



drishti

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Polity and Governance

Highlights

- Internal Democracy in Political Parties
- Indian Nutrition Rating (INR)
- Convergence Portal of the MoFPI
- Live-Streaming of the Supreme Court's Proceedings
- ECI Seeks Limit on Cash Donations
- Ramakrishna Mission's Awakening Programme
- Pradhan Mantri Awas Yojana (Gramin)
- Market-Based Economic Dispatch of Power
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- Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)

Internal Democracy in Political Parties

Why in News?

The **Election Commission** is likely to take up the issue of internal democracy within parties.

What is the Need for Internal Party Democracy?

- **Representation:** The absence of intra-party democracy has contributed to political parties becoming **closed autocratic structures**. This adversely impacts the constitutional rights of all citizens to **equal political opportunity** to participate in politics and contest elections.
- **Less Factionalism:** A leader with strong grassroots connections would not be sidelined. This will allow less factionalism and division of parties. E.g., Sharad Pawar formed Nationalist Congress Party (NCP), Mamata Banerjee formed All India Trinamool Congress after leaving Indian National Congress (INC).
- **Transparency:** A transparent party structure with transparent processes will **allow proper ticket distribution and candidate selection**. The selection would not be based on the whims of a few powerful leaders in the party but will represent the choice of the larger party.
- **Accountability:** A democratic party will be **accountable to its party members**, for they will lose elections in the next cycle for their shortcomings.

- **Decentralising Power:** Every **political party has State and local body units**, an election at each level will allow creation of power centres at different levels. This will allow decentralisation of power and the decision making will take place at the ground level.
- **Criminalization of Politics:** As there is **no well-defined process for the distribution of tickets** to candidates before elections, tickets are given to candidates on the vague concept of winnability. This has led to an additional problem of **candidates with criminal backgrounds** contesting elections.

What are the Reasons for Lack of Intra-Party Democracy?

- **Dynasty Politics:** The lack of intra-party democracy has **also contributed to the growing nepotism in political parties**. With senior party leaders fielding their kins in elections, the succession plans for "family" constituencies are being put in place.
- **Centralised Structure of Political Parties:** The centralised mode of functioning of the political parties and the stringent anti-defection law of 1985 deters party legislators from voting in the national and state legislatures according to their individual preferences.
- **Lack of Law:** Currently, **there is no express provision for internal democratic regulation** of political parties in India and the only governing law is provided by **Section 29A of the Representation of the Peoples' Act, 1951** which provides for registration of political

Note:

parties with the ECI. However, ECI does not have any statutory power to enforce internal democracy in parties or to mandate elections.

- **Personality cult:** There is a **tendency of hero worship in people** and many times a leader takes over the party and builds his own coterie, ending all forms of intra-party democracy.
- **Easy to Subvert Internal Elections:** The ability of existing repositories of power to subvert internal institutional processes to consolidate power and maintain the status quo is unquestionable.

What about the Direction of the Election Commission on Internal Democracy?

- **Representation of the People Act, 1951:**
 - The ECI has **periodically used guidelines issued for registration of parties** under Section 29A of the Representation of the People Act, 1951 to remind parties to conduct elections and to ensure that **their leadership is renewed, changed or re-elected every five years.**
 - The EC's guidelines for parties applying for registration under the Act state that the **applicant should submit a copy of the party constitution.**
- **Power of De-registration of Political Parties:**
 - The commission has **asked the Law Ministry for the power to deregister political parties in the past**, but the proposal has not been implemented so far.
- **No Permanent President for a Party:**
 - The Election Commission of India (ECI) has **also recently rejected the idea of a 'permanent president' for a party.**
 - The ECI says such a step is inherently anti-democratic.

Indian Nutrition Rating (INR)

Why in News?

Recently, The **Food Safety and Standards Authority of India (FSSAI)**, the country's apex food regulator, released a **draft notification for front-of-pack labelling** which would be known as the **Indian Nutrition Rating (INR).**

What do we know about Indian Nutrition Ratings (INR)?

- **About:**
 - It mandates **pre-packaged foods to carry a star rating** similar to the energy-efficiency ratings on

electronic goods, **to discourage the consumption of foods high in sugar, salt and fats.**

➤ **Types:**

- **Daily Intake Guide:** The proportion of the daily recommendations of nutrients is present in one serving of the pre-packaged food.
- **Nutritional information Panel:** It provides the quality of each of the main nutrients present in the food.
- **Traffic Light Labelling:** It shows the amount of fats, salt, sugar, etc, present in the serving and classifies it with colours like red, orange or green based on how healthy it is.
- **Warning Label:** It shows whether the quality of salt, sugar and fats is high, without providing details of the quantities in the food.
- **Star Rating:** It provides 1 to 5 stars based on how healthy the product is, with 5 being healthiest and 1 for least healthy.
- **Process of Rating:** Further, the items would be given **scores based on contribution of energy** and content of **saturated fat, sugar, sodium, fruit and vegetables (FV), nuts, legumes, and millets (NLM)**, dietary fibre, and protein per 100 gm of solid or 100 ml liquid foods.
 - Solid food with a score of more than 25 will be given 0.5 stars, and those with a score less than – (minus) 11 will get 5 stars.
- **Logo:** The logo shall be displayed close in proximity to the name or brand name of the product on the front of pack.
- **Implementation:** The food businesses may **add interpretive information next to the star-rating logo**, giving details of energy, sugar, saturated fat, and salt content.
 - To generate the star-rating logo for the product, food businesses have to submit nutritional profiles of the products concerned on FSSAI's FoSCoS (Food Safety Compliance System) portal.
- **Exempted Products:**
 - Food such as milk and milk products, whey, butter oil, ghee, vegetable oil and fat, fresh and frozen fruit and vegetables, fresh and frozen meat, egg, fish, flour, and sweeteners will not have to display the star rating.
 - Carbonated beverages without any energy or sugar will also not be eligible for declaring the rating.

Note:

➤ Significance:

- According to a study there was a change in consumption pattern in several Latin American countries that implemented such warning labels, and that Chile reported a **24% drop in sugary drink consumption**.
- A meta-analysis of 100 studies published in a study indicated that nutrient warning labels are more effective than traffic lights and nutri-score labels.

Convergence Portal of the MoFPI

Why in News?

Recently, the **Ministry of Food Processing Industries (MoFPI)** has launched the **Convergence Portal** between the **Agriculture Infrastructure Fund (AIF)** scheme, **Pradhan Mantri Micro Food Enterprises Upgradation Scheme (PMFME)** and **Pradhan Mantri Kisan Sampada Yojana (PMKSY)**.

- A **Standard Operating Procedure (SOP)** was also issued with the objective of providing maximum benefits to the beneficiaries under AIF, PMFME and PMKSY.

What is the Convergence Module?

- The Ministry of Food Processing Industries (MoFPI) along with Ministry of Agriculture and Farmers Welfare, jointly launched a Convergence Portal to **better reap the benefits of the Agriculture and Food Processing Sector**.
- It is launched on the idea that all Ministries and Departments of the Government should work **together in cohesion** to serve the people of the country to the best of their abilities.
- The portal will prove to be very important for the **Food Processing Enterprises of the country**, benefiting different sections of the country, including farmers and small-scale entrepreneurs of the processing industry.
- It is a stepping stone to achieve the Prime Minister's dream of an **Aatma Nirbhar Bharat** and will also boost the concept of '**Vocal For Local**'.

What is Pradhan Mantri Micro Food Industry Upgradation Scheme?

➤ About:

- It was launched by the Ministry of Food Processing Industries in June, 2020 under the **Atma Nirbhar**

Bharat Campaign to enhance the competitiveness of individual micro enterprises.

- It provides financial, technical and commercial assistance for the **upgradation of micro food processing enterprises** in the country.
- The scheme adopts the **One District One Product (ODOP)** approach to reap the benefit of scale in terms of procurement of inputs, availing common services and marketing of products.
- It will be implemented over a period of five **years from 2020-21 to 2024-25**.
- **Funding:**
 - It is a **centrally sponsored scheme** with an outlay of Rs. 10,000 crore.
 - The expenditure under the scheme would be shared in **60:40 ratio between Central and State Governments**, in 90:10 ratio with North Eastern and Himalayan States, 60:40 ratio with UTs with legislature and 100% by Centre for other UTs.
- **Need:**
 - The unorganized food processing sector comprising nearly 25 lakh units contributes to 74% of employment in the **food processing sector**.
 - Nearly 66% of these units are located in rural areas and about **80% of them are family-based enterprises supporting livelihood of rural households** and minimising their migration to urban areas.
 - These units largely fall within the category of micro enterprises.
 - The unorganised food processing sector **faces a number of challenges** such as lack of access to modern technology & equipment, training, access institutional credit, lack of branding & marketing skills etc. which limit their performance and their growth.
- **Achievements:**
 - So far about 62,000 beneficiaries engaged in food processing activities **have benefitted from this scheme**. Around 7,300 loans **have been sanctioned** under the scheme for setting up new micro food enterprises or for upgrading existing units.
 - The pace of loan approvals is expected to increase by 50% in the third quarter of 2022-23.

What is AIF?

- Agriculture Infra Fund (AIF) is a financing facility launched in July 2020 for creation of **post-harvest management infrastructure** and community farm

Note:

assets, with benefits including **3% interest subvention and credit guarantee support.**

- Under this, Rs 1 lakh crore from 2020-21 to 2025-26 provision of funds has been made and interest subvention and credit guarantee assistance will be given till the year 2032-33.
- AIF scheme has the **facility of convergence with any other scheme of State or Central Government**, therefore in order to optimize the benefits of multiple government schemes for a particular project, these are being integrated with multiple external systems/portals.

What is Pradhan Mantri Krishi Sampada Yojna?

- Pradhan Mantri Kisan Sampada Yojana, a **Central Sector Scheme** of the Ministry of Food Processing Industries, is envisaged as a **comprehensive package, which will result in creation of modern infrastructure with efficient supply chain management** from farm gate to retail outlet.
- Seven component schemes under PMKSY:
 - Mega Food Parks.
 - Integrated Cold Chain and Value Addition Infrastructure.
 - Infrastructure for Agro-Processing Clusters.
 - Creation of Backward and Forward Linkages.
 - Creation/Expansion of Food Processing & Preservation Capacities.
 - Food Safety and Quality Assurance Infrastructure.
 - Human Resources and Institutions.

What are Other Related Initiatives?

- **Agricultural and Processed Food Products Export Development Authority (APEDA).**
- **Minimum Support Prices (MSP).**
- **Commission for Agricultural Costs and Prices (CACP).**
- **National Skill Development Corporation (NSDC).**
- **Codex Alimentarius Commission**
- **Draft Food Safety And Standards (Labelling And Display) Regulation.**

Live-Streaming of the Supreme Court's Proceedings

Why in News?

Recently, the **Supreme Court (SC)** decided to **live stream its proceedings** in crucial Constitution Bench

cases that will be heard from **27th September, 2022.**

- **Positive systemic corrections have been made possible** due to the broadcast of court proceedings.

What is the Background?

- The Supreme Court in *Swapnil Tripathi vs Supreme Court of India* (2018) had ruled in favour of opening up the apex court through live-streaming.
- It held that the **live streaming proceedings are part of the right to access justice under Article 21** (Protection of Life and Personal Liberty) of the Constitution
- **Gujarat High Court was the first high court to livestream court proceedings** followed by Karnataka high court.
- Currently, the **Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Patna High Courts** live stream their proceedings.
 - Allahabad High Court is considering **power** doing the same.

What were the Recommendations by the Attorney-General of India?

- **Live-streaming** must be introduced as a **pilot project in Chief-Justice of India's (CJI's) court, and only in Constitution Bench cases.**
 - The success of this project will **determine whether or not live streaming should be introduced in all courts** i.e., the Supreme Court and in courts pan-India.
- **De-congestion of courts and improved physical access to courts** for litigants who have to otherwise travel long distances to come to the SC were **cited by the Attorney general (AG) in support of his recommendation.**
- A set of guidelines suggested by the A-G was **approved by the SC.** However, the A-G suggested that the **court must retain the to withhold broadcasting**, and also **not permit it in cases involving:**
 - **Matrimonial matters**
 - **Matters involving interests of juveniles** or the protection and safety of the private life of the young offenders
 - **Matters of National security**
 - **To ensure that victims, witnesses or defendants can depose truthfully and without any fear.**

Note:

- **Special protection** must be given to vulnerable or intimidated witnesses.
- It may provide for **face distortion of the witness** if she/he consents to the broadcast anonymously.
- **To protect confidential or sensitive information**, including all matters relating to sexual assault and rape
- **Matters where publicity would be antithetical** to the administration of justice, and
- **Cases which may provoke sentiments** and arouse passion and provoke enmity among communities.

What is the Scenario in Other Countries?

- **United States:** Since 1955, **audio recording and transcripts of oral arguments** has been allowed.
- **Australia:** **Live or delayed broadcasting is allowed** but the practices and norms differ across courts.
- **Brazil:** Since 2002, **live video and audio broadcast of court proceedings**, including the deliberations and voting process undertaken by the judges in court, is allowed.
- **Canada:** **Proceedings are broadcast live** on Cable Parliamentary Affairs Channel, accompanied by explanations of each case and the overall processes and powers of the court.
- **South Africa:** Since 2017, the Supreme Court of South Africa has **allowed the media to broadcast court proceedings in criminal matters**, as an extension of the right to freedom of expression.
- **United Kingdom:** After 2005, **proceedings are broadcast live with a one-minute delay** on the court's website, but coverage can be withdrawn in sensitive appeals.

What are Associated Concerns?

- **Concerns:**
 - **Video clips of proceedings from Indian courts** that are already there on YouTube and other social media platforms with **sensational titles and little context** are leading to the **spread of misinformation** among the public, as prevalent from the recent past.
 - Also, the **commercial agreements with broadcasters** are also concerning.
 - The **unauthorised reproduction of live streaming videos** is another cause for concern as its regulation will be very difficult at the government's end.

ECI Seeks Limit on Cash Donations

Why in News?

Recently, the **Election Commission of India (ECI)** has suggested a slew of amendments to **RP (Representation of People Act) Act, 1951** to increase **transparency and accountability on the part of candidates**.

What are the Concerns?

- It was found that while donations reported by some political parties were nil, **their audited accounts statement showed receipt of huge amounts**, proving large-scale transactions in cash, **below the threshold limit of Rs 20,000**.
- Another area of concern that has been identified by the EC is the **violation of foreign exchange regulations**.

What are the Key Recommendations of ECI?

- **Report Donations above Rs 2000.**
 - **All donations above Rs 2,000 should be reported**, thereby enhancing transparency in funding.
 - As per rules, political parties have to disclose all donations **above Rs 20,000** through their contribution report that is submitted to the EC.
- **Digital or Cheque Transactions:**
 - Make **digital transactions or account payee cheque transfers mandatory** for all expenses above **Rs 2,000 to a single entity/person**.
- **Limit Cash Donations:**
 - Restrict **cash donations at 20% or at maximum Rs 20 crore out of the total funds** received by a party, whichever is less.
- **Separate Bank Account:**
 - **Every fielding candidate should open a separate bank account for election purposes** and route all expenses and receipts through this account, and **furnish these details in their account** of election expenditure.
- **Segregate Foreign Donations:**
 - The EC has also sought **"electoral reforms"** to ensure that **no foreign donations creep into the funds of the parties** as stipulated under the RP Act and the **Foreign Contribution Regulation Act (FCRA), 2010**.

Note:

- At present, there is **no mechanism to segregate foreign donations** at the initial stages specifically, and the present format of contribution report.

What is ECI?

➤ About:

- The Election Commission of India is an **autonomous constitutional authority** responsible for **administering Union and State election processes** in India.
- The body administers elections to the **Lok Sabha, Rajya Sabha, and State Legislative Assemblies in India**, and the offices of the President and Vice President in the country.
- Originally the commission had only one election commissioner but after the Election Commissioner Amendment Act 1989, it has been made a multi-member body.
- The commission consists of one Chief Election Commissioner and two Election Commissioners

➤ Constitutional Provisions:

- Part XV** of the Indian constitution deals with elections, and establishes a commission for these matters.
- The Election Commission was established in **accordance with the Constitution on 25th January 1950**.
- Article 324 to 329** of the constitution deals with powers, function, tenure, eligibility, etc of the commission and the members.

Articles related to Elections

324	Superintendence, direction and control of elections to be vested in an Election Commission.
325	No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll on grounds of religion, race, caste or sex.
326	Elections to the House of the People and to the Legislative Assemblies of States to be on the basis of adult suffrage.
327	Power of Parliament to make provision with respect to elections to Legislatures.
328	Power of Legislature of a State to make provision with respect to elections to such Legislature.
329	Bar to interference by courts in electoral matters.

Ramakrishna Mission's Awakening Programme

Why in News?

Recently, the Union Minister for Education launched **Ramakrishna Mission's 'Awakening' Programme** for school students.

What do we know about the Awakening Programme?

➤ About:

- It is an initiative towards ensuring overall personality development of a child in line with the philosophy of National Education Policy (NEP), 2020.
- It is for the students of **classes I to V**.

➤ Background:

- Ramakrishna Mission, Delhi branch, from 2014 onwards, has been successfully conducting the **Awakened Citizen Program (ACP)** for **middle school students** to enable them to build "**ATMASHRADDHA**" (Self-esteem) and make responsible choices. It helps them to find solutions for all problems of life.
- There has been a **demand** from educationists for a similar program for Primary school students.
 - In response to this, '**Awakening**' has been designed and piloted across 126 schools.

➤ Need:

- Social transformation** is one of the key goals of education.
- Values and wisdom** are **more important than material wealth**.
- Value-based education is important for building a future-ready and socially conscious generation.

What do we Know about Ramakrishna Mission?

➤ About:

- Ramakrishna Mission** carries out extensive educational and philanthropic work and expounds a modern version of **Advaita Vedanta**—a school of Indian philosophy.
- The society was founded near Kolkata by Vivekananda in 1897 with a twofold purpose: to spread the teachings of Vedanta as embodied in the life of the saint Ramakrishna (1836–86) and to improve the social conditions of the Indian people.

Note:

- The organizations were brought into existence by **Sri Ramakrishna (1836-1886)**, the great 19th-century saint from Bengal who is regarded as the Prophet of the Modern Age, and Sri Ramakrishna's chief disciple, **Swami Vivekananda (1863-1902)**.
- **Motto: "ATMANO MOKSHARTHAM JAGAD HITAYA CHA"** ("For one's own salvation and for the welfare of the world").

What do we know about Swami Vivekanand?

➤ Birth:

- He was born as **Narendranath Datta on 12th January 1863**.
- **National Youth Day** is held every year to observe the birth anniversary of Swami Vivekananda.
- In **1893**, upon the request of **Maharaja Ajit Singh of the Khetri State**, he **took the name 'Vivekananda.'**

➤ Contributions:

- Introduced the world to the Indian philosophies of **Vedanta and Yoga**.
 - He **preached 'neo-Vedanta'**, an interpretation of Hinduism through a Western lens, and believed in combining spirituality with material progress.
- Laid the greatest emphasis on **education** for the **regeneration of our motherland**. Advocated a **man-making character-building education**.
- Best known for his **speech at the World Parliament of Religion in Chicago** in 1893.
- Spelt out the **four pathways of attaining moksha** from the worldly pleasure and attachment in **his books** - Raja-yoga, Karma-yoga, Jnana-yoga and Bhakti-yoga.
- **Netaji Subhas Chandra Bose** had called **Vivekananda** the **"maker of modern India."**

➤ Associated Organisations:

- He was the **chief disciple of the 19th-century mystic Ramakrishna Paramhansa** and established the **Ramakrishna Mission in 1897**.
- In 1899, he **established Belur Math**, which became his permanent abode.

➤ Nationalism

- Though growth of Nationalism is attributed to Western influence but Swami Vivekananda's nationalism is deeply rooted in Indian spirituality and morality.

- His nationalism is based on Humanism and Universalism, the two cardinal features of Indian spiritual culture.
- Unlike western nationalism which is secular in nature, Swami Vivekananda's nationalism is based on religion which is life blood of the Indian people.
- The basis of his nationalism are:
 - Deep concern for masses, freedom and equality through which one expresses self, spiritual integration of the world on the basis of universal brotherhood.
 - "Karmyoga" is a system of ethics to attain freedom both political and spiritual through selfless service.
- His writings and speeches established motherland as the only deity to be worshipped in the mind and heart of countrymen.
- **Death:**
 - He **died at Belur Math in 1902**. Belur Math, **located in West Bengal**, is the headquarters of Ramakrishna Math & Ramakrishna Mission.

Pradhan Mantri

Awas Yojana (Gramin)

Why in News?

Recently, the **Union Ministry of Rural Development** has come up with penalties for any further delay in completing the flagship rural household scheme — **Pradhan Mantri Awas Yojana (Gramin)**.

Why is the Need for Imposing Penalties?

➤ About:

- The penalty would be levied on the state government. If the sanction of the house is delayed for more than one month from the date of issue of the target, **the State government will be penalised Rs 10 per house** for the first month of delay and **Rs 20 per house** for each subsequent month of delay.
- Similarly, if the first instalment due to the beneficiary is **delayed for more than seven days** from the date of sanction, then the State governments will have to pay **Rs 10 per house per week of delay**.

Note:



- No penalty would be imposed if the central funds are not available with the State.
- **Need:**
 - **To Reorient Focus:** Due to **Covid-19**, there was sluggishness in the implementation of the scheme, therefore by imposing penalties the central government is ensuring that the States pay more attention to the programme.
 - **Issues with State Government:** West Bengal, Chhattisgarh and Odisha along Assam are the leading four laggard States who are far behind their targets.
 - Further, the West Bengal government repackaged the scheme as “**Bangla Awas Yojana**” and due to this reason, the central government withheld funds meant for the scheme.

