensure proper crop health and high yields.**
2. To **protect them from falling in the debts of moneylenders** for meeting such expenses and ensure their continuance in the farming activities.
7. **PM-KISAN Mobile App:** It was **developed and designed by the National Informatics Centre (NIC)** in collaboration with the Ministry of Electronics and Information Technology.

Who are excluded from the benefits under the scheme?

The **following categories of beneficiaries of higher economic status shall not be eligible for the benefits under the scheme and these are:**

1. All Institutional Land holders
2. Farmer families which belong to one or more of the following categories:
a) Former and present holders of constitutional posts,
b) Former and present Ministers/ State Ministers and former/present Members of LokSabha/ RajyaSabha/ State Legislative Assemblies/ State Legislative Councils, former and present Mayors of Municipal Corporations, former and present Chairpersons of District Panchayats,
c) All serving or retired officers and employees of Central/ State Government Ministries /Offices/Departments and its field units Central or State PSEs and Attached offices /Autonomous Institutions under Government as well as regular employees of the Local Bodies (Excluding Multi-Tasking Staff /Class IV/Group D employees),
d) All superannuated/retired pensioners whose monthly pension is Rs.10,000/-or more (Excluding Multi-Tasking Staff / Class IV/Group D employees) of the above category,
e) All Persons who have paid Income Tax in the last assessment year,
f) Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with professional bodies and carrying out their profession by undertaking practices.

Key Highlights of PM Kisan Samman Sammelan

1. **PM released the 12th instalment** of **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** funds.
2. **Rs 16,000 crores were transferred to over 8.5 crore eligible farmers** as part of the scheme.
3. PM also inaugurated **600 'Pradan Mantri Kisan Samruddhi Kendras' (PMKSK)** under the **Ministry of Chemicals & Fertilizers**. Under this scheme, more than **3.3 lakh retail fertilizer shops in the country will be converted into PMKSK** in a phased manner.
4. These **Kendras will fulfil the needs of several farmers like providing agri-inputs (fertilizers, seeds, implements); testing facilities for soil, seeds, fertilizers; generating awareness among farmers; providing information regarding various government schemes and ensuring regular capacity building of retailers at block/ district level outlets.**
5. The PM also launched the **'Pradhan Mantri Bhartiya Jan Urvarak Pariyojana'** – One Nation, One Fertilizer.
6. Under this scheme, the **'Bharat Urea Bags' are launched**. These **will help companies in selling fertilizers under the single brand name "Bharat"**.
7. A **e-magazine on fertilizer** with the name **'Indian Edge'** was also launched by the PM.
8. It **will also provide information on domestic and international fertilizer scenarios, including recent developments, price trend analysis, availability and consumption, success stories of farmers and other things.**

9.11 Giraffe

Why in News?

About almost 150 years ago, British colonists introduced giraffes into Africa.

About Giraffes

1. **Giraffe (genus Giraffa) have a total of 4 species** and **these are long-necked mammals with long legs** and **a coat pattern of irregular brown patches on a light background**.
2. Giraffes are the **tallest of all land animals, males (bulls)** may exceed **5.5 metres (18 feet) in height**, and the **tallest females (cows) are about 4.5 metres.**
3. Using **grabby tongue which is almost half a metre long**, **they are able to collect things from almost 6 metres from the ground.**
4. **Giraffes grow to nearly their full height by 4 years of age** but gain weight until they are 7 or 8. Males weights up to 1,930 kg, females up to 1,180 kg.
5. **Both genders have a pair of horns, though males possess other bony protuberances on the skull.**
6. **Giraffes prefer to eat new shoots and leaves**, mainly from the **thorny acacia tree.**
7. Giraffes **obtain most water from their food,** though in the **dry season they drink at least every 3 days.**
8. **Today, Giraffes can be found in grasslands and open woodlands in East Africa.**


About Indian Giraffe:

1.The **largest captive herd of the northern Giraffe** (29 individuals) **in India is at the Alipore Zoological Garden in Kolkata.**

2. A recent study has confirmed that the Giraffe species here are most likely the **Nubian giraffes** and the **Rothschild giraffe.**

3. The Nubian giraffe is the subspecies of giraffe which used to be widespread everywhere in **Northeast Africa.** However, **95% of the population of Nubian Giraffe has declined in the past 3 decades.**

4**. Rothschild's giraffe** is **1 of the tallest subspecies**, growing up to 6 metre tall. Its colouring is unique as compared to other giraffes as their markings stop halfway down their legs.