What is Pradhan Mantri Awas Yojana Gramin?

- **Ministry Involved:** Ministry of Rural development.
- **Aim:** To **provide a pucca house with basic amenities to all rural families**, who are homeless or living in kutchra or dilapidated houses **by the end of March 2022**.
 - To **help rural people Below the Poverty Line (BPL) in construction of dwelling units** and upgradation of existing unserviceable kutchra houses by providing assistance in the form of a full grant.
- **Beneficiaries:** People belonging to SCs/STs, freed bonded labourers and non-SC/ST categories, widows or next-of-kin of defence personnel killed in action, ex-servicemen and retired members of the paramilitary forces, disabled persons and minorities.
- **Selection of Beneficiaries:** Through a three-stage validation - **Socio-Economic Caste Census 2011, Gram Sabha**, and **geo-tagging**.
- **Cost Sharing:** The cost of unit assistance is shared between Central and State Governments in the ratio of **60:40 in plain areas and 90:10 for North Eastern and hilly states**.
- **Features:**
 - The unit assistance has been increased from Rs. 70,000 to Rs. 1.20 lakh in plain and from Rs. 75,000 to Rs. 1.30 lakh in hilly states.
 - The assistance for construction of toilets shall be leveraged through convergence with **Swachh Bharat Mission-Gramin (SBM-G)**, **MGNREGS** or any other dedicated source of funding.

- **Performance:**
 - Under the scheme, the government has set the target of 2.95 crore houses and by August 2022, 2.02 crore houses have been constructed.

Market-Based Economic Dispatch of Power

Why in News?

The **Market-Based Economic Dispatch (MBED) mechanism** envisages **centralised scheduling for dispatching the entire annual electricity consumption** of around 1,400 billion units.

What is the Centralised Model of MBED?

- **MBED mechanism** proposes a **centralised scheduling of power dispatches**, both inter-state and intra-state.
- It will mark a clear **shift from a decentralised model which** is backed by **Electricity Act, 2003**.
- MBED is a way forward to deepen power markets in line with the Centre’s ‘**One Nation, One Grid, One Frequency, One Price**’ formula.
 - It will ensure that the **cheapest electricity generating resources across the country are supplied to meet the overall system demand** and will therefore be a win-win for both the distribution companies and the generators and result in savings for consumers.
- The implementation of the first phase of MBED was **earlier planned to start with effect from April 1, 2022**.
 - However, it was **put off for later in 2022**, the date for which is yet to be announced.

What is the Electricity Act 2003?

- **The Electricity Act, 2003** is the **central law regulating the electricity sector**.
- The Act provides for **Electricity Regulatory Commissions at both the central and state levels i.e., Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERCs)**.
 - **Functions of these Commissions include:**
 - Regulating and determining tariff
 - Issuing licenses for transmission
 - Distribution, and electricity trading
 - Adjudicating upon disputes, within their respective jurisdiction.

Note:

What is the Electricity (Amendment) Bill 2022?

➤ About:

- The Electricity Amendment Bill, 2022 aims at giving multiple players open access to **distribution networks of power suppliers** and also allowing consumers to choose any service provider.

➤ Implication:

- The Bill seeks to amend **Electricity Act 2003**:
 - To facilitate the **use of distribution networks** by all licensees, under provisions of **non-discriminatory “open access”** with the objective of **enabling competition, enhancing efficiency** of distribution licensees for improving services to consumers and **ensuring sustainability** of the power sector.
 - To facilitate **non-discriminatory open access to the distribution network** of a distribution licensee.
 - To make provisions vis-à-vis **graded revision in tariff** over a year besides **mandatory fixing of maximum ceiling and minimum tariff** by the appropriate commission.
 - To convert the rate of punishment **from imprisonment or fine to fine**.
 - To **strengthen functions** that will be discharged by the regulators.

What are the Concerns Associated with the Centralised Model of MBED?

- MBED will have **effect on the relative autonomy of states** in managing their electricity sector, including their own generating stations, and make the **Electricity Distribution Companies (DISCOMs)** (mostly state-owned) entirely dependent on the centralised mechanism.
- MBED is **inconsistent with the constitutional provisions, existing legislative framework and market structure**, and could end up creating more challenges than it resolves as it infringes on the autonomy of states.
- The **concerns regarding the viability of DISCOMs** really need to be tackled.
 - Currently, **power is in the Concurrent List** of the Constitution, with the **electricity grid being divided into** state-wise autonomous control areas managed by the **State Load Dispatch Centres (SLDCs)**, which in turn are supervised by **Regional Load Dispatch**

Centres (RLDCs) and the National Load Dispatch Centre (NLDC).

- Each control area is **responsible in real time for balancing its demand with generation resources**.
- The new model will **narrow the multiple options currently available** under the voluntary market design with day-ahead contracts turning redundant.
- For instance, the **DISCOMs and SLDC wouldn't be able to buy or sell power in the real-time market**.
- It could **potentially clash with emerging market trends i.e., increase in renewable energy** in the overall generation mix and the increasing numbers of **electric vehicles** plugging into the grid.
 - All of these actually **necessitate greater decentralisation of markets** and voluntary pools for efficient grid management and operations.
- India has a diversified electricity market ranging from **long-term power purchase agreements (PPAs), cross border PPAs, short and medium term bilaterals**, day-ahead power exchange, and a real-time online market.
 - Around 87% of the installed power is tied up under long term PPAs and the remaining is transacted in the power markets.
 - At present, **each control area or state follows merit-order dispatch (cheapest power dispatched first)** from the basket of intra-state and inter-state resources and buys or sells on the day-ahead power exchange. **The schedules under long-term PPAs can be revised**.
 - However, this feature of **pan-India visibility of the available tradable power on a daily basis** on the power exchange **will not be available as per the MBED model**.
- The **must-run status of some power stations such as Trombay TPS, Mumbai or the Dadri TPS** in the NCR region **will come under question**.
 - These power stations are critical for security of supply to key cities such as Mumbai or Delhi and in islanding operations in the event of a grid failure.
- The proposed **Bilateral Contract Settlement (BCS) mechanism** under the scheme for refunding the difference between the Market Clearing Price and the contract price under the PPA, primarily to keep the PPA prices intact, is **another challenge**.
 - This will **dilute the objective of “market-driven prices”** while complicating the entire accounting and settlement process.

Note:

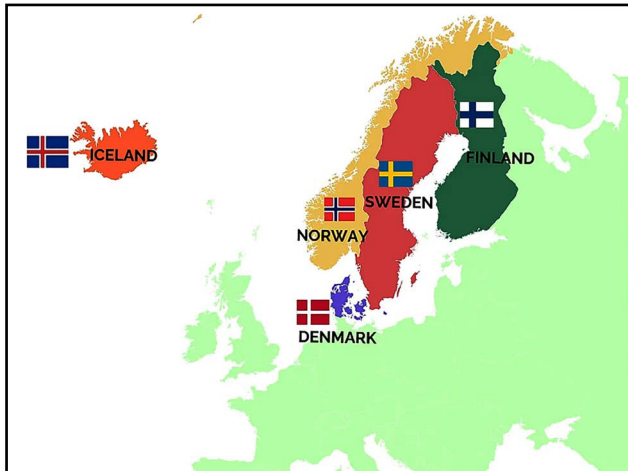
- Further, it will **erode the sanctity of time tested PPAs and create a volatile wholesale market.**

Nordic Model of Social Democracy

Why in News?

In Sweden the new right-wing government is about to form, which threatens the **Nordic (Also Scandinavian) Model of Social Democracy.**

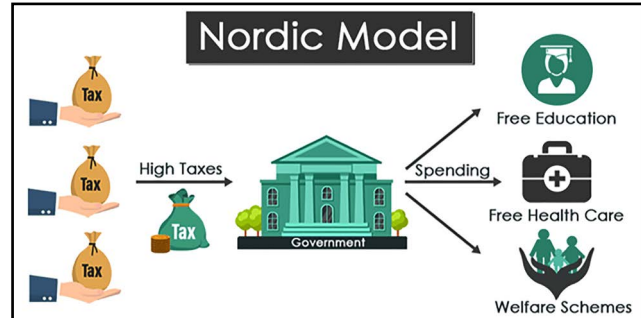
- Sweden's right-wing coalition led by **Moderate Party** has defeated the **centre-left bloc coalition led by Social Democrats Party**, which notwithstanding remained the single largest party.
- Sweden, Norway, Finland, Denmark, and Iceland, collectively known as the **Nordic countries.**



What is the Nordic Model of Democracy?

- The Nordic model refers to the standards followed in Sweden, Norway, Finland, Denmark, and Iceland. These nations are known for **high living standards and low-income disparity.**
- The model is a **unique combination of Free-Market Capitalism and Social Welfare.**
 - An economic system that is based on supply and demand is known as the **Free Market.**
 - Social Benefits are **funded by taxpayers and administered by the government** for the benefit of all citizens.
- It is a **mixed economic system that reduces the gap between the rich and the poor** through **redistributive taxation** and a **robust public sector** while preserving the benefits of capitalism.

- Gender equality is a **hallmark trait of the culture** that results in not only a high degree of workplace participation by women but also a high level of parental engagement by men.



What Makes the Nordic Model Work?

- A combination of **shared history and societal development is credited** with much of its success.
 - Unlike areas that developed around the formation of large corporate-owned farms, the history of **this part of the world is largely one of family-driven agriculture.**
- The result is a nation of small entrepreneurial enterprises directed by citizens **facing the same set of challenges.** Solutions that benefit one member of **society are likely to benefit all members.**
- This **collective mentality** results in a citizenry that trusts its government because the government is led by **citizens seeking to create programs that benefit everyone.**
- The result is **publicly funded services**, such as healthcare and education, are of such high quality that private enterprises have no reason to offer these services or room to improve them. This **mindset remained intact as capitalist enterprises developed.**

What are the Advantages and Disadvantages?

- **Advantage:**
 - The Nordic model yields **equality and social mobility.**
 - Everyone has **free access to decent public services**, including some of the best education and healthcare in the world, and people appear happy to pay their taxes to make sure that this continues.
 - These collective benefits are merged with entrepreneurship, creating an efficient blend of capitalism and socialism (Cuddly Capitalism).

Note:

- **Disadvantage:**
 - The model is criticized, because of the high taxes, high degree of government intervention, and relatively low **Gross Domestic Product (GDP)** and productivity, **limit economic growth**.
 - The Nordic model **redistributes assets, limits the amount of money available for personal spending and consumption**, and encourages reliance on government-subsidized programs.

What are the Challenges to this Model?

- **Aging Populations:**
 - In terms of an aging population, a large base of young taxpayers and a smaller population of older residents receiving services are the ideal scenario. As the population balance shifts the other way, benefit reductions are a likely outcome.
- **Immigration:**
 - In terms of immigration, these countries attract a notable influx of newcomers seeking to enjoy generous public benefits. **These new arrivals often come from nations that do not have a long, shared history of making decisions on behalf of the common good.**
 - **New arrivals can present a significant burden to the system and could,** ultimately, result in its demise.

Gun Violence

Why in News?

Gun violence is an issue that is hotly debated in different countries.

- Anti-gun activists have often pointed to the **killing of innocents in mass shootings** in public places and **called for a ban on the purchase of guns by civilians in US** also raise concerns over increasing **gun culture in India**.

What are the Arguments in favor of Access to Guns?

- Some people believe that **guns can actually make crime less likely** by raising the cost of committing a crime. They have particularly pointed out that it is hard to quantify the number of lives that have potentially been saved by civilians who held guns, leave alone the number of crimes that never happened **because the potential victims held a gun**.

- Some researchers have found that there is a **strong negative relationship between access to firearms among blacks in the US and incidents** of lynching. The finding implies that access to firearms helped blacks better protect themselves against incidents of lynching.

What is the State of Gun Ownership in India?

- The **Small Arms Survey of 2018** claimed that **civilian gun ownership in India** stands at an astounding 70 million, **second only to the US**.
 - The figure seems bizarre, given that gun licenses in India number just 3.4 million, over a third of them in Uttar Pradesh.
- **In 2016**, India ranked 3rd in terms of **gun-related homicides**, and over 90 % of the cases involved the use of unlicensed weapons. This indicates that the **seizure of illegal guns is just a small part of a larger problem**.
- According to the National Crime Records Bureau report of 2020, some **75,000 firearms were seized in that year**, about half of them from UP, which is widely known to be the hub of illegal arms manufacture.

What are the Gun Control Laws in India?

- **Arms Act of 1959:**
 - **About:**
 - It aims to be as extensive as possible to cover all aspects relating to the acquisition, possession, manufacture, sale, import, export, and transport of arms and ammunition in India.
 - **Requirements for Acquiring Gun License:**
 - The minimum age requirement for acquiring a gun license in India is 21 years.
 - The applicant must not have been convicted of any offence involving violence or moral turpitude five years prior to commencing the application, not of an 'unsound mind' and not a threat to public safety and peace.
 - Property qualification is not a criterion for acquiring a gun license.
 - Upon receiving an application, the **licensing authority (i.e., the Home Ministry)**, asks the officer in-charge of the nearest police station to submit a report about the applicant after thorough vetting within a prescribed time.

Note:

○ Other Features:

- It defines 'prohibited arms' as those that either discharge any noxious liquid or gas, or weapons that seek pressure to be applied on a trigger for discharge.
- It allows the use of smooth bore gun with a barrel of not less than 20 inches for crop protection or sport.
- **No entity is permitted to sell or transfer any firearm which does not bear the name of the maker, manufacturer's number or any other visible or stamped identification mark.**

➤ Arms Amendment Act 2019:

- The Arms Act amended in 2019 reduces the number of firearms that an individual can procure **from 3 to 2**.
- The validity of the license has been **increased from the present 3 years to 5 years**.
- It also enlists specific provisions on curtailing the use of licensed weapons to ensure social harmony.
- The **punishment of imprisonment is increased between 7 and 14 years**, along with a fine for the offense of acquisition, possession or carrying of prohibited ammunition without a license.
 - It prohibits the conversion of one category of firearms to another without a license.
 - Unlawful manufacture, sale and transfer are liable for an imprisonment term not less than seven years which could be extended to life, with a fine.

Draft Indian Telecommunication Bill 2022

Why in News?

Recently, the **Department of Telecommunications (DoT)** released the **draft Indian Telecommunications 2022 Bill** to regulate Internet-based **OTT(Over-The-Top)** telecom services.

What are the Key Highlights of the Draft Bill?

➤ About:

- The draft Bill consolidates **three separate acts** which currently govern the telecommunication sector — **the Indian Telegraph Act, 1885, Indian**

Wireless Telegraphy Act, 1933, and The Telegraph Wires (Unlawful Protection) Act, 1950.

➤ Dilution of TRAI Power:

- The DoT has also proposed to dilute some crucial powers and responsibilities of the **Telecom Regulatory Authority of India (TRAI)** on issuing new licences to service providers.

➤ OTT Regulation:

- The government has included internet-based and **OTT communication services** such as WhatsApp calls, Facetime, Google Meet etc **under telecom services**.
 - It was the long-standing demand by telecom operators for creating a level playing field. At present, while **telecom companies need a licence to offer services, OTT platforms do not**.
 - Further, bringing OTTs under the ambit of telecom services means that OTT and **internet-based communications would require a licence to offer services**.

➤ Provision of Refund:

- The telecom ministry has proposed a provision for refund of fees in case a telecom or internet provider surrenders his license.

➤ Default in Payment by Licensees:

- In the **event of payment default, and in extraordinary circumstances**, including financial stress, consumer interest, maintaining competition in the sector, or reliability and continued supply of telecommunication services, the **govt can defer the payment of such amounts, convert a part or all of the amounts payable into shares**, write-off payable amounts or provide relief from payment.

➤ In case of Insolvency:

- In the **case of insolvency, the spectrum assigned to an entity shall revert to government control**, and the Central Government may take such further action, as may be prescribed, which may include allowing such licensee or assignee to continue to use the spectrum.

➤ Telecommunication Development Fund:

- It proposes to **rename the Universal Service Obligation Fund (USOF) as Telecommunication Development Fund (TDF)**.
 - The USO fund is **generated from the annual revenue of telecom services providers**. The sums of money received towards the TDF will first be credited to the Consolidated Fund of India.

Note:

- The fund will be **utilised to boost connectivity services in underserved rural, remote, and urban areas**. It will also **aid research and development of new telecommunication services, skill development**, and support the introduction of new telecommunication services.

What is the Present status of the Telecom Industry in India?

➤ **Present Status:**

- The Telecom industry in India is the **second largest in the world** with a subscriber base of 1.17 billion as of 2022. India has an **overall teledensity of 85.11 %**.
- The industry's exponential growth over the last few years is primarily driven by affordable tariffs, wider availability, the roll-out of **Mobile Number Portability (MNP), expanding 3G and 4G coverage**, and evolving consumption patterns of subscribers.
- The Telecom sector is the **3rd largest sector in terms of FDI inflows, contributing 6.44% of total FDI inflow**, and contributes directly to 2.2 million employment and indirectly to 1.8 million jobs.
- Between 2014 and 2021, the **FDI inflows in the Telecom sector rose by 150%** to USD 20.72 billion from USD 8.32 billion during 2002-2014.
- 100% Foreign Direct Investment (FDI) has now been allowed in the Telecom sector under the automatic route.
- India is on its way to becoming the **second-largest smartphone market globally by 2025 with around 1 billion installed devices** and is expected to have 920 million unique mobile subscribers by 2025 which will include 88 million 5G connections.

➤ **Initiatives:**

- **PLI Schemes under Atmanirbhar Bharat Abhiyan:**
 - **Production Linked Incentive (PLI)** Scheme worth INR 12,195 Crores for manufacturing of telecom and networking products. Incentives worth more than INR 4,000 Crores have been earmarked for the Design Led Manufacturing Scheme of the existing PLI Scheme.
- **Telecom Sector Reforms:**
 - In 2021, large-scale structural and procedural reforms have been brought in to enhance liquidity and minimise financial stress within the telecom sector.

○ **Bharat Net Project:**

- **Bharat Net Project** Optical fibre cables laid to 178,247-gram panchayats, out of which 161,870 are service ready. Additionally, 4,218-gram panchayats have been connected over satellite media, taking the total number of service-ready gram panchayats to 166,088.

○ **Prime Minister Wi-Fi Access Network Interface (PM-WANI):**

- Provision of **public Wi-Fi service through Public Data Offices (PDOs)** spread across the country to accelerate the expansion of broadband internet services.

➤ **Challenges:**

- **Declining Average Revenue Per User (ARPU):** ARPU decline now is sharp and steady, which, combined with falling profits and in some cases serious losses, is prompting the Indian telecom industry to look at consolidation as the only way to boost revenues.
 - In 2019, the Supreme Court allowed the government's plea to recover adjusted gross revenue of about Rs 92,000 crore from telcos, that further adds to their stress.
- **Limited Spectrum Availability:** Available spectrum is less than 40% as compared to European nations and 50% as compared to China.
- **Low Broadband Penetration:** Low broadband penetration in the country is a matter of concern. As per white paper presented on broadband at the last International Telecommunication Union (ITU), **broadband penetration in India is only 7%**.
- Over the Top (OTT) applications such as WhatsApp, OLA and so on do not need permission or a pact with a telecommunications company. This hampers the revenue of telecommunication service providers.
- **Huge fluctuations in the duties on Telecom Equipment** which contribute to connecting the whole system from the central server to the consumer.

What are Over-The-Top Platforms (OTT)?

- OTT or Over-the-Top platforms are audio and video hosting and streaming services such as **Netflix, Amazon Prime Video, Hotstar etc**, which started

Note:

out as content hosting platforms but soon branched out into the production and release of short movies, feature films, documentaries and web series themselves.

- These platforms offer a range of content and use **Artificial Intelligence (AI)** to suggest users the content they are likely to view based on their past viewership on the platform.
- Most OTT platforms generally offer some content for free and charge a monthly subscription fee for premium content which is generally unavailable elsewhere.

SC's Reference on Capital Punishment

Why in News?

Recently, the **Supreme Court (SC)** has referred to a larger Bench the issues relating to the norms for imposing the **Capital Sentence**.

What has the Court Said?

- The current referral of the three-judge **bench** of the Supreme Court to a five-judge bench is **based on an argument that the process of same-day sentencing is hopelessly tilted against the accused**.
- The Bench said that the **State is given an opportunity to present aggravating circumstances** against the accused throughout the duration of a trial.
- The accused, on the other hand, **is able to produce evidence showing mitigating circumstances** in their favour, only after their conviction.

What are the Issues?

- There are **conflicting judgments on when and how the sentencing hearing must take place** mainly on whether it is necessary to hold the hearing on sentencing on a **subsequent day and not on the day of the conviction**.
- The issue pertains to giving **meaningful opportunity to those found guilty of a capital offence** to present mitigating factors and circumstances so that **they can better plead for a life term instead** of a death sentence.

- The issue arises from the legal requirement that whenever a court records a conviction, **it has to hold a separate hearing on the quantum** of sentence.

What are the Legalities and Judgements?

- **Section 235** of the **Code of Criminal Procedure (CrPC)** says if the **accused is convicted**, the judge will hear the **accused on the question of sentence and then pass sentence**.
 - This process is significant **if the conviction is for an offence that entails either death or life imprisonment**.
- **Section 354(3)** says that when there is **death Punishment or imprisonment for life**, the judgment will have to state the reason for why the sentence was awarded.
- If the **sentence is death**, **"special reasons"** will have to be provided in the judgment.
- **In 1980**, the Supreme Court upheld the constitutionality of capital punishment in '**Bachan Singh v State of Punjab**' on the condition that the **punishment will be awarded in the "rarest of the rare" cases**.
 - Crucially, the ruling also stressed that a separate sentencing hearing would be held, where a judge would be persuaded on why the death sentence need not be awarded.
- This position was reiterated in several subsequent rulings of the court, including in '**Mithu v State of Punjab**', a **1982** ruling by a five-judge Bench **that struck down mandatory death sentence** as it falls foul of the right of an accused to be heard before sentencing.

What are the Views on Same-Day Sentencing?

- Even though a separate hearing on sentencing is practiced in all trials, **most judges do not adjourn the case to a future date** to go through this.
- As soon as the verdict of 'guilty' is pronounced, they ask counsel on both sides to argue on sentencing.
- There is a view that **such 'same-day' sentencing is inadequate and violates natural justice** as convicts do not get enough time to gather mitigating factors.
- In a series of judgments, the Supreme Court **has advocated that the sentencing hearing be done separately**, that is, at a future date after conviction.
- However, in a contradiction of sorts, several judgments have upheld the practice of 'same-day' sentencing.

Note:

What is the likely Outcome?

- The Constitution Bench may lay down **comprehensive guidelines** on the manner in which sentencing **decisions can be arrived at**.
- The SC may make it **necessary for the trial court to get to know the accused better** before passing the sentence.
- The courts may **draft the help of psychologists and psychoanalytical experts**.
 - A study into the childhood experiences and upbringing of the accused, mental health history in the family and the likelihood of traumatic past experiences and other social and cultural factors **may be mandated to be part of the sentencing process**.
- This may mean that **trial courts will be better informed than now**, when only basic data such as educational and economic status are ascertained before a sentence is imposed.

What is Capital Punishment?

- Capital Punishment stands for **the most severe form of punishment**. It is the punishment which is awarded for the **most heinous and grievous crimes against humanity**.
 - Certain offences under **Indian Penal Code**, for which the offenders can be sentenced to punishment of death are:
 - Murder (Section 302)
 - Dacoity with murder (Section 396)
 - Criminal Conspiracy (Section 120B)
 - Waging war against the Government of India or attempting to do so (Section 121)
 - Abatement of mutiny (Section 132) and others.
- The term death penalty is sometimes **used interchangeably with capital punishment**, though imposition of the penalty is not always followed by execution, it can be **commuted into life imprisonment or pardoned by the President under Article 72 of Indian Constitution**.

JALDOOT App

Why in News?

Recently, the Ministry of Rural Development has launched the "JALDOOT App and JALDOOT App e-brochure" to capture the **Ground water level in a better way**.

What is a JALDOOT App?

- **About:**
 - JALDOOT app has been jointly developed by the Ministry of Rural Development and **Panchayati Raj**.
 - This app will be used across the country to capture the water level of **selected 2-3 wells in a village**.
 - The app will work in **both online and offline mode**. So, water level can be captured even **without internet connectivity and captured data will be stored in mobile** and when mobile comes in the connectivity area, data will synchronize with the central server.
 - The regular data to be input by the Jaldots would be integrated with the database of **National Water Informatics Centre (NWIC)**, which can be utilized for analysis and display of various useful reports for the benefit of various stakeholders.
- **Significance:**
 - This app will facilitate **observing water tables across the country** and the resulting **data can be utilized for Gram Panchayat Development Plan and Mahatma Gandhi NREGA Plans**.
 - The app is launched to capture the water level of selected wells in a village across the country.
 - JALDOOT app will allow **Gram Rojgar Sahyak to measure** the water level of the well twice a year pre-monsoon and post-monsoon.
 - The app will **ease panchayats with robust information that** can be later used for better planning of works.

What is the Status of Groundwater Depletion in India?

- **Status of Groundwater Depletion:**
 - According to the **Central Ground Water Board (CGWB)**, with 230 billion metre cubes of groundwater drawn out each year for irrigating agriculture lands in India, **many parts of the country are experiencing rapid depletion of groundwater**.
 - The total estimated groundwater depletion in India is **in the range of 122–199-billion-meter cubes**.
 - 89% of groundwater extracted is **used in the irrigation sector**, making it the highest category user in the country.

Note:

- This is followed by groundwater for domestic use which is 9% of the extracted groundwater. Industrial use of groundwater is 2%. 50% of urban water requirements and 85% of rural domestic water requirements are also fulfilled by ground water.

➤ **Causes:**

○ **Green Revolution:**

- The Green Revolution **enabled water-intensive crops to be grown in drought-prone/ water deficit regions**, leading to over extraction of groundwater.
- Frequent pumping of water from the ground without waiting for its replenishment leads to quick depletion.
- Further, Subsidies on electricity and high **MSP (Minimum Support Price)** for water intensive crops.

○ **Industries Requirement:**

- Water contamination as in the case of pollution by landfills, septic tanks, leaky underground gas tanks, and from overuse of fertilizers and pesticides **leads to damage and depletion of groundwater** resources.

○ **Inadequate Regulation:**

- Inadequate regulation of groundwater **encourages the exhaustion of groundwater resources** without any penalty.

○ **Federal Issue:**

- Water being a **state subject**, initiatives on water management including water conservation and water harvesting and making available adequate drinkable water to citizens in the **Country is primarily the States' responsibility**.

What are the Related Initiatives?

- **Atal Bhujal Yojana (Atal Jal)**
- **Jal Shakti Abhiyan (JSA)**
- **Aquifer Mapping and Management Programme**
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**
- **Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component**
- **Mission Kakatiya' in Telangana**

Abortion Rights for Single Women

Why in News?

Recently, the **Supreme Court** has allowed all women in the country, regardless of marital status, can undergo an abortion up to 24 weeks into pregnancy to access **safe and legal abortion care**.

What is the SC's Ruling?

➤ **Ruled over an Old Law:**

- It has ruled over a 51-year-old abortion law (The Medical Termination of Pregnancy Act of 1971) which bars **unmarried women from terminating pregnancies which are up to 24-weeks old**.

- The Medical Termination of Pregnancy Act of 1971 and its Rules of 2003 prohibit unmarried women who are between 20 weeks to 24 weeks pregnant to abort with the help of registered medical practitioners.
- The latest amendment to the **MTP Act was made in 2021**.

➤ **Right to Choose under Article 21:**

- Court held that the **rights of reproductive autonomy, dignity and privacy under Article 21 of the Constitution gives an unmarried woman the right of choice** as to whether or not to bear a child on a similar footing as that of a married woman.

➤ **Right to Equality under Article 14:**

- Prohibiting single or unmarried pregnant women with pregnancies between 20 and 24 weeks from accessing abortion while allowing married women with the same term of pregnancy to access the care was **violative of the right to equality before law and equal protection (Article 14)**.
- A single woman may have suffered the same **"change in material circumstances"** as a married pregnant woman. She may have been abandoned or without a job or been a **victim of violence during her pregnancy**.

➤ **Not Constitutionally Sustainable:**

- Artificial distinction between married and unmarried women is not constitutionally sustainable.
- The benefits of law extend **equally to single and married women**.

Note:

- **Extended the Ambit of Reproductive Rights:**
 - The term **Reproductive Right** is not restricted to **having or not having children**.
 - Reproductive rights' of women included a **"constellation of rights, entitlements and freedoms for women"**.
 - Reproductive rights include the right to access education and information about contraception and sexual health, right to choose safe and legal abortion and **right to reproductive health care**.
- **Views on Marital Rape:**
 - For the sole purpose of the MTP Act, the meaning of rape must include marital rape to marshal a woman's right to reproductive and decisional autonomy.

What is India's Abortion Law?

- **Historical Perspective:**
 - Until the 1960s, abortion was illegal in India and a **woman could face three years of imprisonment and/or a fine under Section 312 of the Indian Penal Code (IPC)**.
 - It was in the mid-1960s that the government set up the Shantilal Shah Committee and asked the group, headed by Dr Shantilal Shah, to look into the **matter of abortions and decide if India needed a law for the same**.
 - Based on the report of the **Shantilal Shah Committee**, a medical termination bill was introduced in Lok Sabha and Rajya Sabha and was passed by **Parliament in August 1971**.
 - The **Medical Termination of Pregnancy (MTP) Act, 1971** came into force on 1st of April 1972 and applied to all of India except the state of Jammu and Kashmir.
 - Also, Section 312 of the Indian Penal Code, 1860, criminalises voluntarily "causing miscarriage" even when the miscarriage is with the pregnant woman's consent, except when the miscarriage is caused to save the woman's life.
 - This means that the woman herself, or anyone else including a medical practitioner, could be prosecuted for an abortion.
- **About:**
 - **Medical Termination of Pregnancy (MTP) Act, 1971** act allowed pregnancy termination by a medical practitioner in two stages:

- A single doctor's opinion was necessary for abortions up to 12 weeks after conception.
- For pregnancies **between 12 to 20 weeks old**, the opinion of two doctors was required to determine if the continuance of the pregnancy would involve a risk to the life of the pregnant woman or of grave injury to her physical or mental health or if there is a substantial risk that if the child were born, it would suffer from such physical or mental abnormalities as to be seriously **"handicapped" before agreeing to terminate the woman's pregnancy**.

➤ **Recent Amendments:**

- In 2021, Parliament amended the law to allow for abortions based on the advice of one doctor for **pregnancies up to 20 weeks**.
 - The modified law needs the opinion of two doctors for pregnancies between 20 and 24 weeks.
 - Further, for pregnancies between 20 and 24 weeks, rules specified **seven categories of women who would be eligible** for seeking termination under section 3B of rules prescribed under the MTP Act,
 - Survivors of sexual assault or rape or incest,
 - Minors,
 - Change of marital status during the ongoing pregnancy (widowhood and divorce),
 - Women with physical disabilities (major disability as per criteria laid down under the Rights of Persons with Disabilities Act, 2016)
 - Mentally ill women including mental retardation,
 - The foetal malformation that has a substantial risk of being incompatible with life or if the child is born it may suffer from such physical or mental abnormalities to be seriously handicapped, and
 - Women with pregnancy in humanitarian settings or disasters or emergencies may be declared by the Government.

What are the Concerns?

➤ **Cases of Unsafe Abortions:**

- Unsafe abortions are the third leading cause of maternal mortality in India, and close to **8 women**

Note:

die from causes related to unsafe abortions each day, according to the **United Nations Population Fund (UNFPA)'s State of the World Population Report 2022**.

- The women outside marriages and in poor families are left with no choice but to use **unsafe or illegal ways to abort unwanted pregnancies**.
- **Shortage of Medical Expert in Rural India:**
 - According to a 2018 study in the Lancet, 15.6 million abortions were accessed every year in India as of 2015.
 - The MTP Act requires abortion to be performed only by doctors with specialisation in gynaecology or obstetrics.
 - However, the Ministry of Health and Family Welfare's 2019-20 report on Rural Health Statistics indicates that there is a **70% shortage of obstetrician-gynaecologists in rural India**.
- **Illicit Abortions leading to Maternal Mortality:**
 - As the law does not permit abortion at will, it pushes women to **access illicit abortions** under unsafe conditions, thus **result in maternal mortality**.

Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)

Why in News?

Recently, The Central government announced an extension of the **Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY)** for another three months until December 2022.

What is PM-GKAY?

- **About:**
 - PMGKAY is a part of the **Pradhan Mantri Garib Kalyan Package (PMGKP)** to help the poor fight the battle against **Covid-19**.
 - The scheme aimed at providing each person who is covered under the **National Food Security Act 2013** with an additional 5 kg grains (wheat or

rice) for free, in addition to the 5 kg of subsidised foodgrain already provided through the **Public Distribution System (PDS)**.

- It was initially announced for a three-month period (April, May and June 2020), covering 80 crore ration cardholders. Later it was extended till September 2022.
- Its nodal Ministry is the **Ministry of Finance**.
- The benefit of the free ration can be availed through portability by any migrant labour or beneficiary under the **One Nation One Ration Card (ONORC)** plan from nearly 5 lakh ration shops across the country.
- **Cost:** The overall expenditure of PMGKAY will be about Rs. 3.91 lakh crore for all the phases.
- **Challenges:** The beneficiaries of the National Food Security Act are based on the last census (2011). The number of food-insecure people has increased since then and they remain uncovered.
- **Issues:**
 - **Expensive:** It's very expensive for the government to sustain and increases the need for an abundant supply of cheap grains. In 2022, India has had to restrict exports of wheat and rice after erratic weather hurt harvest, adding to pressure on food prices, and rattling global agricultural markets.
 - **Increase Fiscal Deficit:** It could pose a risk to the government's target to further narrow the fiscal deficit to 6.4% of gross domestic product.
 - **Inflation:** The decision on the program could also affect inflation. The prices of rice and wheat, which make up about 10% of India's retail inflation, are seeing an uptick due to lower production amid a heatwave and patchy monsoon.

What are the Related Initiatives Introduced by the Government?

- **National Food Security Mission**
- **Rashtriya Krishi Vikas Yojana (RKVY)**
- **Integrated Schemes on Oilseeds, Pulses, Palm oil and Maize (ISOPOM)**
- **Pradhan Mantri Fasal Bima Yojana**
- **National Food Security Act (NFSA)**



Note:

International Relations

Highlights

- *Promote Common Security Through Dialogue and Cooperation: UNSC*
- *Kyrgyzstan-Tajikistan Conflict*
- *India Saudi Arabia Relations*
- *Future of the Commonwealth*
- *ASEAN-India Economic Ministers' Meeting*
- *Eastern Economic Forum*
- *Quad Grouping*
- *Group of Four (G-4) Countries*
- *Combined Maritime Forces (CMF)*
- *ICAO Joins International Solar Alliance*
- *Shanghai Cooperation Organisation (SCO) Summit 2022*
- *Asian Palm Oil Alliance*

Promote Common Security Through Dialogue and Cooperation: UNSC

Why in News?

Recently, India's Permanent Representative to the UN addressed a **United Nations Security Council (UNSC)** meeting on the topic 'Promote Common Security Through Dialogue and Cooperation.

- The UNSC meeting was convened at the behest of China, the president of the Security Council for August 2022 and a veto-wielding member of the **15-member Council**.

What are the Key Highlights of the Address?

- All countries **should respect each other's sovereignty and territorial integrity** and respect international agreements.
- Common security was only possible when **countries stand together on terrorism** and do not practice double standards on the issue and when they do not take unilateral measures to back out of agreements.
- India called for multilateral reform, particularly at the Security Council, saying **common security among nations could not be aspired** for if the common good of the global south was denied representation.
 - The most urgent thing is to make the Security Council more representative of developing countries so as to reflect current geopolitical realities, the

African continent should also have permanent representation on the Council.

- An armed conflict in **one part of the world has cascading effects on the people of another**.
 - We have seen the effect of the **Ukraine Conflict** on other developing countries, particularly, on the supply of food grains, fertilizer and fuel.
- The impact of the **Crisis in Afghanistan** is still being felt throughout the region.
- China has **repeatedly blocked the attempts of India and the US at the UN to blacklist Pakistan-based terrorists**.
- While emphasizing on Common Security, India targeted China, which has **violated border pacts** by amassing its military in eastern **Ladakh in 2020**.
 - The eastern Ladakh border standoff between India and China erupted on 5th May, 2020, following a **violent clash in the Pangong lake areas**.
 - Both sides gradually enhanced their deployment by rushing in tens of thousands of soldiers as well as heavy weaponry.
- China claims nearly all of the disputed South China Sea, though Taiwan, the Philippines, Brunei, Malaysia and Vietnam all **claim parts of it**.

What is UNSC?

- **About:**
 - The Security Council was established by the **UN Charter in 1945**. It is one of the six principal organs of the United Nations.

Note:

- The other 5 organs of the United Nations are—the General Assembly (UNGA), the Trusteeship Council, the Economic and Social Council, the International Court of Justice, and the Secretariat.
- The UNSC, with a mandate to maintain international peace and security, is **the centrepiece of global multilateralism**.
- It selects the **UN Secretary-General** and **plays a co-terminus role** with the UN General Assembly in electing judges to the **International Court of Justice**.
 - Its resolutions, adopted under **chapter VII of the UN charter**, are binding on all countries.

➤ Composition:

- The UNSC is composed of **15 members, 5 permanent and 10 non-permanent**.
- **Five permanent members:** China, France, the Russian Federation, the United Kingdom, and the United States.
- **Ten non-permanent members:** Elected for two-year terms by the General Assembly.
 - Five from African and Asian States;
 - One from Eastern European States;
 - Two from Latin American States;
 - Two from Western European and other States.

➤ India's Membership:

- India has served **seven times in the UN Security Council as a non-permanent member** and in January 2021, India entered the **UNSC for the eighth time**.
- **India has been advocating a permanent seat in UNSC**.

➤ Voting Powers:

- Each member of the Security Council **has one vote**. Decisions of the Security Council on matters are made by **an affirmative vote of nine members including the concurring votes of the permanent members**.
- A "No" vote from one of the five permanent members **blocks the passage of the resolution**.

Kyrgyzstan-Tajikistan Conflict

Why in News?

Recently, nearly 100 people have been killed and scores injured in violent border clashes between **Kyrgyzstan and Tajikistan**.



What Led to the Clash between the Two Countries?

➤ Historical Legacy:

- **The current clashes are** replaying old pre- and post-Soviet era legacies.
- The borders of the two republics were demarcated under Joseph Stalin's leadership.
- **Common Rights over Natural Resources:** Historically, the Kyrgyz and Tajik populations **enjoyed common rights over natural resources**.
- The creation of the **Soviet Union** saw the **large-scale redistribution of livestock to collective and state farms**, which upset the existing status quo.

➤ Present Tussle:

- Recent incidents saw groups from either side **planting trees in disputed areas and engaging in a physical confrontation** using agricultural equipment as weapons.
- Currently, **Ferghana Valley** continues to be a site of struggle and frequent violent outbursts, with the location consisting primarily of **Tajiks, Kyrgyz, and Uzbeks**, who have historically shared common sociological specificities, economic activities, and religious practices.
- Both countries **share multiple water channels** with undulating trajectories and flow, which **upset equitable access to water on both sides**. As a result, small-scale conflicts occur practically every year during the crucial irrigation period.
 - Kyrgyzstan and Tajikistan share 971 kilometers of border territory of which about 471 kilometers remain disputable.

Note:

- Leaders of both countries have contributed to the continuation of the conflict through the imagination of a particular type of development project which resulted in the **large-scale displacement of nomadic communities**, hoping to stabilise the internal dynamics of their respective countries and legitimise their power.

How are India-Tajikistan Relations?

- **Cooperation in International Forums:**
 - In 2020, Tajikistan extended support for India's candidature for a non-permanent seat in **United Nation Security Council** for the term 2021-22.
 - Tajikistan strongly supported **Shanghai Cooperation Organisation (SCO) Member status for India**.
 - India also supported **Tajikistan's candidature to United Nations' Economic and Social Council (ECOSOC)** and accession to **WTO** in March 2013.
- **Development & Aid Partnership:**
 - **Development Assistance:**
 - With a grant of USD 0.6 million, an **Information and Technology Centre (Bedil Centre)** was commissioned in 2006.
 - The project ran for a full hardware cycle of 6 years and trained almost all first-generation IT experts in the government sector in Tajikistan.
 - A project for setting up computer labs in **37 schools in Tajikistan** was completed and delivered in August 2016.
 - **Humanitarian Assistance:**
 - In June 2009, USD 200,000 cash assistance was given by India to overcome damage caused by floods in Tajikistan.
 - After the outbreak of **Polio** in southwest Tajikistan, India provided 2 million doses of **oral polio vaccine** through **UNICEF** in November 2010.
- **Human Capacity Building:**
 - Since the establishment of the Indian embassy in Dushanbe in 1994, Tajikistan has been a beneficiary of the **Indian Technical & Economic Cooperation Programme (ITEC)**.
 - In 2019, under **India-Central Asia Dialogue Process**, some Tajik diplomats were trained at Foreign Service Institute, Delhi.
- **Trade & Economic Relation:**
 - Indian exports to Tajikistan mainly consist of

pharmaceuticals, medical preparations, cane or beet sugar, **tea**, **handicraft** and machinery.

- Indian pharmaceutical products **occupy approximately 25% of Tajik market**.

➤ Cultural & People-to-People Relation:

- **Deep rooted historical and cultural linkages** have helped expand and widen the relationship to a new level.
 - Cooperation between the two countries encompasses all aspects of human endeavour with **special focus on military and defence ties**.
- **Swami Vivekananda Cultural Centre in Dushanbe** offers courses in **Kathak & Tabla** through teachers deployed by **Indian Council for Cultural Relations** from India. The centre **also offers Sanskrit and Hindi language classes**.
- In 2020 '**My Life My Yoga**' video blogging competition saw participation from Tajikistan yoga enthusiasts.

➤ Strategic:

- India has an airbase at a place called **Ayni**, about thirty kilometres from Dushanbe. Over the years, it developed into an Indian Air Force (IAF) base known as **Gissar Military Aerodrome (GMA)**.

India Saudi Arabia Relations

Why in News?

Recently, the **Union Minister of Commerce and Industry, Consumer Affairs, Food and Public Distribution and Textiles** visited Saudi Arabia to attend the Ministerial meeting of the **India-Saudi Arabia Strategic Partnership Council**.



Note:

What are the Key Outcomes of the Meeting?

- Streamlining efforts to carry out the declaration of investments of **USD \$100 billion in India** made by Saudi Arabia in February 2019.
- Endorsement of the **41 areas of cooperation** identified by the technical teams under the **4 broad domains of**:
 - **Agriculture & Food Security**
 - **Energy**
 - Technology & Information Technology
 - Industry & Infrastructure
- A commitment to carrying out **important projects in a timely way**. The following are some of the priority areas for cooperation:
 - **Digital fintech sector cooperation** through the operationalization of **Unified Payments Interface (UPI)** and **Rupay Card** in the Kingdom of Saudi Arabia.
 - Reiteration of **commitment to ongoing collaboration** on joint projects, such as the **construction of a refinery on the West Coast**, an investment in **Liquefied Natural Gas (LNG)** infrastructure, and the creation of strategic petroleum storage facilities in India.
- **Discussions were also held on:**
 - **Institutional tie-up of the EXIM banks** of the two countries,
 - Mutual **recognition of standards**,
 - Establishment of **startup and innovation bridge**,
 - Strengthening collaboration in **infrastructure development**, particularly in the **domains of construction**,
 - **Railways** etc.