IUCN Red List Status:

1.**Nubian giraffes - Critically Endangered**

2. Rothschild giraffe – Endangereds
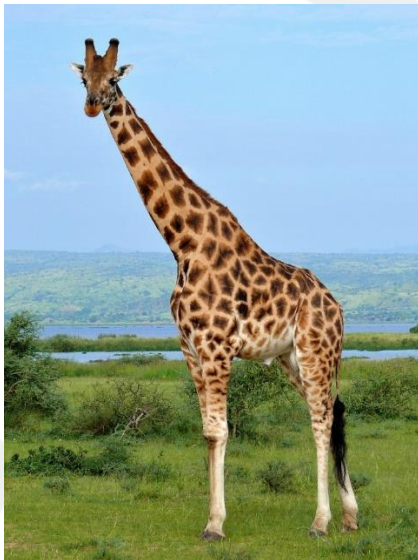
(9.12) Evolution of Coinage System in India

Why in News?

Recently, the Delhi government has appealed to the PM to have images of Goddess Lakshmi and Lord Ganesh printed on the new currency notes.

1. India has a long tradition of coinage with images of gods and goddesses on them.
2. It is interesting to know that **'The Kushans'**, who have ruled till 3rd century AD, were the first to use the image of Goddess Lakshmi on their coins.

History of Coinage in India

1. Punch Marked Coins:

a) The 1st documented evidence of coinage starts with the 'Punch Marked' coins issued between the 7th-6th century BC and 1st century AD.

b) They are called 'punch-marked' coins because of their manufacturing technique. Mostly made of silver and these coins contain symbols, each of which was punched on the coin with a separate punch.

c) They are broadly classified into 2 periods:

i) The 1st period is attributed to the Janapadas or small local states.

ii) The second period is attributed to the Mauryas.

iii) The motifs found on these coins were mostly drawn from nature like the sun, various animal motifs, trees, hills etc.

Punch Marked Coin, Silver Bentbar

2. Dynastic Coins: The earliest of these coins relate to those of the **Indo-Greeks, the Saka-Pahlavas and the Kushans**. These **coins are generally issued between the 2nd century BC and 2nd century AD.**

a) **Indo Greeks:** These are the **silver coins** with **Greek gods and goddesses** inscribed on them, apart from the **portraits of the issuers.**

b) **Sakas: The Saka coinage of the Western Kshatrapas** are perhaps the **earliest dated coins, the dates being given in the Saka era which commences in AD 78.** The Saka era represents the **official calendar of the Indian Republic**.

c) **Kushans:** Kushans, **who belongs from the Central Asian region depicted Oesho (Shiva), moon deity Miro and Buddha in their coinage.** Earliest Kushan coinage is generally attributed to **Vima Kadphises**. The Kushan coins generally depicted iconographic forms drawn from **Greek, Mesopotamian, Zorastrian and Indian mythology**. **Shiva, Buddha** and **Kartikeya** were the major Indian deities portrayed.

d) Satavahana: The dates of their coming into power is disputed and are variously put between **270 BC to 30 BC**. Their coins were **predominantly of copper and lead**; however, **silver coins were also found.** These coins carries the motifs of fauna like elephants, lions, bulls, horses, etc.

e) Western Kshatrapa: The texts on the coins were generally in **Greek and Brahmi, Kharoshti** too was used. The Western Kshatrap coins are known **to be the earliest coins bearing dates**.