What is the India-Saudi Arabia Strategic Partnership Council?

- **The Strategic Partnership Council** was instituted in **October, 2019** during the visit of the **Prime Minister of India to the Kingdom of Saudi Arabia**.
- **It has two main pillars:**
 - Political, Security, Social and Cultural Committee
 - Committee on Economy and Investments
- India is the **fourth country with which Saudi Arabia has formed such a strategic partnership**, after the UK, France and China.

How has India's

Relations with Saudi Arabia been?

- **Oil & Gas:**
 - Saudi Arabia is currently **India's second-largest supplier of crude oil** (Iraq has been India's top supplier).
 - India **imports around 18% of its crude oil requirement** and around **22 % of its Liquefied Petroleum Gas (LPG) requirement** from Saudi Arabia.
 - Saudi Arabia will assist in setting up the **world's largest greenfield refinery at Raigarh in Maharashtra** by Saudi Aramco, Adnoc of the United Arab Emirates and Indian public sector oil companies.
- **Bilateral Trade:**
 - Saudi Arabia is **India's fourth largest trade partner** (after the USA, China and UAE).
 - In FY 2021-22, bilateral trade was valued at **USD 42.8 billion**.
 - India's **imports from Saudi Arabia reached USD 34.01 billion** and **exports to Saudi Arabia were worth USD 8.76 billion**. An increase of **49.5% over 2021**.
 - Total trade with Saudi Arabia accounted for **4.14% of India's total trade in FY 2021-22**.
- **Indian Diaspora:**
 - The **2.6 million-strong Indian community in Saudi Arabia** is the largest expatriate community in the Kingdom and is the 'most preferred community' due to their expertise, sense of discipline, law-abiding and peace-loving nature.
- **Cultural Linkages:**
 - **Haj pilgrimage** is another important component of bilateral relations between India and Saudi Arabia.
- **Naval Exercise:**
 - In 2021, India and Saudi Arabia started their first-ever Naval joint exercise called the **Al-Mohed Al-Hindi Exercise**.

Future of the Commonwealth

Why in News?

The death of **Queen Elizabeth II** of the United Kingdom, marks not only the end of an era for the British monarchy but also a turning point for the 14 Commonwealth realms of which she was the Head of State.

Note:

What is the Background?

- There has been a significant transformation of the socio-economic environment in the 14 realms countries since the death of Queen Elizabeth II.
- Several countries out of these 14 called to **establish a republic and break free of historical ties to the British monarchy.**
 - A republic is a form of government in which **“supreme power is held by the people and their elected representatives”.**
- Thus, it is likely that during the reign of the **incumbent King Charles III**, the Queen’s successor, more nations will follow in the **footsteps of Barbados.**
 - **In 2021**, Barbados became the **18th country to remove the British monarch from the role of head of state** and substitute them with a national government functionary.

What is the Commonwealth?

- **About:**
 - The Commonwealth of Nations is a group of **56 countries composed mostly of former British colonies.**
 - It was established by the **London Declaration in 1949.**
 - While members of the Commonwealth are predominantly located in Africa, the Americas, Asia, and the Pacific, with many of them emerging economies, the three European members of the group are Cyprus, Malta, and the U.K.
 - The developed nations of the Commonwealth are Australia, Canada, and New Zealand.
- **Republics and Realms:**
 - The Commonwealth **consists of both Republics and Realms.**
 - The British monarch is the **Head of State for the realms, whereas the republics are ruled by elected governments** except in the case of five countries — **Brunei Darussalam, Eswatini, Lesotho, Malaysia, and Tonga** — each a self-governed monarchy.
 - The **realms** are Antigua and Barbuda, Australia, the Bahamas, Belize, Canada, Grenada, Jamaica, New Zealand, Papua New Guinea, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, the Solomon Islands, and Tuvalu.

What is the Commonwealth’s Relevance in Today’s World?

- Although the Commonwealth may seem like an outdated forum after the death of the queen, yet it retains a **suitable relevance which has sustained it over time even after the decolonization of the British Empire.**
- In the age of multilateral diplomacy, where states want a forum to express their views, advance their interests and shape global norms, the **Commonwealth provides precisely such a forum.**
- The monarch is **only the symbolic head**, the leaders of the free world make the Commonwealth work.
- Throughout her reign, Queen Elizabeth played a critical role in championing the organisation and maintaining the group’s relevance, regularly travelling to meet with leaders of Commonwealth nations across the world.

What is the Future of Commonwealth?

- Australia, Newzealand, and the Bahamas are likely to become Republics in future.
- Governments in five other Caribbean nations — Antigua and Barbuda, Belize, Grenada, Jamaica and Saint Kitts and Nevis — have **signalled their intention to act similarly.**
- Thus, it is not beyond imagination that following the death of Queen Elizabeth, **the Commonwealth realms might fade into being a relic of the past**, and nations that suffered a history of colonialism — along with its attendant violence and resource extraction — will move **forward to establish themselves as republics.**

ASEAN-India Economic Ministers’ Meeting

Why in News?

Recently, India and Cambodia co-chaired the **19th ASEAN-India Economic Ministers’ meeting** in Cambodia.

- The Economic Ministers or their representatives from all the **10 ASEAN countries** attended the meeting.

What are the Highlights of the Meeting?

- **Noted Economic Relations:**

Note:

- The Ministers noted that trade and economic relations between ASEAN and India are starting to recover **from the impact of the Covid-19 pandemic** and the two-way trade between ASEAN and India reached USD 91.5 billion in 2021 increasing by 39.2% year-on-year.
- **ASEAN India Business Council:**
 - The Ministers also took note of the recommendations made by **ASEAN India Business Council (AIBC)** to enhance the ASEAN India economic partnership and the activities undertaken by AIBC in 2022.
 - ASEAN India-Business Council (AIBC) was set up in March 2003 as a forum **to bring key private sector players from India and the ASEAN countries** on a single platform for business networking and sharing of ideas.
- **Post Covid-19 Recovery:**
 - Ministers reaffirmed their commitment **to take collective actions to mitigate the economic impact of the pandemic** and work towards a sustainable post-Covid-19 recovery.
- **Supply Chain Connectivity:**
 - The Ministers welcomed ASEAN and India to forge collective actions in securing a robust supply chain connectivity to **maintain the flow of essential goods** and services through ASEAN-India Trade in Goods Agreement (AITIGA) Upgrade Negotiations, mutual recognition of Covid-19 vaccination, vaccines production, public health surveillance, and medical technologies.
- **ASEAN India Trade in Goods Agreement:**
 - The Ministers endorsed the Scope of the Review of the AITIGA to make it **more user-friendly, simple, and trade facilitative for businesses**, as well as responsive to the current global and regional challenges including supply chain disruptions.
 - The Ministers also activated the **AITIGA Joint Committee** to undertake the review of AITIGA expeditiously.

What is the Association of Southeast Asian Nations?

- **About:**
 - It is a **regional grouping** that promotes economic, political, and security cooperation.

- It was established in **August 1967 in Bangkok**, Thailand with the signing of the ASEAN Declaration (Bangkok Declaration) by the founding fathers of ASEAN, namely **Indonesia, Malaysia, Philippines, Singapore and Thailand**.
- Its chairmanship **rotates annually, based on the alphabetical order** of the English names of Member States.
- ASEAN countries have a total population of 650 million people and a combined **Gross Domestic Product (GDP)** of USD 2.8 trillion.
- Commodity trade between India and ASEAN region has reached **98.39 billion** in the period April 2021- February 2022. India's main trading ties are with Indonesia, Singapore, Malaysia, Vietnam and Thailand.
- **Members:**
 - ASEAN brings together ten Southeast Asian states – Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam – into one organisation.



Eastern Economic Forum

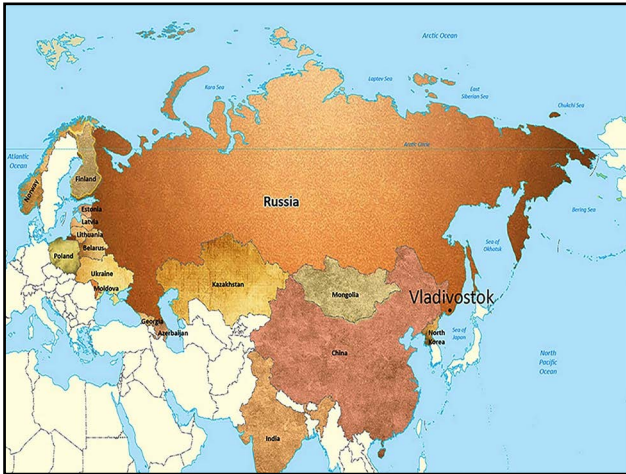
Why in News?

- Recently, Russia hosted the **7th Eastern Economic Forum (EEF)** at Vladivostok.
- The forum is a platform for entrepreneurs to expand their businesses into **Russia's Far East (RFE)**.

Note:



drishti



What is the Eastern Economic Forum?

➤ About:

- The EEF was established in 2015 to encourage **foreign investments in the RFE**.
- The EEF displays the **economic potential, suitable business conditions and investment opportunities** in the region.
- Agreements signed at the EEF increased from **217 in 2017 to 380 agreements in 2021, worth 3.6 trillion roubles**.
- The agreements focus on **infrastructure, transportation projects, mineral excavations, construction, industry and agriculture**.

➤ Key Players:

- China, South Korea, Japan and India are the Key Players in the region, where China is the biggest investor.
 - China sees potential in promoting the **Chinese Belt and Road Initiative (BRI)** And the **Polar Sea Route** in the RFE.
 - China's investments in the region **account for 90% of the total investments**.

➤ Objectives:

- Russia has strategically developed the region with the **aim of connecting Russia to the Asian trading routes**.
- With the fast modernisation of cities like Vladivostok, Khabarovsk, Ulan-Ude, Chita and more, Russia aims to **attract more investments** in the region.
- To **survive the economic crisis and the sanctions** with the help of China and other Asian powers.

What is the Significance of the RFE?

- The region encompasses **one-third of Russia's territory and is rich with natural resources** such as fish, oil, natural gas, wood, diamonds and other minerals.
- The small population living in the region is another factor for encouraging people to move and work in the Far East.
- The region's riches and resources **contribute to 5% of Russia's GDP (Gross Domestic Product)**.
 - But despite the abundance and availability of materials, **procuring and supplying them is an issue** due to the unavailability of personnel.
- The RFE is **geographically placed at a strategic location**; acting as a **gateway into Asia**.

What does India Seek at the Forum?

- **India** seeks to expand its influence in the RFE. During the forum, India expressed its **readiness in expanding trade, connectivity and investments** in Russia.
- India is keen to **deepen its cooperation in energy, pharmaceuticals, maritime connectivity**, healthcare, tourism, the diamond industry and the Arctic.
 - In 2019, India offered a **USD 1 billion line of credit to develop infrastructure in the region**.
- Through the EEF, **India aims to establish a strong inter-state interaction** with Russia.
 - Business representatives of Gujarat and the Republic of Sakha (Russia) have **launched agreements in the diamond and pharmaceuticals industry**.

How does India act at

Balancing Between the EEF and IPEF?

- Since the coming together of countries like Myanmar, Armenia, Russia, and China for EEF seems like the forming of an **Anti-Sanctions Group** in the international order, India has vested interests in both the forums, EEF and **IPEF (U.S.-led Indo-Pacific Economic Framework)**.
- India has **not shied away from investing** in the Russia-initiated EEF despite the current international conditions, where western countries impose Sanctions on Russia.
- At the same time, India has given **its confirmation and acceptance to three of the four pillars in the IPEF**.
- India understands the benefits of being involved in the development of the RFE but it **also perceives the IPEF as a vital platform to strengthen its presence in the Indo-Pacific region**.

Note:

- The IPEF also presents an ideal opportunity for India to act in the region, without being part of the China-led **Regional Comprehensive Economic Partnership** or other regional groupings like the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership**.

Quad Grouping

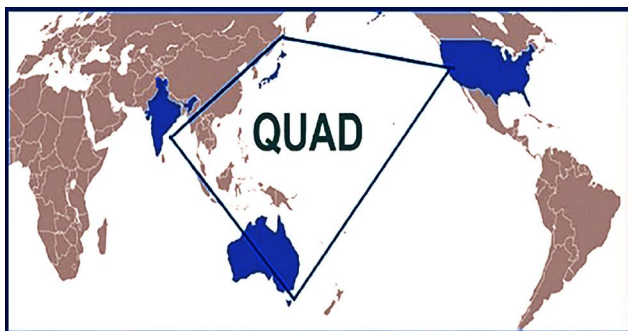
Why in News?

Foreign Ministers of the **Quad (India, the U.S., Australia, and Japan)** met on the fringes of the **United Nations General Assembly (UNGA)** to sign a **Humanitarian Assistance and Disaster Relief (HADR) partnership** into effect.

- Under the HADR, **the member countries will coordinate their disaster response operations** in the **Indo-Pacific region** with other National and International agencies, private non-governmental organizations.

What is QUAD?

- It is the grouping of four **democracies—India, Australia, the US, and Japan**.
- All four nations find a common ground of being democratic nations and also support the common interest of unhindered maritime trade and security.
- It aims to ensure and support a **“free, open and prosperous” Indo-Pacific region**.
- The idea of Quad was first mooted by Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it, apparently due to Chinese pressure.
- Finally in 2017, India, Australia, the US and Japan, came together and formed this “quadrilateral” coalition.



What are the Opportunities for India Under Quad Arrangement?

- **Countering China:**

- The maritime space is a lot more **important to China than engaging in opportunistic land grab attempts** in the Himalayas.

- A huge chunk of Chinese trade happens via the Indian oceanic routes that pass through maritime chokepoints.
- In the event of any Chinese aggression on borders, India by cooperating with Quad countries can potentially disrupt Chinese trade.
- Hence, unlike in the continental sphere where India seems facing a ‘nutcracker like situation’ due to China-Pakistan collusion, the maritime sphere is wide open to India to undertake coalition building, rule setting, and other forms of strategic exploration.

➤ Emerging as a Net Security Provider:

- There is a growing **great power interest in the maritime sphere**, especially with the arrival of the concept of ‘Indo-Pacific’. For instance, many European countries have recently released their Indo-Pacific strategies.
- With India, located right at the centre of the Indo-Pacific geopolitical imagination can realise **the vision of a ‘broader Asia’ that can extend its influence away from geographical boundaries**.
- Moreover, India can build around **collective action in humanitarian assistance and disaster relief, monitoring shipping** for search and rescue or anti-piracy operations, infrastructure assistance to climatically vulnerable states, connectivity initiatives and similar activities.
- Further, India with **Quad countries can check imperialist policies** of China in Indian ocean region and ensure Security and growth for all in the region.

What are the Issues Related to Quad?

- **Undefined Vision:** Although there is potential for cooperation, the **Quad remains a mechanism without a defined strategic mission**.
- **Maritime Dominated:** The entire focus on the Indo-Pacific makes the **Quad a maritime, rather than a land-based grouping**, raising questions whether the cooperation extends to the Asia-Pacific and Eurasian regions.
- **India’s Aversion of Alliance System:** The fact that India is the only member that is averse to a **treaty alliance system**, has slowed down the progress of building a stronger **Quadrilateral engagement**.

Note:

Group of Four (G-4) Countries

Why in News?

On the sidelines of the **76th session of the UN General Assembly**, the **G-4 countries** highlight 'urgent need' for reform in **U.N. Security Council (UNSC)**.

Who are the Group of Four(G-4) Countries?

- The G4 is a grouping of **Brazil, Germany, India and Japan** which are **aspiring to become permanent members of the UNSC**.
- The G4 countries are supporting each other's bids for permanent membership of the UNSC.
- The G4 nations traditionally meet on the sidelines of the annual high-level UN General Assembly session.

What are the Key Highlights of the G-4 Meeting?

- They felt that the UN decision-making bodies **needed to be urgently reformed as global issues were increasingly complex and interconnected**.
- Further, they reiterated their **joint commitment to work toward text-based negotiations that lead to Reformed Multilateralism**.
- They highlighted that **General Assembly did not make "meaningful progress"** in the **Inter-Governmental Negotiations (IGN)** and **lacked transparency**.
- They reiterated their support for African countries being represented in a permanent and non-permanent capacity.
- The Ministers agreed on the need for **enhanced role and presence of developing countries and of major contributors** to the United Nations to enhance the capacity of the Council to respond effectively to the complex and evolving challenges on questions of international peace and security.

Why is there a Need for UNSC Reforms?

- **UN represents a larger world** and the irony is that it has **only 5 permanent members** in its important body.
- The current composition of the Security Council represents the post-World War II realities and thus is **not in pace with the changing balance of power** in the world.

- At the time of the formation of the UNSC, big powers were given privileges to make them part of the council. This was necessary for its proper functioning as well as to avoid failure like that of the organization 'League of Nations'.
- The **regions like far East Asia, South America, and Africa have no representation in the permanent membership** of the council.

Why is India Demanding the Permanent Membership of the UNSC?

- **Overview:**
 - For the first 40 years of the UN Security Council's formation, India **never asked for permanent membership**.
 - Even in 1993 when India submitted its written proposal to the UN in response to the General Assembly resolution related to reforms, it did not specifically state that it wants permanent membership for itself.
 - It is only from the last few years that India has started asking for permanent membership in the council.
 - India deserves a permanent place in the council **considering the size of its economy, population and the fact that it is the largest democracy** in the world.
 - India has become a major player not only in Asia but also in the world.
 - The Security Council would be a more representative body if India would be there in it as a permanent member.
- **Need:**
 - By having veto power, one can enjoy **enormous powers**.
 - Since 2009, India was trying to designate Masood Azhar as a global terrorist. One veto power of China kept delaying it.
 - India will be able to **work better for its interests**.
 - There was a time when the USSR actually started boycotting the UNSC and that was the time when US managed to get the resolution passed for the Korean War. From that time onwards USSR realized that it doesn't make sense to

Note:

boycott the UN. It **needs to keep veto if at all resolution is against them.**

- India's presence as a permanent member will be an **acknowledgement of its rise as a global power**, ready to play a key role in the council's objectives of international peace and security.
- India will be able to enjoy the '**prestige**' associated with the permanent membership of the council.

What is the United Nations Security Council (UNSC)?

- Established by the United Nations charter in 1945, the Security Council has primary responsibility of maintaining international peace and security.
- The Security Council has **15 members**.
 - There are **five permanent members**: the United States, the Russian Federation, France, China and the United Kingdom.
 - The non-permanent members of the Security Council are elected for a term of two years.
- **Each member of the Security Council has one vote. Decisions of the Security Council on matters are made by an affirmative vote of nine members including the concurring votes of the permanent members. A "No" vote from one of the five permanent members blocks the passage of the resolution.**
- Any member of the United Nations which is not a member of the Security Council may participate, without vote, in the discussion of any question brought before the Security Council whenever the latter considers that the interests of that member are specially affected.

What is Intergovernmental Negotiations (IGN)?

- IGN is a group of nation-states working within the United Nations to further reform of the United Nations Security Council (UNSC)
- The IGN is composed of several different international organizations, namely:
 - African Union
 - G4 nations
 - Uniting for Consensus Group (UfC)
 - L.69 Group of Developing Countries
 - Arab League
 - Caribbean Community (CARICOM).

Combined Maritime Forces (CMF)

Why in News?

Recently, **INS Sunayna** arrived in Port Victoria, **Seychelles** to participate in the annual training exercise **Operation Southern Readiness of Combined Maritime Forces (CMF)**.

- This not only reinforces the **Indian Navy's commitment to maritime security in the Indian Ocean Region** but also marks the maiden participation of an Indian Navy ship in the CMF exercise.



What do we know about Combined Maritime Forces (CMF)?

- **About:**
 - It is a **multinational maritime partnership**, which exists to **uphold the Rules-Based International Order (RBIO)** by countering illicit non-state actors on the high seas and promoting security, stability, and prosperity across approximately 3.2 million square miles of international waters, which encompass some of the world's most important shipping lanes.
 - **CMF is Commanded by a U.S. Navy Vice Admiral.**

Note:



- **Members:**
 - **CMF has 34 member nations:** Australia, Bahrain, Belgium, Brazil, Canada, Denmark, Egypt, France, Germany, Greece, Iraq, Italy, Japan, Jordan, Republic of Korea, Kuwait, Malaysia, the Netherlands, New Zealand, Norway, Pakistan, the Philippines, Portugal, Qatar, Saudi Arabia, Seychelles, Singapore, Spain, Thailand, Turkey, UAE, United Kingdom, United States, and Yemen.
 - India is not a member of CMF. At the **India-US 2+2 dialogue held in April (2022)**; India had announced that it would **join the CMF as an Associate Partner**.
- **Focus Area:**
 - CMF's main focus areas are **counter-narcotics, counter-smuggling, suppressing piracy, encouraging regional cooperation**, engaging with regional and other partners to strengthen relevant capabilities in order to improve overall security and stability.
 - When requested, CMF assets at sea will also respond to environmental and humanitarian incidents.

ICAO Joins International Solar Alliance

Why in News?

Recently, the **International Civil Aviation Organization (ICAO)** signed a **Memorandum of Understanding (MoU)** with the **International Solar Alliance (ISA)** during the 42nd session of ICAO Assembly in Montreal, Canada.

- Cochin International Airport in India became the world's first fully Solar powered airport in the world in 2015.

What is the MoU About?

- The MoU carries forward the legacy of ISA.
- The event marks a new beginning **for solar energy use in the global civil aviation sector**.
- It will enable the **solarization of the aviation sector** across all Member States of ISA
- It aims to check the growth of CO₂ emissions in the **Aviation sector**, leading to India's **Net Zero Targets**.
- It will work towards **providing information, providing advocacy, capacity building** and demonstration projects.

What is the India's Net Zero Target?

- India has pledged for **Net Zero Carbon goal by 2070** in **COP 26**.
- India has pledged a target of installing 175 GW of renewable energy of which 100 GW will be solar energy by 2022 and reduction in emission intensity by **33-35% by 2030**, to let solar energy reach the most unconnected villages and communities.

What is the International Solar Alliance (ISA)?

- **About:**
 - Co-founded by India and France during 2015, the ISA is an action-oriented, member-driven, collaborative platform for increased deployment of **solar energy** technologies.
 - Its basic motive is to facilitate energy access, ensure energy security, and drive energy transition in its member countries.
 - ISA is the nodal agency for implementing **One Sun One World One Grid (OSOWOG)**, which seeks to transfer solar power generated in one region to feed the electricity demands of others.
- **Headquarters:**
 - The Headquarters is in India with its **Interim Secretariat** being set up in Gurugram.
- **Member Nations:**
 - A total of 109 countries have signed the ISA Framework Agreement and 90 have ratified it.
 - All member states of the **United Nations** are eligible to join the ISA.
- **Observer Status to International Solar Alliance:**
 - The **United Nations General Assembly (UNGA)** has granted Observer Status to the International Solar Alliance (ISA).

Note:

- It will help provide for regular and well-defined cooperation between the Alliance and the United Nations that would benefit global energy growth and development.

What is the International Civil Aviation Organisation?

- ICAO is a **United Nations (UN) specialized agency, established in 1944**, which laid the foundation for the standards and procedures for peaceful global air navigation.
 - The Convention on International Civil Aviation was signed on 7th December 1944 in Chicago commonly known as the '**Chicago Convention**'.
 - It established the core principles permitting international transport by air, and also led to the creation of the ICAO.
- India is among its **193 members**.
- It is headquartered in **Montreal, Canada**.

Shanghai Cooperation Organisation (SCO) Summit 2022

Why in News?

The **Shanghai Cooperation Organisation(SCO)** summit 2022 was held recently in **Samarkand, Uzbekistan**.

- Samarkand declaration was signed by the member states.
- India takes over Presidency of the SCO for 2023.

What are the Key Highlights of the Summit?

- The Samarkand declaration advocated "commitment to peaceful settlement of differences and disputes between countries through dialogue and consultation".
- They stress that the principles of mutual respect for **sovereignty, independence, territorial integrity of States**, equality, mutual benefit, non- interference in internal affairs, and non-use or threat of use of force are the basis for sustainable development of international relations.
- The member countries are planning to develop common principles and approaches to form a **unified list of terrorists, separatist and extremist organizations**

whose activities are prohibited on the territories of the SCO member states.

- Russia is also looking at **more customers for its gas** as Western countries look to cut their dependence on it.
- Russia suggested that the organisation should think about holding its own big athletic event.

➤ Indian Perspective:

- **Connectivity:** India urged Shanghai Cooperation Organisation member states to give each other full **right to transit**, as it would **enhance connectivity** and help in establishing **reliable and resilient supply chains in the region**.
- **Food Security:** As the whole world is facing an unprecedented energy and food crisis, India emphasised the initiative to promote millet and address issues related to food security.
 - In this context, India is trying to popularise millets, as SCO can play a big role in marking 2023 as the **International Year of Millets**.
- **Working Group on Traditional Medicine: World Health Organisation(WHO)** opened its **Global Center for Traditional Medicines** in Gujarat in April 2022.
 - This was the **first and only worldwide centre for conventional medicine** established by the WHO.
- **Tourism: Varanasi was declared as the SCO Tourism and Cultural Capital** for 2022-2023 to promote the **rich cultural and historical heritage** of the people and the **tourism potential of SCO member states**.
 - Further, it will **promote tourism, cultural and humanitarian exchanges** between India and the SCO member Countries.
 - It also underlines **India's ancient civilizational links with the Member States of SCO**, especially the Central Asian Republics.
 - Under the framework of this **major cultural outreach program, a number of events will be hosted in Varanasi during 2022-23**.

What do we know about Shanghai Cooperation Organisation(SCO)?

➤ About:

- It is a **permanent intergovernmental international organisation**. It was **created in 2001**.
- The **SCO Charter was signed in 2002**, and **entered into force in 2003**.

Note:

- It's a **Eurasian political, economic and military organisation** aiming to maintain peace, security and stability in the region.
- It is seen as a counterweight to **North Atlantic Treaty Organization (NATO)**, It is a **nine-member economic and security bloc** and has emerged as one of the **largest transregional international organisations**.
- **Official Languages:**
 - Russian and Chinese.
- **Permanent Bodies:**
 - SCO Secretariat in Beijing.
 - Executive Committee of the Regional Anti-Terrorist Structure (RATS) in Tashkent.
- **Chairmanship:**
 - It is by rotation for a year by Member States.
- **Genesis:**
 - Prior to the creation of SCO in 2001, **Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the Shanghai Five**.
 - Shanghai Five (1996) emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
 - Following the accession of Uzbekistan to the organisation in **2001, the Shanghai Five was renamed the SCO**.
 - **India and Pakistan became members in 2017**.
 - **Current Members: Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan**.
 - **Iran is set to become a permanent member of the SCO in 2023**.
 - **India was made an observer at the SCO in 2005** and has generally participated in the ministerial-level meetings of the grouping which focus mainly on security and economic cooperation in the Eurasian region.

Asian Palm Oil Alliance

Why in News?

The apex edible oil industry associations from five major palm oil importing countries of Asia -- **India, Pakistan, Sri Lanka, Bangladesh and Nepal** -- have come together to form the **Asian Palm Oil Alliance (APOA)**.

- APOA held its first general body meeting on the sidelines of the Globoil Summit being held at Agra, India and the next meeting is expected to be held in **Indonesia early next year 2023**.
- **Globoil Summit** is one of the World's Leading Edible Oils and Agri Trade Conference, Exhibitions & Awards.
 - 2022 also marks the 25th year celebration of Globoil India.

What is APOA?

- The APOA aims is safeguarding the **economic and business interests of the palm oil consuming countries** and will work towards increasing the consumption of palm oil in member countries.
- The alliance would work **towards ensuring that palm oil is recognised as a high-quality, economical, and healthy vegetable oil** and to change the negative image of palm oil.
- Membership of APOA would be **further expanded to include companies or industry bodies** associated with production or refining of palm oil across the continent.

What is Palm Oil?

- Palm oil is **currently the world's most consumed vegetable oil**.
- It is used extensively in the **production of detergents, plastics, cosmetics, and biofuels**.
- Indonesia and Malaysia together account for almost **90% of the global palm oil production**, with Indonesia producing the largest quantity at over 45 million tonnes in 2021.
- Top consumers of the commodity are India, China, and the **European Union (EU)**.
- India's annual imports of edible oil is around **13-14 million tonne (MT)**.
- Around 8 MT of palm oil is imported from **Indonesia and Malaysia**, while other oils, such as soya and sunflower, come from Argentina, Brazil, Ukraine and Russia.
 - Asia accounts for **around 40% of the global palm oil consumption** while Europe accounts for 12% of palm oil trade. Indonesia and Malaysia are the biggest palm oil exporters in the world.
- India is the **largest importer of palm oil in Asia**, accounting for 15% of global imports, followed by China (9%), Pakistan (4%) and Bangladesh (2%).

Note:

Economic Scenario

Highlights

- Asian Development Bank (ADB) Loan to Himachal Pradesh
- Scheme Special Assistance to States for Capital Investment
- Interest Rates on Small Savings Schemes
- Skill Development in India
- Renewable Energy and Jobs
- Banking System Liquidity
- National Technical Textiles Mission (NTTM)
- Green Fins Hub
- Financial Stability and Development Council
- Social Entrepreneurship in India
- PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana)
- Amendments in IBBI Regulations
- 47th AIBD Annual Gathering
- National Logistics Policy 2022
- Self-reliance in Energy Sector
- AgriTech Summit
- Automobile Industry in India
- Ethereum Merger
- International Year of Millets 2023
- PCA Framework
- Fund of Funds for Startups (FFS)
- Eight Years of Make in India
- Maharatna Status to REC
- Modified Incentive Scheme for Semiconductor Chip-Making
- Quarterly Employment Survey (QES)

Asian Development Bank (ADB) Loan to Himachal Pradesh

Why in News?

Recently, the **Asian Development Bank (ADB)** and the Government of India signed a USD 96.3-million loan agreement to **provide safe drinking water and improve water supply and sanitation services** in the state of Himachal Pradesh.

What are the Key Highlights of the Project?

➤ About:

- The project is aligned with the objectives of the Government of India's **Jal Jeevan Mission** which aims to provide piped water to all rural households by 2024,
- It will upgrade water supply infrastructure and strengthen institutional capacity to ensure safe, sustainable, and inclusive rural water supply and sanitation services.

Features:

- **Water Supply Infrastructure Revamping:**
 - Although more than 90% of the state's rural population has access to drinking water, the water supply infrastructure needs revamping, for efficient and improved service quality.
- **Fecal Management Programme:**
 - A pilot fecal sludge management and sanitation programme will also be implemented in **Sirmaur District, benefiting 250,000 residents.**
- **Strengthen Jal Shakti Vibhag:**
 - The project will strengthen the capacity of the **Jal Shakti Vibhag** of the Government of Himachal Pradesh and **gram panchayat (local government) village water and sanitation committees.**
 - It will support the **state government's water tariff policy reforms** and introduce an asset management system at the **state-level and district asset management plans.**
 - Key project stakeholders and **community-based organisations will be trained on water management**, including livelihood skills training for **women's self-help groups.**

Note:

What is Asian Development Bank?

- ADB, established in **1966** is owned by 68 members-49 from the region.
- It is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific while sustaining its efforts to eradicate extreme poverty.
- Further, it assists members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.
- It aims to promote social and economic development in Asia and the Pacific.
- As of 31st December 2019, **ADB's five largest shareholders** are **Japan and the United States** (each with **15.6% of total shares**), the **People's Republic of China (6.4%), India (6.3%), and Australia (5.8%)**.
- It is headquartered in **Manila, Philippines**.

Scheme Special Assistance to States for Capital Investment

Why in News?

Recently, the Government has launched a **Scheme Special Assistance to States for Capital Investment for 2022-23**.

What is the Scheme Special Assistance to States for Capital Investment?

- **About:**
 - Under this Scheme, financial assistance is provided to the States Governments in the form of **50-year interest free loan** for capital investment projects.
 - For the 2022-23 Financial Year (FY) a total financial assistance of Rs 1 lakh crore would be given to states.
 - The loan under the scheme **would be over and above the normal borrowing ceiling** allowed to states for FY 2022-23 and should be spent in the same year.
- **Eligible Parts of the Scheme:**
 - New or ongoing projects or for settling pending bills in ongoing capital projects.
 - States may submit projects of higher value than the funds allocated, indicating their preference/priority.

➤ **Different Parts of the Scheme:**

- For capital works (**PM Gati Shakti Master Plan** will receive priority); PM Gati Shakti related expenditure; **PM Gram Sadak Yojana**; Incentives for digitisation; **Optical Fibre Cable**; Urban reforms; Disinvestment and monetisation.
- **Exclusion:** Projects with capital outlay of less than 5 crore (2 crore for North East) and repair and maintenance projects irrespective of capital outlay are not eligible

What is Capital Expenditure?

➤ **Meaning:**

- Capital expenditure is the **money spent by the government on the development of machinery, equipment, building, health facilities, education, etc.**
- It also **includes the expenditure incurred on acquiring fixed assets** like land and investment by the government that gives profits or dividends in future.
- Along with the creation of assets, repayment of loan is also capital expenditure, as it reduces liability.
- Capital spending is associated with investment or development spending, where expenditure has benefits extending years into the future.

➤ **Significance:**

- Capital expenditure is long-term in nature and allows the economy to generate revenue for many years by adding or improving production facilities and boosting operational efficiency.
- It also **increases labour participation**, takes stock of the economy and raises its capacity to produce more in future.

➤ **Different from Revenue Expenditure:**

- Unlike capital expenditure, which creates assets for the future, **revenue expenditure is one that neither creates assets nor reduces any liability of the government.**
- Salaries of employees, interest payment on past debt, subsidies, pension, etc, fall under the category of revenue expenditure. It is recurring in nature.

Interest Rates on Small Savings Schemes

Why in News?

Recently, the Government of India has hiked interest rates on some of the **Small Savings Schemes (2-year and**

Note:

3-year Time Deposits, Senior Citizens Savings Scheme and Kisan Vikas Patra) for October-December 2022.

What are Small Savings Schemes?

➤ About:

- Small Savings Schemes are a **set of savings instruments managed by the central government** with an aim to **encourage citizens to save regularly irrespective of their age.**
 - They are popular as they **not only provide returns that are generally higher than bank fixed deposits but also come with a sovereign guarantee and tax benefits.**
- All deposits received under various small savings schemes are pooled in the **National Small Savings Fund**. The money in the fund is **used by the central government** to finance its **fiscal deficit**.

➤ Classification:

- **Post office deposits:**
 - Savings deposit, Recurring deposit and Time deposits with 1, 2, 3 and 5 year maturities and the Monthly Income Account.
- **Savings Certificates:**
 - **National Savings Certificate:**
 - The interest that is **earned is reinvested into the scheme every year** automatically.
 - **Kisan Vikas Patra:**
 - Open to everyone, doubles the one-time investment at the end of 124 months signifying a **return of 6.9% compounded annually.**
- **Social Security Schemes:**
 - **Public Provident Fund:**
 - Public Provident Fund (PPF) is a retirement savings scheme offered by the Government of India with the aim of providing a secure post-retirement life to everyone.
 - **Sukanya Samriddhi Account:**
 - It was launched in 2015 under the **Beti Bachao Beti Padhao** campaign **exclusively for a girl child.**
 - The account **can be opened in the name of a girl child** below the age of 10 years.
 - The scheme **guarantees a return of 7.6% per annum** and is eligible for **tax benefit under Section 80C of the Income Tax Act.**
 - **Senior Citizens Savings Scheme:**

- Can be opened by anyone who is over 60 years of age.

➤ Determination of Rates:

- Interest rates on small savings schemes are **reset on a quarterly basis**, in line with the **movement in benchmark government bonds of similar maturity**. The rates are **reviewed periodically by the Ministry of Finance**.
- **The Shyamala Gopinath panel (2010)** constituted on the **Small Saving Scheme** had suggested a **market-linked interest rate system** for small savings schemes.

Skill Development in India

Why in News?

Recently, the Union Skill Development and Entrepreneurship Minister inaugurated the **13th Federation of Indian Chambers of Commerce & Industry (FICCI) Global Skills Summit 2022**.

Theme: Education to Employability - Making It Happen.

What is FICCI?

- It's a non-government, not-for-profit organisation,
- **Established in 1927**, it is the **largest and oldest apex business organisation in India**.
- It provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policymakers and the international business community.

What is the Status of Skill Development in India?

➤ About:

- The 2015 Report on **National Policy on Skill Development and Entrepreneurship** estimated that only **4.7%** of the total workforce in India had undergone formal skill training compared with **52% in the US, 80% in Japan, and 96% in South Korea**.
- A skill gap study conducted by the **National Skill Development Corporation (NSDC)** over 2010-2014 indicated an additional net incremental requirement of 10.97 crores of skilled manpower in 24 key sectors by 2022.
 - In addition, the 29.82 crore farm and nonfarm sector workforce needed to be skilled, reskilled, and upskilled.

Note:

➤ Issues:

- **Overburdened Responsibility: Phase III of Pradhan Mantri Kaushal Vikas Yojana**, launched to impart skills development to over 8 lakh persons in 2020-21.
 - However, it suffers from excessive reliance on the District Skills Development Committees, chaired by District Collectors, who would not be able to prioritise this role, given their other assignments.
- **Discontinuity in Policy Process:** The **National Skill Development Agency (NSDA)**, was created in 2013 for resolving the inter-ministerial and inter-departmental issues and eliminating duplicates of efforts of the Centre.
 - However, it has been now subsumed as part of the National Council for Vocational Training (NCVT).
 - This reflects not only a discontinuity in the policy process, but also some obfuscation among policymakers.
- **Enormous Number of New Entrants:** According to a 2019 study by the **National Skills Development Corporation (NSDC)**, 7 crore additional people in the working age of 15-59 years are expected to enter the labor force by 2023.
 - Given the sheer magnitude of youth to be skilled, it is paramount that the policy efforts are adequate in all respects.
- **Employers' Unwillingness:** India's joblessness issue is not only a skills problem; it is representative of the lack of appetite of industrialists and SMEs for recruiting.
 - Due to limited access to credit because of Banks' NPAs, the investment rate has declined and thus has a negative impact on job creation.

Why is there a Need for Skill Development of Workforce?

- **Supply and Demand Issues:** On the supply side, India is failing to create enough job opportunities; and on the demand side, professionals entering the job market are lacking in skill sets. This is resulting in a scenario of **rising unemployment rates along with low employability**.
- **Rising Unemployment:** As per the **Centre for Monitoring Indian Economy (CMIE)**, the **unemployment rate in India has been around 7% or 8% in 2022**, up from about 5% five years ago.

- Further, the workforce shrank as millions of people dejected over weak job prospects pulled out, a situation that was exacerbated by Covid-19 lockdowns.

- The labor force participation rate, meaning people who are working or looking for work, has **dropped to just 40% of the 900 million Indians of legal age**, from 46% six years ago.

- **Lack of Skills in Workforce:** While keeping pace with the employment generation is one issue, the **employability and productivity of those entering the labour market is another issue**.

- As per the India Skills report 2015, **only 37.22% of surveyed people were found employable** - 34.26% among males and 37.88% among females.

- According to **Periodic Labour Force Survey (PLFS) data 2019-20**, 86.1% of those between 15 and 59 years had not received any vocational training. The remaining 13.9% had received training through diverse formal and informal channels.

- **Demand for Skilled Workforce:** The **Confederation of Indian Industry (CII)** had projected Incremental Human Resource Requirements till 2022 at 201 million, making the total requirement of the skilled workforce by 2023 at 300 million.

- A major share of these jobs was to be added in the manufacturing sector, with the National Manufacturing Policy (2011) targeting 100 million new jobs in manufacturing by 2022.

What are the Various Initiatives taken for Skill Development?

- **Pradhan Mantri Kaushal Vikas Yojana:** The flagship **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** scheme was launched in 2015 to provide short-term training, skilling through ITIs and under the apprenticeship scheme.
 - Since 2015, the government has trained over 10 million youth under this scheme.
- **SANKALP and STRIVE:** The **SANKALP programme** which focuses on the district-level skilling ecosystem and the **STRIVE project** which aims to improve the performance of ITIs are other significant skilling interventions.
- **Initiatives from Several Ministries:** Nearly 40 skill development programmes are implemented by 20 central ministries/departments. The **Ministry of Skill**

Note:



Development and Entrepreneurship contributes about 55% of the skilling achieved.

- Initiatives by all ministries have resulted in nearly four crore people being trained through various traditional skills programmes since 2015.
- **Mandatory CSR Expenditure in Skilling:** Since the implementation of **mandatory CSR spending under the Companies Act, 2013**, corporations in India have invested over ₹100,000 crores in diverse social projects.
 - Of these, about ₹6,877 crores were spent on skilling and livelihood enhancement projects. Maharashtra, Tamil Nadu, Odisha, Karnataka, and Gujarat were the top five recipient States.
- **TEJAS Initiative for Skilling:** Recently, TEJAS (Training for Emirates Jobs and Skills), a Skill India International Project to train overseas Indians was launched at the Dubai Expo, 2020.
 - The project aims at skilling, certification and overseas employment of Indians and creating pathways to enable the Indian workforce to get equipped for skill and market requirements in the UAE.

Renewable Energy and Jobs

Why in News?

Recently, the **International Renewable Energy Agency (IRENA)** and the **International Labour Organization (ILO)** released a report titled “**Renewable Energy and Jobs-Annual Review 2022**”, which says that around 700,000 new jobs were created in the **Renewable Energy Sector** in just one year.

- The report identified **domestic market size, along with labor**, as a major factor influencing job growth in the sector.

What are the Findings?

- **Overview:**
 - The Renewable Energy sector employed **12.7 million people across the world in 2021**, up from 12 million in 2020.
 - Close to **two-thirds of all such jobs are in Asia**, with China alone **accounting for 42 % of the global total**. It is followed by the European Union and Brazil with 10 % each and the United States and India with 7 % each.

- Developed economies received the largest share of investment in the renewable energy field. These countries are on their way to **achieving a 60 % growth in the clean energy sector by 2022**.
- **Regional Trends:**
 - **Southeast Asian** countries are **becoming major Solar Photovoltaic (PV) manufacturing hubs** and biofuel producers, while China is the pre-eminent manufacturer and installer of solar PV panels and is creating a growing number of jobs in offshore wind.
 - **India** added more than **10 Gigawatts of solar PV**, generating many installation jobs, but remains heavily dependent on imported panels.
 - **Europe** accounts for about 40 % of the **world’s wind manufacturing output and is the most important exporter** of wind power equipment; it is trying to reconstitute its solar PV manufacturing industry.
 - In Africa there are growing **job opportunities in decentralized renewables**, while in the Americas, Mexico is the leading supplier of wind turbine blades.
 - **Brazil remains the leading employer in biofuels** but is also adding many jobs in wind and solar PV installations.
 - **The US** is beginning to build a domestic industrial base for the budding offshore wind sector.
- **Solar Energy:**
 - Solar energy remained the **fastest-growing sector**.
 - In 2021 it provided **4.3 million jobs** — more than a third of the total renewable energy workforce.
 - In 2021, a record 132.8 gigawatts of solar PV capacity were installed globally, up from 125.6 GW in 2020.
 - China accounted for **53 GW (40 %) of this addition**. It was followed by the US, India and Brazil, all of which set new annual records.
- **Decentralized Renewable Energy:**
 - The number of people directly employed in **Decentralised Renewable Energy (DRE)** in 2021 was more than 80,000 in India (mostly in solar PV), 50,000 each in Kenya and Nigeria, almost 30,000 in Uganda.
 - DRE is a system that uses **renewable energy to generate, store and distribute power in a localised way**.