f) Gupta: Gupta coinage (4th-6th centuries AD) followed the tradition of the Kushans, depicting the **king on the obverse and a deity on the reverse**; the deities were **Indian and the texts were in Brahmi**. The earliest Gupta coins are attributed to **Samudragupta, Chandragupta II** and **Kumargupta** and their coins often commemorate dynastic succession as well as significant socio-political events, like marriage alliances, the horse sacrifice etc.
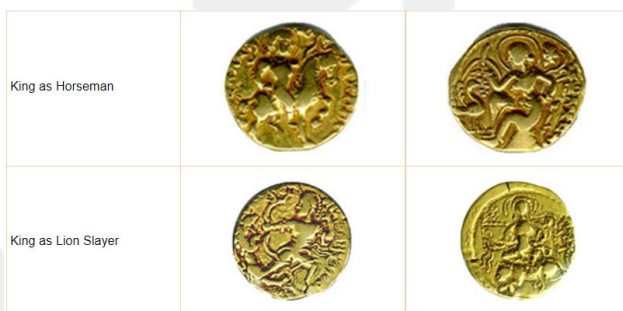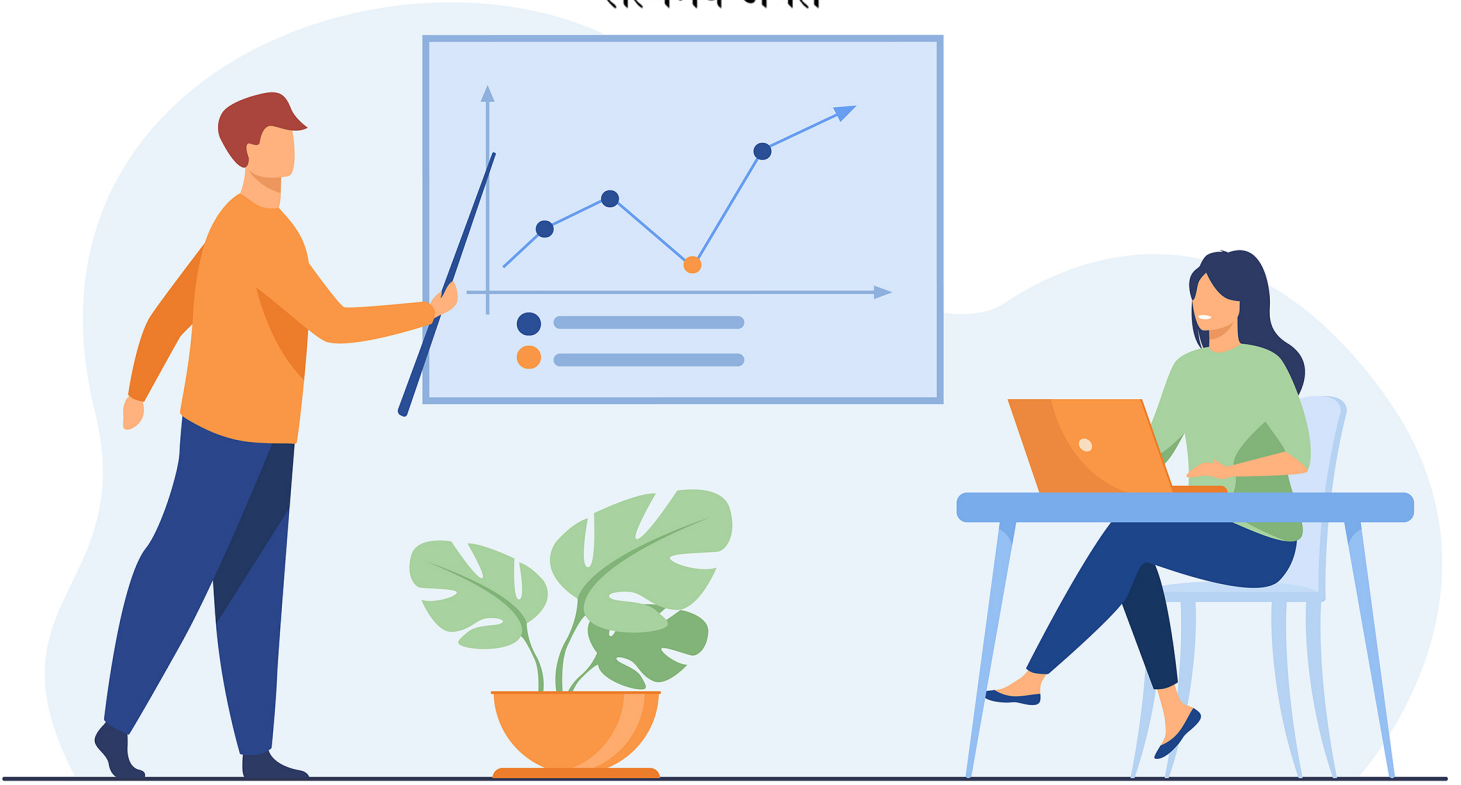
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