Note:

- The share of women in the **DRE** workforce is still low, particularly for skilled jobs, the researchers observed.
 - Overall, the share of women in DRE was 41 % in Kenya, 37 % in Ethiopia and Nigeria, 28 % in Uganda and 21 % in India.

What are the Recommendations?

- An energy transition that can be considered just needs not only to create decent jobs but **also to offer social protection for affected workers**, communities and regions during the transition.
- A successful and just energy transition requires strong public policy interventions and capable institutions for policy implementation.
- Pursuing **industrial policies that encourage the expansion of decent renewables jobs** at home.
- Not only the ultimate outcome of the energy transition but also the process of a decades-long transformation of all economies must be just.
- The expansion of renewable energy needs to be **supported with holistic policy packages**, including training for workers to ensure jobs are decent, high quality, well paid and diverse in pursuit of a just transition.

What is the International Renewable Energy Agency (IRENA)?

- It is an intergovernmental organisation, it was officially founded in Bonn, Germany, in January 2009.
- It has 168 members and India is the 77th Founding Member of IRENA.
- It has its headquarters in Abu Dhabi, United Arab Emirates.

What is the International Labor Organization?

- It is the only tripartite **United Nation (UN) agency**. It brings together governments, employers and workers of 187 member States (India is a member), to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
 - Received the **Nobel Peace Prize in 1969**.
- Established in 1919 by the **Treaty of Versailles as an affiliated agency of the League of Nations**.
- Became the first affiliated specialized agency of the UN in 1946.
- Headquarters: Geneva, Switzerland.

Banking System Liquidity

Why in News?

For the first time Liquidity in the banking system has moved into deficit mode after remaining in surplus mode for almost 40 months for the first time since May 2019.

What is Banking System Liquidity?

- Liquidity in the banking system refers to **readily available cash that banks need to meet short-term business** and financial needs.
- On a given day, if the banking system is a net borrower from the RBI under **Liquidity Adjustment Facility (LAF)**, the system liquidity can be said to be in deficit and if the banking system is a net lender to the RBI, the system liquidity **can be said to be in surplus**.
 - The LAF refers to the RBI's operations through which **it injects or absorbs liquidity into or from the banking system**.

What has Triggered this Deficit?

- The change in the liquidity situation has come due to **advance tax outflows**. This also increases the **call money rate temporarily above** the repo rate.
 - **Call money rate** is the rate at which **short term funds are borrowed** and lent in the money market.
 - Banks resort to these types of loans to fill the asset liability mismatch, comply with the statutory **CRR (Cash Reserve Ratio)** and **SLR (Statutory Liquidity Ratio)** requirements and to meet the sudden demand of funds. RBI, banks, primary dealers etc are the participants of the call money market.
- Besides, there is the continuous intervention of the **RBI to stem the fall in the rupee against the US dollar**.
- The deficit in the liquidity situation has been caused by **an uptick in bank credit, intervention of the RBI into the forex market**, and also incremental deposit growth not keeping pace with credit demand.

How can a Tight Liquidity

Condition Impact Consumers?

- A tight liquidity condition could lead to a **rise in the government securities yields** and subsequently lead to a **rise in interest rates** for consumers too.
- RBI may increase Repo Rate, which can lead to a **higher cost of funds**.

Note:

- Banks will increase their repo-linked lending rates and the **marginal cost of funds-based lending rate (MCLR)**, to which all loans are linked to. This rise **will result in higher interest rates for consumers**.
 - The MCLR is the minimum interest rate that a bank can lend at.

National Technical Textiles Mission (NTTM)

Why in News?

The **Ministry of Textiles** recently cleared 23 strategic research projects worth around Rs 60 crores in **Specialty fibres, Sustainable Textiles, Geotextiles, Mobiltech and Sports textiles** under the **National Technical Textiles Mission**.

What are Technical Textiles?

- Technical textiles are **functional fabrics** that have applications across various industries including automobiles, civil engineering and construction, agriculture, healthcare, industrial safety, personal protection etc.
 - Technical Textile products derive their demand from the development and industrialization in a country.
- Based on usage, there are **12 technical textile segments**: Agrotech, Meditech, Buildtech, Mobiltech, Clothtech, Oekotech, Geotech, Packtech, Homotech, Protech, Indutech and Sportech.
 - **For example**, 'mobiltech' refers to products in vehicles such as seat belts and airbags, airplane seats; geotech, which is incidentally the fastest growing sub-segment, used to hold back soil, etc.

What do we know about the National Technical Textiles Mission (NTTM)?

- **About:**
 - It was **approved in 2020 by the Cabinet Committee on Economic Affairs (CCEA)** with total outlay of Rs.1480 Crore.
 - The implementation period is four years, from FY 2020-21 to FY 2023-24.
- **Aim:**
 - The aim of the mission is to position **India as a global leader in Technical Textiles** by taking the

domestic market size from USD 40 billion to USD 50 billion by 2024.

- It also supports the **'Make in India'** Initiative promoting domestic manufacturing of related machinery and equipment.
- **Components:**
 - **First component:** It will **focus on research, development and innovation** with an outlay of Rs. 1,000 crores.
 - The research will be at both fiber level and application-based in geo, agro, medical, sports and mobile textiles and the development of biodegradable technical textiles.
 - Research activities will also focus on the development of indigenous machinery and process equipment.
 - **Second component:** It will be for the **promotion and development of the market for technical textiles**.
 - The **penetration level of technical textiles is low** in India varying between 5-10% against the level of 30-70% in developed countries.
 - The Mission will aim at an average growth rate of 15-20% per annum by 2024.
 - **Third component:** It will **focus on export promotion** so that technical textile exports from the country reach from Rs 14,000 crores to Rs 20,000 crores by 2021-2022 and ensure 10% average growth every year till the Mission ends.
 - An **export promotion council** for technical textiles will be set up.
 - **Fourth component:** It will **focus on education, training and skill development**.
 - The Mission will promote technical education at higher engineering and technology levels related to technical textiles and its application areas.
- **Scenario of Textile sector:**
 - The growth of technical textiles in India has **gained momentum in the past five years**, currently growing at an **8% per annum rate**.
 - It aims to **hasten this growth to the 15-20% range** during the next five years.
 - Indian Technical Textiles segment is estimated at USD 16 Billion which is approximately 6% of the 250 billion USD global technical textiles market.
 - The **biggest players are the USA**, western Europe, China and Japan (20-40% share).

Note:

➤ Implementation & Governance:

- The mission will be implemented via a **three-tier institutional mechanism which will consist of the following:**
 - **Mission Steering Group:** The group will be authorized to approve all financial norms with respect to schemes, components and programme of the mission.
 - The group will also be entrusted with the **responsibility of approving all scientific and technological research projects** under the mission.
 - **Empowered Programme Committee:** The committee will be required to approve all projects (except research projects) within the financial limits of various programs as approved by the Mission Steering Group.
 - The committee will also be entrusted with the **responsibility of monitoring the implementation** of various components of the mission.
 - **Committee on Technical Textiles on Research, Development & Innovation:** This committee will be responsible for the identification and recommendation of research projects to the Mission Steering Group for approval.
 - These projects will be related to strategic sectors such as space, security, defence, para-military, and atomic energy.

What are the Other Initiatives Related to Technical Textile?

- **Production Linked Incentive (PLI) Scheme for Textiles Sector:** It aims to promote the production of high-value Man-Made Fiber (MMF) fabrics, garments and technical textiles.
- **Harmonized System of Nomenclature (HSN) Codes for Technical Textile:** In 2019, the Government of India dedicated 207 HSN codes to technical textiles to help in monitoring the data of import and export, in providing financial support and other incentives to manufacturers.
- **100% FDI under Automatic Route:** The Government of India allows 100% **Foreign Direct Investment (FDI)** under the automatic route. International technical textile manufacturers such as Ahlstrom, Johnson & Johnson etc have already initiated operations in India.

- **Technotex India:** It is a flagship event organized by the Ministry of Textiles, in collaboration with **Federation of Indian Chambers of Commerce & Industry (FICCI)** and comprises exhibitions, conferences and seminars with the participation of stakeholders from across the global technical textile value chain.
- **Amended Technology Upgradation Fund Scheme:** To improve exports and indirectly promote investments in textile machinery.

Green Fins Hub

Why in News?

Recently, the **United Nations Environmental Programme (UNEP)**, along with the UK-based charity **Reef-World Foundation**, launched the **Green Fins Hub**.

- Green Fins Hub is a **global digital platform for diving and snorkelling operators worldwide**.

What is Green Fins?

➤ About:

- **Green Fins** is a proven conservation management approach **implemented internationally by The Reef-World Foundation and the UNEP** which leads to a measurable **reduction in the negative environmental impacts associated with marine tourism**.
- **Originally established in Thailand in 2004**, the Green Fins approach is a tool for supporting **adoption and implementation of best practices in the diving and snorkeling tourism industry**.

➤ Aim:

- It aims to **protect coral reefs through environment-friendly guidelines** promoting sustainable diving and snorkelling.
- It provides the **only internationally recognised environmental standards for marine tourism** and its robust assessment system measures compliance.

What is Green Fins Hub?

➤ About:

- The **Green Fins Hub** is the **first-ever global marine tourism industry platform**.
- It would **give sustainable marine tourism a 'major boost'**.

Note:

- It is expected to scale up to reach a **potential 30,000 operators worldwide from about 700 operators across 14 countries.**

➤ Significance:

- It is intended to catalyse a **seismic shift towards sustainability in the marine tourism sector** through Green Fins membership.
- **Coral reefs are home to at least 25% of marine life, are the mecca for marine-related tourism, contributing up to 40% or more of the gross domestic product** in some island nations. However, they are a **most vulnerable ecosystem**, especially to climate change with the difference between a global temperature rise of 1.5 or 2°C being existential for reefs.
 - **Increasing accessibility of best practice, knowledge and citizen science** through the Green Fins Hub could be a **game changer in ensuring a future for coral reefs and other fragile marine ecosystems.**
- The **platform will help diving and snorkelling operators worldwide to make simple, cost-efficient changes to their daily practices** by utilising tried and tested solutions.
 - It would also help them **keep track of their annual improvements and communicate with their communities and customers.**

What is Sustainable

Coastal and Marine Tourism?

- **Sustainable Tourism** refers to sustainable practices in and by the tourism industry. It refers to **addressing the issues of a greener tourism sector both on the demand as well as supply side.**
 - According to the UN, **sustainable tourism should incorporate the following:**
 - **Make optimal use of environmental resources** that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
 - **Respect the socio-cultural authenticity of host communities**, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.

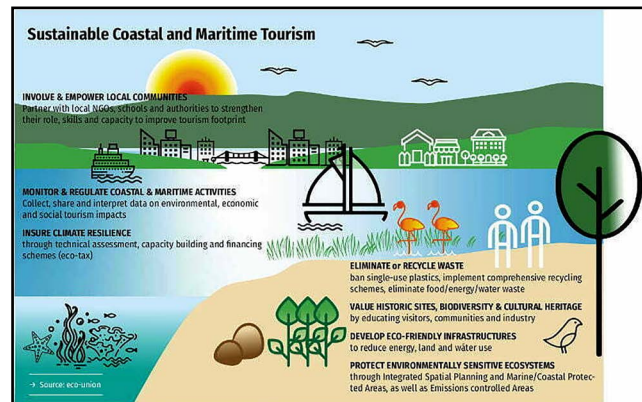
- **Ensure viable, long-term economic operations, providing socio-economic benefits** to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

➤ Coastal and Marine Tourism (CMT) represents at least 50% of total global tourism. It constitutes the largest economic sector for most Small Island Developing States (SIDS) and many coastal states.

- With anticipated global growth rates of more than 3.5%, coastal and marine tourism is **projected to be the largest value-adding segment of the ocean economy by 2030, at 26%.**

What are the Challenges Associated with CMT?

- **Continued Depletion and Degradation of Natural Assets** is putting the sustainability and viability of the industry, along with the local communities that rely on it, at risk.
- **Covid-19 Pandemic Caused a Major Disruption** in the tourism industry. The World Travel and Tourism Council has projected around 75 million job losses and a tourism-induced GDP reduction of more than \$2 trillion globally.
- **Climate Change will Affect Strongly the Coastal Areas** with high anthropic vulnerability, through temperature increase, more frequent environmental events, water scarcity and sea level rise (SLR).



What are the Other Initiatives

Towards Coastal and Marine Tourism?

- **Global Initiatives:**
 - **Global Sustainable Tourism Council (GSTC) and World Wild Fund (WWF)** are partnering with hotels,

Note:

cruise ships, tour operators and the industry to create nature-positive tourism where all supply chain actors converge to create value for people, nature and businesses.

- **Sustainable Blue Economy Finance Initiative** is a UN-convened global community focused on the intersection between private finance and ocean health, supporting the implementation of the Sustainable **Blue Economy Finance Principles**.
 - **The Sustainable Blue Economy Finance Principles** are the foundational keystone to invest in the ocean economy. Launched in 2018, they are the world's first global guiding framework for banks, insurers and investors to finance a sustainable blue economy. They promote the implementation of SDG 14 (Life Below Water), and set out ocean-specific standards.
- **Ocean Recovery Alliance has become a signatory of the Global Tourism Plastics Initiative**, led by the UNEP and World Tourism Organization, in collaboration with the Ellen MacArthur Foundation.
 - **The Global Tourism Plastics Initiative** has the objective to **tackle plastic pollution** by promoting a shift towards circular economy of plastics in tourism operations where plastics never become waste, rather than to completely eliminate plastics from all tourism operations.

➤ **Indian Initiatives:**

- **Deep Ocean Mission**
- **India-Norway Task Force on Blue Economy for Sustainable Development**
- **O-SMART**
- **Integrated Coastal Zone Management**

Financial Stability and Development Council

Why in News?

Recently, the Union Minister of Finance and Corporate Affairs chaired the 26th Meeting of the **Financial Stability and Development Council (FSDC)**.

What are the Key Highlights?

- The council stressed on the **early warning indicators for the economy and the preparedness to deal with them**, improving the efficiency of the existing

financial and credit information systems, and issues of governance and management in systemically important financial institutions.

- It was noted that there is a **need to monitor the financial sector risks**, the financial conditions and market developments on a continuous basis by the Government and the regulators **so that appropriate and timely action can be taken** so as to mitigate any vulnerability and strengthen financial stability.
- The council took note of the **preparation in respect of financial sector issues** to be taken up during **India's G20 Presidency in 2023**.

What is FSDC?

➤ **Establishment:**

- It is a **non-statutory apex council** under the Ministry of Finance constituted by the **Executive Order in 2010**.
- The Raghuram Rajan committee (2008) on **financial sector reforms first proposed the creation of FSDC**.

➤ **Composition:**

- It is chaired by the **Finance Minister and its members include the heads of all Financial Sector Regulators (RBI, SEBI, PFRDA & IRDA)**, Finance Secretary, Secretary of Department of Economic Affairs (DEA), Secretary of Department of Financial Services (DFS), and Chief Economic Adviser.
 - In 2018, the government **reconstituted FSDC to include the Minister of State** responsible for the Department of Economic Affairs (DEA), Secretary of Department of Electronics and Information Technology, Chairperson of the **Insolvency and Bankruptcy Board of India (IBBI)** and the Revenue Secretary.

- FSDC sub-committee is headed by the **Governor of RBI**.

- The Council can invite experts to its meeting if required.

➤ **Functions:**

- To strengthen and institutionalize the mechanism for maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development.
- **To monitor macro-prudential supervision** of the economy. It assesses the functioning of large financial conglomerates.

Note:

Social Entrepreneurship in India

Why in News?

In order for businesses and governments to make informed decisions about global socioeconomic and environmental issues, **social entrepreneurship is becoming increasingly important.**

Who are Social Entrepreneurs?

➤ About:

- It is a **construct that blends the idea of a commercial enterprise** with the tenets of a charitable nonprofit organization.
- It is about **creating business models** revolving around low-cost products and services to resolve social inequities.
- It **helps to succeed in economic initiatives**, and all the investment focuses on the social and environmental mission.
- Social entrepreneurs are also **called social innovators** as they are the agents of change and create significant change using innovative ideas.
 - They **identify the problems and build the difference** by their plan.
- Social entrepreneurship is a growing trend alongside Socially Responsible Investment (SRI) and **ESG (Environmental, Social and Governance) investing.**

➤ Examples:

- Educational programs, providing banking services in underserved areas and helping children orphaned by **epidemic disease.**

What is the Significance of Social Entrepreneurs?

- **Focus on Social Problems:** Social Entrepreneurs **mainly focus on social problems.** They initiate innovation by mobilizing the resources available to build social arrangements in response to social problems.
- **Change Agent in Social Sector:** Social Entrepreneurs **act as change makers in society** who in turn influence others to contribute to the development of mankind.
 - They work not only as a strong catalyst in society, but as change agents in the social sector.
- **Bring the Changes:** They **adopt a mission to create and sustain social value;** recognizing and rigidly pursuing new opportunities, engaging in a process of continuous innovation, adaptation and learning.

- **Increased Accountability:** They **act boldly without being limited by resources** in hand and exhibit heightened accountability to the constituencies.
- **Improve People's Lives:** People are **attracted to social entrepreneurs** like the Nobel Peace Prize laureate **Muhammad Yunus** for many of the same reasons that they find business entrepreneurs like Steve Jobs so compelling – these extraordinary people come up with brilliant ideas and against all the odds succeed at creating new products and services that dramatically improve people's lives.
- **Help in Achieving Inclusive Society:** They are **also playing a pivotal role in the inclusive recovery** and rebuilding of communities at the grassroots level.

How can Social Entrepreneurs Contribute to India's Growth Story?

➤ No more Not for Profit:

- India's development sector has undergone a rapid transformation including the **creation of social enterprises that are purely for-profit companies** and no longer restricted to "no-profit" or "low-profit" ventures.
 - These **for-profit social enterprises can generate enough funds** to run their operations without donations or grants.

➤ Social Impact Investing:

- The **country's social entrepreneurs are being nurtured, encouraged and hailed** for being able to meet India's most challenging developmental demands.
- According to the **Impact Investors Council (IIC)**, around 600 impact enterprises in India now affect 500 million lives, attracting over USD 9 billion in capital.
 - Impact Investors Council (IIC) is the **leading national industry association of Impact Investors in India.**
 - Its mission is to **encourage private capital to bridge the social investment gap in the country** while developing an impact investment asset class.

➤ Deepening Social Innovation Movement:

- Today's social entrepreneurs have **become elemental innovators and dynamic problem-solvers** contributing to India's development.

Note:

- These **enterprises are looking for strategic collaborations**, both domestic and international, to innovatively solve unique problems.
- **Extensive use of technology and rapid digitalisation initiatives** by the government have further facilitated their innovation streak.
- **Support of Government:**
 - Government support for **startups** along with the announcement and impending launch of the **Social Stock Exchange** has paved the way for a more positive atmosphere for social entrepreneurship in India.
 - The **Securities and Exchange Board of India** has recently **released the framework for a Social Stock Exchange**, making it possible for social entrepreneurs to raise more funds and expand their impact and reach exponentially.
- **Sustainability and a Multi-Dimensional Approach:**
 - Both businesses and governments are becoming increasingly aware of the importance of sustainability.
 - **Social entrepreneurs and their business models** have always been **working on the sustainability framework**.
 - The government and corporate firms are **not only willing to take inspiration from their business models and incorporate those learnings**, but also to help these enterprises scale up.
 - Additionally, **in order to bridge the socioeconomic gaps prevalent in society**, one needs to adopt a multidimensional approach.
 - For example, beyond the lack of financial resources, **poverty also has cultural, social, psychological and emotional dimensions**, which manifest in the form of discrimination, exclusion, insecurity, vulnerability, powerlessness and rejection.
 - **Social entrepreneurial models offer customisation for each problem**, hence addressing all the dimensions of an issue.

PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana)

Why in News?

To reduce the use of chemical fertilisers the Government is Planning to Launch the **PM PRANAM**

(Promotion of Alternate Nutrients for Agriculture Management Yojana) Scheme.

What do we Know About PRANAM Scheme?

- **Objectives:**
 - To encourage the balanced use of fertilisers in conjunction with biofertilisers and organic fertilisers.
- **Aim:**
 - To bring down the subsidy burden on chemical fertilisers, which is estimated to reach Rs 2.25 lakh crore in 2022-23 — 39% higher than 2021 figure of Rs 1.62 lakh crore.
- **Features of the Proposed Scheme:**
 - The scheme will have no separate budget and will be financed through the “savings of existing fertiliser subsidy” under schemes run by the Department of Fertilizers.
 - 50% of subsidy savings will be passed on as a grant to the state that saves the money.
 - 70% of the grant provided under the scheme can be used for asset creation related to the **technological adoption of alternate fertilisers** and alternate fertiliser production units at the village, block and district levels.
 - The remaining 30% grant money can be used for **rewarding and encouraging farmers, panchayats, farmer producer organisations** and self-help groups that are **involved in the reduction of fertiliser use and awareness generation**.
 - The calculation of reducing chemical fertiliser use of urea in a year will be **compared to the average consumption of urea during the last three years**.
 - For this purpose, data available on a Fertilizer Ministry dashboard, **IFMS (Integrated Fertilizers Management System)** will be used.

What was the Need for this Scheme?

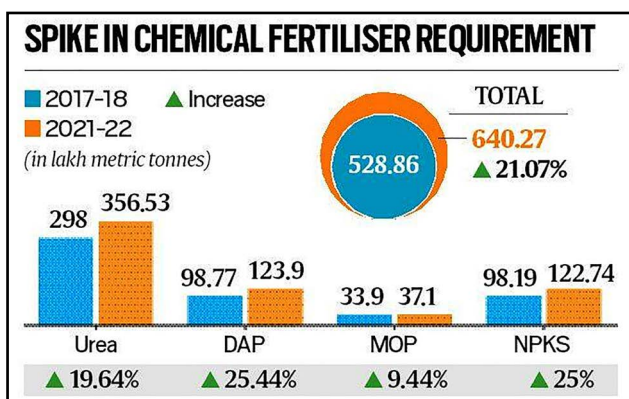
- **Subsidy Burden on Government:**
 - Farmers **buy fertilisers at Maximum Retail Prices (MRP) below their normal supply-and-demand-based market rates** or what it costs to produce/import them.
 - For example, the MRP of neem-coated urea is fixed by the government at Rs. 5,922.22 per tonne, whereas its average cost-plus price payable to domestic manufacturers and importers comes to around Rs. 17,000 and Rs. 23,000 per tonne, respectively.

Note:

- The **difference**, which varies according to plant-wise production cost and import price, is **footed by the Centre as a subsidy**, which goes to the companies.
- The **MRPs of non-urea fertilisers are decontrolled or fixed by the companies**. However, the **Centre pays a flat per-tonne subsidy on these nutrients** to ensure reasonable prices.
 - The per-tonne subsidy ranges from Rs. 10,231 to Rs. 24,000 for different types of fertilisers.
- The Centre **pays subsidy on urea to fertiliser manufacturers on the basis of cost of production** at each plant and the units are required to sell the fertiliser at the government-set Maximum Retail Price (MRP).

What is the Present Status of Fertilizer Usage in India?

- The expenditure on fertiliser subsidy was 1.62 lakh crore in 2020-21 and could cross Rs 2.25 lakh crore during 2022.
- The total requirement of four fertilisers — **Urea, DAP (Di-ammonium Phosphate), MOP (Muriate of potash), NPKS (Nitrogen, Phosphorus and Potassium)** — in the country **increased by 21%** to 640.27 lakh metric tonnes (LMT) in 2021-22 from 528.86 lakh metric tonnes in 2017-18.
 - **The maximum increase** — 25.44% — has been recorded in the **requirement of DAP**. It went up from 98.77 LMT in 2017-18 to 123.9 LMT in 2021-22.
 - **Urea, the most used chemical fertiliser in the country**, recorded an increase of 19.64 per cent — from 298 LMT in 2017-18 to 356.53 in 2021-22 — in the last five years.



What are the Other Related Initiatives taken by the government?

- **Direct Benefit Transfer:** The Centre introduced a Direct Benefit Transfer system in **fertilizers** with effect from October 2016 under which a **100% subsidy on various fertiliser grades is released to the fertiliser companies on the basis of actual sales** made by the retailers to the beneficiaries.
- **Incorporation of new Nutrients:** The government had incorporated new nutrients like **Nano urea** and **“bio-stimulants” in the Fertilizer Control Order-1985 (FCO)**.
- **Neem Coating of Urea:** The **Department of Fertilizers (DoF)** has made it mandatory for all the domestic producers to produce **100% urea as Neem Coated Urea (NCU)**.
 - The benefits of use of NCU are as under:-
 - Improvement in soil health.
 - Reduction in usage of plant protection chemicals.
 - Reduction in pest and disease attack.
 - An increase in yield of paddy, sugarcane, maize, soybean, Tur/Red Gram.
- **New Urea Policy (NUP) 2015:** Objectives of the policy are-
 - To maximize **indigenous urea production**.
 - To promote energy efficiency in the urea units.
 - To rationalize the subsidy burden on the Government of India.
- **Use of Space Technology in Fertilizer Sector:** DoF commissioned a three-year Pilot Study on **“Resource Mapping of Rock Phosphate using Reflectance Spectroscopy and Earth Observations Data”** by National Remote Sensing Centre under ISRO, in collaboration with Geological.

Amendments in IBBI Regulations

Why in News?

Recently, **Insolvency and Bankruptcy Board of India (IBBI)** amended its regulations to boost the value of stressed companies.

- The amendments in **IBBI (Insolvency Resolution Process for Corporate Persons) Regulations, 2016** have been done to **maximise value in resolution**.

Note:

- It will allow the sale of one or more assets of an entity undergoing insolvency resolution process besides other changes.

What are the Amended Regulations?

- The Committee of Creditors (CoC) can now examine whether a compromise or an arrangement can be explored for a Corporate Debtor (CD) during the liquidation period.
 - As many as 1,703 Corporate Insolvency Resolution Processes (CIRPs) ended up in liquidation till June 2022.
- The regulator has permitted a resolution professional and the CoC to look for sale of one or more assets of the CD concerned in cases where there are no resolution plans for the whole business.
- A resolution plan to include sale of one or more assets of CD will be enabled to one or more successful resolution applicants providing for appropriate treatment of the remaining assets.
- A Resolution Professional (RP) will have to actively seek claims from known (based on the books of accounts) creditors of the company concerned that will help in making available a clearer picture of the debt.
 - RPs will be required to provide an opinion on whether the company has been subject to avoidance transactions within 75 days of the start of CIRP.
 - RPs will now be required to assess and report whether the company has completed any transactions to siphon off funds prior to insolvency proceedings.
 - The regulations mandate that any appointments made by RPs should follow a transparent process.
- Details of any applications filed for avoidance of transactions will be made available to resolution applicants before submission of resolutions plans and can be addressed by the applicants in their plans.
- The information memorandum is required to contain material information which will help in assessing its position as a going concern, and not only information about its assets, thereby addressing a critical need of the market.

Why is the Significance of Amended Regulations?

- The provisions would allow stakeholders to claw back lost value and would disincentivise stakeholders from entering into such transactions.

- The amendments enable a longer time for the asset in the market.
- The amendments will provide an impetus to better market-led solutions for insolvency resolution.
- This will ensure that better quality information about the insolvent company and its assets is available to the market, including prospective resolution applicants, in a timely manner.

What is Insolvency and Bankruptcy Board of India?

- The Insolvency and Bankruptcy Board of India was established in 2016 under the **Insolvency and Bankruptcy Code, 2016 (Code)**.
- It is a key pillar of the ecosystem responsible for implementation of the Code that consolidates and amends the laws relating to reorganization and insolvency resolution of corporate persons, partnership firms and individuals in a time bound manner for maximization of the value of assets of such persons, to promote entrepreneurship, availability of credit and balance the interests of all the stakeholders.
- It is a **unique regulator** as it regulates a profession as well as processes.
- It has **regulatory oversight** over the Insolvency Professionals, Insolvency Professional Agencies, Insolvency Professional Entities and Information Utilities.
- It has also been designated as the **'Authority' under the Companies (Registered Valuers and Valuation Rules), 2017** for regulation and development of the profession of valuers in the country.

47th AIBD Annual Gathering

Why in News?

- India's Presidency of the prestigious **Asia-pacific Institute of Broadcasting Development (AIBD)** has been extended for one more year.
- This was unanimously decided by the AIBD member countries at the two-day General Conference of the Institute held in New Delhi.

What is Asia-pacific Institute of Broadcasting Development (AIBD)?

- **About:**
 - The Asia-Pacific Institute for Broadcasting Development (AIBD) was established in 1977

Note:



under the aegis of **United Nations Educational, Scientific and Cultural Organization (UNESCO)**.

- It is a unique regional **inter-governmental organisation servicing countries of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP)** in the field of **electronic media development**.
- Its secretariat is situated in **Kuala Lumpur** and is hosted by the Government of Malaysia.
- **Objective:**
 - The AIBD is mandated to **achieve a vibrant and cohesive electronic media environment in the Asia-Pacific region** through policy and resource development.
- **Founding Members:**
 - The **International Telecommunication Union (ITU)**, the **United Nations Development Programme (UNDP)**, and the **United Nations Educational, Scientific Cultural Organisation (UNESCO)** and The **Asia-Pacific Broadcasting Union (ABU)** are founding organizations of the Institute and they are non-voting members of the General Conference.
- **Members:**
 - Broadcasters from 26 countries in the Asia Pacific region including India are full members of the organisation.
- **The 47th AIBD Annual Gathering:**
 - The 47th AIBD Annual Gathering/20th AIBD General Conference and Associated Meetings was **held in New Delhi**.
 - It witnessed a range of discussions, presentations and idea exchange sessions especially focusing on the topic of **“Building a Stronger Future of Broadcasting in post pandemic era”**.
 - A **five-year plan for co-operative activities and exchange programmes** was also finalised.
 - All the participating countries and member broadcasters **pledged to work together for a sustainable broadcasting environment**, latest technology know-how, finest content

How has AIBD Proved Significant in the Covid-19 Pandemic Era?

- AIBD leadership kept the member countries **connected online** during the **Covid-19** pandemic and also maintained a **constant dialogue on how media can mitigate the impact of the pandemic**.

- **Member countries were immensely benefitted through sharing of information** on the latest developments in the medical field, positive stories of Covid warriors and more importantly in countering fake news which was spreading faster than the pandemic.
- AIBD continued its **training and capacity building programmes even during lockdowns**. 34 training programmes were conducted in 2021 alone and were focused on tradition as well as emerging issues like climate change, green technologies, sustainable development, faster reporting, programming for children etc.
- With increase in the use of internet in broadcasting, **training of journalists in cyber security journalism has become imperative**.
 - AIBD is the first set up to take this up as part of its training programmes.
- It is the media which brought the world on one platform during the difficult phase and reinforced the spirit of one global family.

National Logistics Policy 2022

Why in News?

Recently, the Government has launched a **National Logistics Policy (NLP) 2022**, aiming to achieve ‘quick last-mile delivery’, end transport-related challenges.

What is Logistics?

- Logistics encompasses **planning, coordinating, storing, and moving resources** —people, raw materials, inventory, equipment, etc., from **one location to another**, from the production points to consumption, distribution, or other production points.
- The term “logistics” describes the **total process of controlling the acquisition, storage, and delivery of resources** to their intended location.
- It entails **locating potential distributors and suppliers and evaluating the viability** and accessibility of such parties.

What is NLP 2022?

- **About:**
 - The policy focuses on key areas such as **process re-engineering, digitisation, and multi-modal transport**.

Note:

- It is a crucial move as **high logistics cost impacts the competitiveness** of domestic goods in the international market.
- The need for a national logistics policy was felt **since the logistics cost in India is high as compared to other developed economies.**
- **Goals:**
 - **Logistics costs have to be cut by half to be near global benchmarks by 2030** by reducing the cost of logistics from 14-18% of GDP to global best practices of 8%.
 - Countries like the US, South Korea, Singapore, and certain European nations have such a **low logistics cost-to-GDP ratio.**
 - The current cost is 16% of GDP.
 - Being the 5th largest economy in the world, India aims to be **among the top 10 in the LPI (Logistics Performance Index) by 2030.** It has to match the pace of South Korea.
 - In 2018, India was ranked **44th** in the LPI.
 - Creating data-driven Decision Support Systems (DSS) to **enable an efficient logistics ecosystem.**
 - The policy's target is to **ensure that logistical issues are minimised**, exports grow manifold, and small industries and the **people working in them benefit significantly.**
- **Key Building Blocks:**
 - **Digital Integration System:** It will lead to seamless and faster work-flow, making logistics significantly more efficient.
 - **Unified Logistics Interface Platform:** It aims to collapse **all logistics and transport sector digital services into a single portal**, thereby freeing manufacturers and exporters from the present tyranny of long and cumbersome processes.
 - **Ease of Logistics Services:** E-Logs, a new digital platform, will allow industry to **directly take up operational issues with government agencies** for speedy resolution.
 - **Comprehensive Logistics Action Plan:** The Comprehensive Logistics Action Plan comprising **integrated digital logistics systems**, standardisation of physical assets, benchmarking service standards, human resource development, capacity building, development of logistics parks, etc.

What is the Significance of the Policy?

- **PM Gati Shakti** will get further boost and complementarity with the launch of the National Logistics Policy.
- The Policy will help make the sector an integrated, cost-efficient, resilient, and **sustainable logistics ecosystem in the country** as it covers all bases of the sector along with streamlining rules and **addressing supply-side constraints.**
- The policy is an endeavor to improve the competitiveness of Indian goods, enhance economic growth and increase employment opportunities.

What are the Initiatives Related to Logistics?

- **Multimodal Transportation of Goods Act, 1993.**
- **PM Gati Shakti Scheme**
- **Multi Modal Logistics Parks**
- **LEADS Report**
- **Dedicated Freight Corridor**
- **Sagarmala Projects**
- **Bharatmala Project**

Self-reliance in Energy Sector

Why in News?

The Government of India has been undertaking various initiatives to attract more **E&P (Exploration & Production) investment** to increase self-reliance in the energy sector.

What is the Background?

- India's Energy sector is one of the **most diversified in the world.** Sources of power generation range from conventional sources such as **coal, lignite, natural gas, oil, hydro and nuclear power, to viable non-conventional sources** such as wind, solar, agricultural and domestic waste.
- India was **ranked fourth in wind power, fifth in solar power and fourth in renewable power** installed capacity, as of 2020.
- Near-universal household access to electricity was achieved in 2019, meaning that over 900 million citizens have gained an electrical connection in less than two decades.
- But, the per capita electricity consumption in India is **only one-third of the global average**, even though the demand for energy has doubled.

Note:

- So, to catch up with the increasing demand for energy, there is a need to make arrangements for a secure and sustainable form of self-reliance in the energy sector.

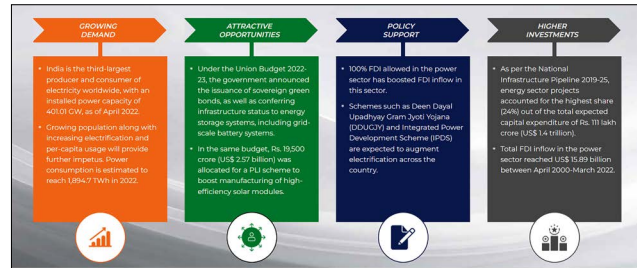
What is the need of Becoming Self-Reliant in the Energy Sector?

- India is **not energy independent**. It spends over Rs 12 lakh crore on importing energy.
- The government is planning to get energy independence before 100 years of independence is completed i.e., by 2047.
- As green power takes precedence in the global scheme of things, the Indian government has already **kick-started its green hydrogen journey**.
- For a nation, 85% dependent on imports for meeting its oil needs and 50 % for gas requirements, the **key is alternate energy sources** - from renewable power to hydrogen and switching to electric vehicles from current petrol and diesel-run automobiles.
- From solar energy to Mission Hydrogen to adoption to EVs, we need to take these initiatives to the next level for energy independence.
- India is the **world's fifth largest producer of ethanol** after the US, Brazil, EU and China. Ethanol worldwide is largely used for consumption but nations like Brazil and India also **dope it in petrol**.
- Self-reliance through green energy initiatives is the **foundation of a green and sustainable economy**. Green energy initiatives focus on clean energy and its availability to all individuals and businesses.

What are the Government's Achievements in the Energy Sector?

- The target of supplying petrol mixed with **10% ethanol** (10% ethanol, 90% petrol) was **achieved in June 2022**, ahead of the original schedule of November 2022.
 - Encouraged by the success, the government **advanced the target of making petrol with 20% ethanol by five years to 2025**.
- As of March 2021, 2.82 crore households have been electrified under **Pradhan Mantri Sahaj Bijli Har Ghar Yojana, "Saubhagya"**.
- By June, 2022, over 36.86 crore LED bulbs, 72.18 lakh LED tube lights and 23.59 lakh energy-efficient fans have been distributed across the country, **saving around 48,411 million kWh per year and Rs. 19,332 crores in cost savings**.

- As of June 2022, over **44 lakh smart metres have been deployed under the National Smart Grid Mission (NSGM)**, with a further 67 lakhs to be deployed.
- Solar tariffs in India have reduced from Rs. 7.36/kWh (US 10 cents/kWh) in FY15 to Rs. 2.45/kWh (US 3.2 cents/kWh) in July 2021.
- India's rank **jumped to 22 in 2019 from 137 in 2014** on **World Bank's Ease of doing business - "Getting Electricity" ranking**.



What are the Initiatives to Achieve Self-reliance in the Energy Sector?

- **Gas Based Economy:**
- **Blending of Ethanol in Petrol**
- **Prime Minister Ujjwala Yojna**
- **Renewable Energy Initiatives**
- **National Hydrogen Mission**

AgriTech Summit

Why in News?

The Union Minister for Agriculture and Farmers Welfare addressed the 'Outlook Agritech Summit and Swaraj Awards 2022'.

What is the AgriTech Summit?

- Agritech Summit is a platform to **bring together the top political leadership, policymakers, thought leaders and companies involved in agriculture-related technology** to share knowledge and recognise the best practices in the field of agriculture in India.
- The annual awards recognise the best performances and innovations in the field of agriculture, and recognise those who are pushing the envelope by using smart technology.
 - The awards were given to various Krishi Vikas Kendras, Farmers' Producers Organisations as well as individual scientists.

Note:

- The Swaraj Award was organised in association with the **Indian Council of Agricultural Research (ICAR)** and the Ministry of Agriculture and Farmer's Welfare. What are the Highlights of the Address?
- Many important schemes are being implemented so that the **challenges of farming can be reduced and the income of the farmers can be increased.**
- There are 86% of small farmers in the country, who have small acreage and cannot invest much. The government is working to take these farmers forward, because if the balance of these farmers remains low, then **neither agriculture nor the country will progress.**
- The government has started the **work of creating 10,000 new FPOs (Farmer Producer Organisation),** if small farmers join these FPOs, then **the area under cultivation increases,** the collective power of the farmer's increases.
- The government is also **working in the field of pulses and oilseeds.** Both were areas of scarcity.

What is the importance of Technology in Agriculture?

- **Importance:**
 - The agriculture sector **poses its own unique challenges** such as dependency upon good monsoons, small and fragmented farm holdings, lack of mechanisation and scarcity of capital.
 - Technology in agriculture **can be used in different aspects of agriculture** such as the application of herbicide, pesticide, fertilizer, and improved seed.
 - Over the years, technology has proved to be extremely useful in the agricultural sector.
 - Presently, farmers **are able to grow crops in areas where they were thought could not grow,** but this is only possible through agricultural biotechnology.
 - For example, **genetic engineering** has made it possible to introduce certain strains into other genes of crops or animals.
 - Such engineering boosts the **resistance of the crops to pests** (e.g., Bt Cotton) and **droughts.** Through technology, farmers are in a position to electrify every process for efficiency and improved production.
- **Initiatives:**
 - The government is working on a **Digital Agri Mission** so that the **farmers can reach the government and the government can reach all the farmers.**

- Under the **Digital Agri Mission,** if all the farmers, agricultural areas, government schemes, central and state governments and banks are also brought on this platform, then the benefits of the schemes will be easily available.
 - Farmers are being linked with mechanization.
 - The government is **promoting drone technology.**

What are the Initiatives Related to Agriculture?

- **Palm Oil Mission**
- **Pradhan Mantri Fasal Bima Yojana**
- **Pradhan Mantri Kisan Samman Nidhi Yojana**
- **AgriStack**
- **Unified Farmer Service Platform**
- **National e-Governance Plan in Agriculture**
- **Sub-Mission on Agricultural Mechanization**

Automobile Industry in India

Why in News?

Recently, the Union Minister of Commerce and Industry addressed the 62nd **Automotive Component Manufacturers Association (ACMA)** Annual Session.

- The **Theme** of the session was '**Future of Mobility - Transforming to be Ahead of Opportunity**'.
- The **ACMA** is the **apex body representing the interest of the Indian Auto Component Industry.** Its membership of over 850 manufacturers contributes to more than 85% of the auto component industry's turnover in the organized sector.

What are the Key Highlights of the Session?

- The 5-point action agenda was given for the Automobile Industry:
 - To **Focus on Quality** in order to become globally competitive and reduce dependence on imports.
 - To **Think holistically** and have a larger vision to engage with others in the spirit of openness and competitiveness.
 - To Give **emphasis on Value Addition.**
 - To Exit the Uncompetitive market and **explore new market opportunities** in the sectors where we can be competitive.
 - To Think big and **set aggressive targets** and ambitions for the industry.

Note:

- Further, the government emphasize that future of the Automotive Component Industry rests on being more **Connected, focusing on Convenience, orienting towards Clean Energy** and clean mobility and using Cutting-edge technology.

What is the Status of Automobile industry in India?

- **About:**
 - **Automobile Industry** comprises all the automobile vehicles including Passenger Vehicles, Commercial Vehicles, Three Wheelers, Two Wheelers and Quadricycles.
 - India's Automotive Market was valued at **USD 100 billion in 2021** and is expected to reach **USD 160 billion in 2027**, registering a **compounded annual growth rate (CAGR) of 8.1%** over the forecast period (2022-2027).
 - India is the **4th largest producer** of Automobiles in the world, with an average annual production of more than 4 million motor vehicles.
 - India is the **largest tractor manufacturer**, second-largest bus manufacturer, and third largest heavy trucks manufacturer in the world.
 - The **Electric Vehicle (EV)** market is estimated to reach Rs. 50,000 crore (USD 7.09 billion) in India by 2025.
 - **Share in Gross Domestic Product (GDP): 7.1%.**
 - **Share in India's exports: 4.7%.**
- **Initiatives:**
 - **Production-Linked Incentive (PLI):**
 - The Union Cabinet announced the **Production-Linked Incentive (PLI) Scheme** in the Automobile and Auto Components sectors.
 - The PLI scheme (**outlay of USD 3.5 Billion**) for the **automobile** sector proposes **financial incentives of up to 18% to boost domestic manufacturing** of advanced automotive technology products and attract investments in the automotive manufacturing value chain.
 - **Foreign Direct Investment (FDI):**
 - Under the automatic route, **100% Foreign Direct Investment (FDI) is permitted along with full delicensing.** Hence, making it easy for investors to set up their manufacturing plant/shop in India.

- **Automotive Mission Plan 2016-26 (AMP 2026):**
 - The **Automotive Mission Plan 2016-26 (AMP 2026)** outlines the **trajectory of growth of the automotive ecosystem in India**, including the glide path of definite regulations and policies that govern research, design, technology, testing, manufacturing, import/ export, sale, use, repair, and recycling of automotive vehicles, components and services.
- **National Electric Mobility Mission Plan 2020 (NEMMP):**
 - The NEMMP initiative has been taken up to **encourage consistent, affordable and competent xEVs (hybrid and electric vehicles)** that meet consumer performance and price expectations through government-industry collaboration.

What are the Challenges faced by the Automobile Industry?

- **Shared Cars:** Over the past three-four years, India has seen the **rapid rise of ride-share apps like OLA, Uber, etc.**
 - These apps make travel far more convenient without the hassle of driving through rigorous traffic and **avoiding the maintenance cost of owning a vehicle, all at affordable rates.** This has certainly challenged the concept of ownership and thus affected sales.
- **Tight Credit Availability:** 80-85% of vehicles in the country are financed by the nationalised banks, private banks or NBFCs.
 - Banks have become extra-cautious in supplying credit to the people purchasing a car.
- **Transition to EV:** The government plans to ban internal-combustion powered two-wheelers and three-wheelers by 2023 and 2025 respectively.
 - This sudden transition, when the situation of the **automobile sector is already dire as the sales have slumped to a two-decade low**, has worsened the situation of job cuts and market disruption.
- **Decrease Demand for Commercial Vehicles:** The freight carrying capacity of the new model trucks has increased. Due to this, there has been a decline in the demand for new trucks as the consumers can carry freight in their own trucks.

Note:

Ethereum Merger

Why in News?

Recently, the **Ethereum** blockchain platform fully transitioned from 'proof of work' to a 'proof-of-stake' consensus mechanism and this revamp is known as the Merge.

What has Exactly Changed?

➤ Old Method:

- **Proof of Work:** As a decentralised platform, Ethereum doesn't have institutions like banks approving the transactions that happen on its network – the **approvals were earlier happening under the Proof of Work (PoW) consensus mechanism** which was essentially **done by miners**.
 - Under it, the **miners would compete to solve complex mathematical puzzles** using a massive infrastructure of cutting-edge computer hardware, and the first one to solve the puzzle would be chosen as the validator.
 - This method was almost **entirely dependent on crypto farms**, which are massive warehouses lined with rows of computers which would solve the puzzles.
- **Issues:**
 - **High Energy Consumption:** These mining farms were **energy guzzlers** and they sometimes **consumed more electricity than entire countries** and were, therefore, a big concern in terms of **environmental sustainability**.
 - The crypto's total annualised power consumption nearly **matches that of Finland**, while its carbon footprint is comparable to Switzerland.
 - For some time, European countries even mulled a crypto mining ban, while China actually carried out a nationwide crackdown on crypto miners, sending them fleeing overseas.
- **New Method:**
 - **Proof of Stake:** It would **set aside the need for crypto miners and gigantic mining farms**, which had previously driven the blockchain under a mechanism called 'proof-of-work' (PoW).
 - Instead, it has now **shifted to a 'proof-of-stake'**

(PoS) mechanism that assigns 'validators' randomly to approve transactions and earn a small reward.

- Validators are people who **volunteer a computer to maintain the blockchain's integrity** by constantly computing the linkage from the first block to the last.
- **Benefits:**
 - This would entirely **eliminate the need for miners** on the Ethereum network.
 - It will **reduce ethereum's energy consumption** by nearly 99.95%.
 - It will make **transactions on the Ethereum network extremely secure**.

What do we Know about Ethereum?

- Ethereum is one of the **most used platforms by developers to build decentralised apps (dApps)**, smart contracts, and even crypto tokens. The platform's currency, Ether is only second to Bitcoin in terms of market capitalisation.
- Some of the most popular applications of cryptocurrencies such as **non-fungible tokens (NFTs)** and **decentralised finance (DeFi)** are based on the Ethereum network.

What is Cryptocurrency?

- **Cryptocurrency**, sometimes called crypto-currency or crypto, is any form of currency that exists digitally or virtually and uses cryptography to secure transactions.
- Cryptocurrencies don't have a central issuing or regulating authority, instead using a decentralized system to record transactions and issue new units.
 - It is supported by a decentralized **peer-to-peer network** called the **blockchain**.

What is Blockchain Technology?

- **Blockchain technology** ensures that **all transactions in cryptocurrencies are recorded** in a public financial transaction database.
 - Bitcoin, Ethereum, and Ripple are a few notable **examples** of cryptocurrencies.
- Blockchain derives its name from the **digital databases or ledgers** where information is stored as "**blocks**" that are coupled together to form "**chains**".
 - It offers a **singular combination of permanent and tamper-evident record-keeping**, real-time transaction transparency, and auditability.

Note:

- An exact copy of the blockchain is **available to each of the multiple computers** or users who are joined together in a network.
 - Any new information added or altered via a new block is to be vetted and **approved by over half the total users**.

International Year of Millets 2023

Why in News?

A series of pre-launch events and initiatives have been organized by the Ministry of Agriculture and Farmers Welfare as a run-up to the **International Year of Millets 2023** to create awareness and a sense of participation in the country around the ancient and forgotten golden grains.

- Many events were launched such as 'India's Wealth, Millets for Health', Millet Startup Innovation Challenge, Mighty Millets Quiz, Logo and slogan contest etc.

What is IYM?

➤ About

- India's proposal to observe an International Year of Millets in 2023 was approved by the **Food and Agriculture Organisation (FAO)** in 2018 and the **United Nations General Assembly** has declared the year 2023 as the International Year of Millets.
- This was adopted by a **United Nations Resolution for which India took the lead** and was supported by over 70 nations.

➤ Objectives:

- Awareness of the **contribution of millet to Food Security** and nutrition.
- Inspire stakeholders to improve sustainable production and quality of millets.
- Focus on **enhanced investment in research and development** and extension services to achieve the other two aims.

What is Millet?

➤ About:

- Millet is a **collective term referring to a number of small-seeded annual grasses** that are cultivated as grain crops, primarily on **marginal lands in dry areas in temperate, subtropical and tropical regions**.

- Some of the common millets available in India are Ragi (Finger millet), Jowar (Sorghum), Sama (Little millet), Bajra (Pearl millet), and Variga (Proso millet).
 - The earliest evidence for these grains has been found in **Indus civilization and were one of the first plants domesticated** for food.
- It is grown in about 131 countries and is the traditional food for around 60 crore people in Asia & Africa.
- India is **the largest producer** of millet in the world.
 - It Accounts for 20 % of global production and **80 % of Asia's production**.

➤ Global Distribution:

- India, Nigeria and China are the **largest producers of millets in the world**, accounting for more than 55% of the global production.
- For many years, India was a **major producer of millets**. However, in recent years, millet production has **increased dramatically in Africa**.

➤ Significance:

○ Nutritionally Superior:

- Millets are **less expensive and nutritionally superior** to wheat & rice owing to their high protein, fibre, vitamins and minerals like iron content.
- Millets are also **rich in calcium and magnesium**. For example, Ragi is known to have the highest calcium content among all the food grains.
- Millets can provide nutritional security and **act as a shield against nutritional deficiency**, especially among children and women. Its high iron content can fight high prevalence of anaemia in India women of reproductive age and infants.

○ Gluten-free a low glycemic index:

- Millets can help **tackle lifestyle problems and health challenges** such as obesity and diabetes as they are gluten-free and have a low glycemic index (a relative ranking of carbohydrate in foods according to how they affect blood glucose levels).

○ Super Crop at Growing:

- Millets are **Photo-insensitive** (do not require a specific photoperiod for flowering) & **resilient to climate change**. Millets can grow on poor soils with little or no external inputs.

Note:



- Millets are **less water consuming and are capable of growing under drought conditions**, under non-irrigated conditions even in very low rainfall regimes.
 - Millets have **low carbon and water footprint** (rice plants need at least 3 times more water to grow in comparison to millets).
- **Initiatives Taken by Government:**
- **Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)**
 - **Increase in Minimum Support Price (MSP):** The government has hiked the Minimum Support Price of Millets, which came as a big price incentive for farmers.
 - Further, to provide a steady market for the produce, the government has included millets in the public distribution system.
 - **Input Support:** The government has introduced provision of seed kits and inputs to farmers, building value chains through **Farmer Producer Organisations** and supporting the marketability of millets.

PCA Framework

Why in News?

Recently, The **Reserve Bank of India (RBI)** has removed the **Central Bank of India (CBI)** from its **Prompt Corrective Action Framework (PCAF)** after CBI showed improvement in various financial ratios, including minimum regulatory capital and Net **Non-Performing Assets (NPNAs)**.

- The RBI had imposed the PCA norms on CBI in June 2017 due to its **high net NPA and Negative Return of Assets (RoA)**.

What is PCAF?

- **Background:**
- PCA is a framework under which **banks with weak financial metrics are put under watch** by the RBI.
 - The RBI introduced the **PCA framework in 2002** as a structured **early-intervention mechanism** for banks that become **undercapitalised** due to poor asset quality, or vulnerable **due to loss of profitability**.

- The framework was **reviewed in 2017** based on the recommendations of the working group of the **Financial Stability and Development Council** on Resolution Regimes for Financial Institutions in India and the Financial Sector Legislative Reforms Commission.
- **Parameters:**
- The RBI has specified certain regulatory trigger points, as a part of PCA Framework, in terms of three parameters, i.e., **Capital to Risk Weighted Assets Ratio (CRAR)**, net **Non-Performing Assets (NPA)** and **Return on Assets (RoA)**
- **Objective:**
- The objective of the PCA framework is **to enable supervisory intervention at an appropriate time** and require the supervised entity to initiate and implement remedial measures in a timely manner, so as to **restore its financial health**.
 - It aims to check the problem of **Non-Performing Assets (NPAs)** in the Indian banking sector.
 - It is intended to **help alert the regulator as well as investors and depositors** if a bank is heading for trouble.
 - The idea is to head off problems before they attain crisis proportions.
- **Audited Annual Financial Results:**
- A bank will generally be placed under the PCA framework based on the audited annual financial results and the ongoing **supervisory assessment made by the RBI**.
- **Recent Development:**
- In 2021, the RBI revised the PCA Framework for **scheduled commercial banks**, round capital, asset quality and leverage will be key areas, earlier asset quality and profitability were the key areas for monitoring under framework.

What is a Non Performing Asset?

- It is a loan or advance for which the principal or interest payment remains overdue for a period of 90 days.
- Banks are required to classify NPAs further into Substandard, Doubtful and Loss assets.

What is Capital Adequacy Ratio?

- The CAR is a measure of **a bank's available capital expressed as a percentage** of a bank's risk-weighted credit exposures.

Note:

- CAR) is the measurement ratio that assesses **the ability of banks to absorb losses**.
- The Capital Adequacy Ratio, **also known as capital-to-risk weighted assets ratio (CRAR)**, is used to protect depositors and promote the stability and efficiency of financial systems around the world.

What is Return of Asset (RoE)?

- Return on assets is a profitability ratio that provides how **much profit a company is able to generate from its assets**.
- ROA is shown as a **percentage, and the higher the number, the more efficient a company's management is** at managing its balance sheet to generate profits.
- Companies with a low ROA usually have **more assets involved in generating profit**, while companies with a high ROA have fewer assets.
- ROA is best when comparing similar companies; an asset-intensive company's lower ROA might appear alarming compared to an **unrelated company's higher ROA with fewer assets and similar profit**.

Fund of Funds for Startups (FFS)

Why in News?

Recently, the Government of India has committed Rs. 7,385 crores under **Fund of Funds for Startup** India Investment, launched in 2016, for 88 **Alternative Investment Funds (AIFs)**.

- These AIFs, in turn, have invested Rs. 11,206 crores in 720 **startups**.

What is Fund of Funds for Startup?

- **About:**
 - Fund of Funds is a mutual fund scheme that invests in other **mutual fund** schemes.
 - In this, the fund manager holds a portfolio of other mutual funds instead of directly investing in equities or **bonds**.
 - Under FFS, support is extended to **Securities and Exchange Board of India (SEBI) registered Alternative Investment Funds (AIFs)**, which in turn invest in startups.
 - FFS was announced with a corpus of Rs. 10,000 crore.

- The corpus is to be built up over **14th and 15th Finance Commission Cycles** (FY 2016-2020 and FY 2021-2025) through budgetary support by the **Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry**.

- FFS has made capital available for startups at **early stage, seed stage and growth stage**.

- It has also played a role in facilitating **raising of domestic capital, reducing dependence on foreign capital and encouraging home grown and new venture capital funds**.

➤ Performance:

- The amount committed under FFS has **grown** over the years recording a **CAGR (Compound Annual Growth Rate) of over 21%** since the launch of the Scheme.

- **Small Industries Development Bank of India (SIDBI)**, which is responsible for operationalising the Scheme, has undertaken a **series of reforms** recently to expedite the drawdowns to **enable AIFs assisted under FFS to avail accelerated drawdowns**.

- This has resulted in a **year-on-year surge of 100%** in the amount of drawdowns.

- FFS has helped anchor 67 AIFs out of 88 AIFs supported.

- 38 of these are first time fund managers which is in line with FFS's core objective of **anchoring venture capital investments for Indian startups**.

- Performing startups supported through FFS are showing valuation increase by more than 10 times with a number of them even achieving **unicorn status** (valuation of over USD 1 billion).

What is Alternate Investment Funds AIF?

➤ About:

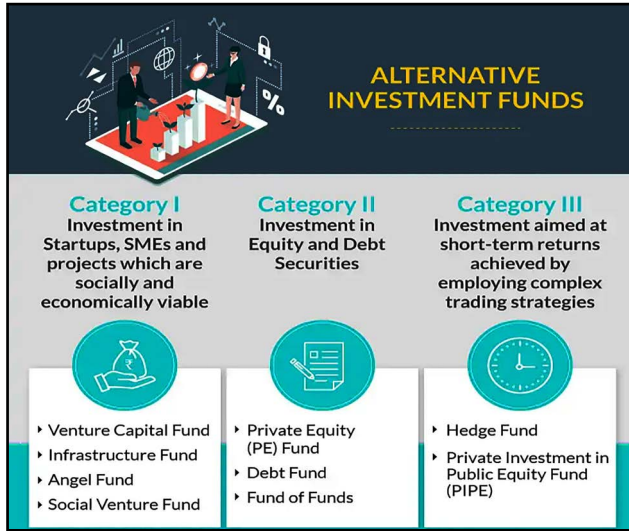
- **Alternative Investment Fund or AIF** means any fund **established or incorporated in India**, which is a **privately pooled investment vehicle** which collects funds from sophisticated investors, whether Indian or foreign, for **investing it in accordance with a defined investment policy** for the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

- **Regulation 2(1)(b) of Securities and Exchange Board of India (SEBI) Regulations (AIFs), 2012** lays down the definition of AIFs.

Note:

- Through a company, or a Limited Liability Partnership (LLP), an **Alternative Investment Fund** can be established.

➤ **Categories:**



What is the State of Startups in India?

➤ **About Startup:**

- The term startup refers to a **company in the first stages of operations**. Startups are founded by one or more entrepreneurs who want to develop a **product or service for which they believe there is demand**.
- These companies generally **start with high costs and limited revenue**, which is why **they look for capital from a variety of sources** such as venture capitalists.

➤ **Status in India:**

- **National Figure:**
 - India has become the **3rd largest start-up ecosystem** in the world after the US and China.
 - India is home to as many as **75,000 Startups**.
 - **49% of start-ups** are from tier-2 and tier-3 cities.
 - There are currently **105 unicorns**, out of which **44 were born in 2021** and **19 in 2022**.
 - Startups are also emerging in the fields like **IT, agriculture, aviation, education, energy, health** and **space sectors**.
- **Global Innovation Index:**
 - India has been ranked in its global ranking of **Global Innovation Index (GII)** from **81st in the year 2015** to **46th in 2021** among 130 economies of the world.

- India ranks **2nd among 34 lower-middle-income economies** and **1st among 10 Central and Southern Asian economies** in terms of GI.

○ **Other Rankings:**

- **Publications:**

- Globally ranked **3rd (2021)** from **6th in 2013** based on the **National Science Foundation** database.

- **Patents:**

- Globally ranked **9th (2021)** in terms of **resident patent filing**.

- **Quality of Research Publications:**

- Globally ranked **9th (2021)** from **13th in 2013**.

➤ **Initiatives for Startup:**

- **National Initiative for Developing and Harnessing Innovations (NIDHI)**
- **Startup India Action Plan (SIAP)**
- **Ranking of States on Support to Startup Ecosystems (RSSSE)**
- **Startup India Seed Fund Scheme (SISFS):** It aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.
- **National Startup Awards:** It seeks to recognize and reward outstanding startups and ecosystem enablers that are contributing to economic dynamism by spurring innovation and injecting competition.

Eight Years of Make in India

Why in News?

Make in India completes eight years of path-breaking reforms and annual FDI doubles to USD 83 billion in 2022.

What do we Know about the Make in-India Programme?

➤ **About:**

- **Launched in 2014**, Make in India aims to **transform the country into a leading global manufacturing and investment destination**.
- The initiative is an open invitation to potential investors and partners across the globe to participate in the growth story of 'New India'.
- Make In India has substantial accomplishments across 27 sectors. These include strategic sectors of manufacturing and services as well.

Note:

Make in India@8

Eight yrs of Make in India; annual FDI doubles to \$83 b } **Govt focus on key sectors like semiconductors**

PLI boost to localised manufacturing, 14 schemes operational



Apr-Aug 2022 toy exports up 636% from 2013 } **Preference in public procurement of goods, works and services**

Objectives:

- To **attract foreign investment for new industrialisation** and develop the already existing industry base in India to surpass that of China.
- Target of an **increase in manufacturing sector growth to 12-14% per annum** over the medium term.
- To **increase the share of manufacturing sector in the country's Gross Domestic Product from 16% to 25% by 2022.**
- To **create 100 million additional jobs by 2022.**
- To **promote export-led growth.**

Outcomes:

- **FDI inflows:** FDI inflows in India stood at USD 45.15 billion in 2014-2015 and have since consecutively reached record FDI inflows for eight years.
 - The year 2021-22 recorded the **highest ever FDI at USD 83.6 billion.**
 - On the back of **economic reforms and Ease of Doing Business** in recent years, India is on track to attract **USD 100 Billion in FDI** in the current Financial Year (2022-23).
- The import of toys in FY21-22 has reduced by 70% to USD 110 Mn (Rs. 877.8 cr.). India's export of toys registers tremendous growth of 636% in April-August 2022 over the same period in 2013.

- **Production Linked Incentive (PLI):** The **Production Linked Incentive (PLI)** scheme across 14 key manufacturing sectors, was launched in 2020-21 as a big boost to the Make in India initiative.

What are the Initiatives to Support Make in India Scheme?

➤ National Single Window System (NSWS):

- The **National Single Window System (NSWS)** has been soft-launched in September 2021 to improve the ease of doing business by providing a single digital platform to investors for approvals and clearances.
- This portal has **integrated multiple existing clearance systems of the various Ministries/Departments of the Government of India and State Governments** to enhance the investor experience.

➤ Gati Shakti:

- The Government has also launched a programme for **multimodal connectivity to manufacturing zones in the country**, called the **Prime Minister's Gatishakti programme**, which will ensure **logistical efficiency in business operations through the creation of infrastructure that improves connectivity.**

➤ One-District-One-Product (ODOP):

- This initiative aims at facilitating the **promotion and production of indigenous products from each district** of the country and providing a global platform to the artisans and manufacturers of handloom, handicrafts, textiles, agricultural and processed products, thereby further contributing to the socio-economic growth of various regions of the country.

➤ Improving toy exports and reducing Imports:

- To **address the import of low-quality and hazardous toys and to enhance domestic manufacturing of toys**, several strategic interventions such as increase of **Basic Custom Duty from 20% to 60%**, implementation of Quality Control Order, mandatory sample testing of imported toys, granting more than 850 BIS licenses to domestic toy manufacturers, development of toy clusters etc. have been taken by the government.

➤ Scheme for building Semiconductor Ecosystem:

- Recognising the importance of semiconductors in the world economy, the Government has launched a USD 10 billion incentive scheme to build a semiconductor, display, and design ecosystem in India.

Note:

What are the Issues Related to the Make in India Programme?

- **Investment from Shell Companies:** Large part of the Indian FDI is neither foreign nor direct but comes from **Mauritius-based shell companies** which are suspected to be investing black money from India only, which is routed via Mauritius.
- **Low Productivity:** The productivity of Indian factories is low and workers have insufficient skills.
 - **McKinsey report** states that Indian workers in the manufacturing sector are, on average, almost four and five times less productive than their counterparts in Thailand and China.
- **Small Industrial Units:** The size of the industrial units is small for attaining the desired economies of scale, investing in modern equipment and developing supply chains.
- **infrastructure:** Electricity costs are almost the same in India and China but **power outages are much higher in India.**
- **Transportation:** Average speeds in China are about 100 km per hour, while in India, they are about 60 km per hour. **Indian railways have saturated and Indian ports have been outperformed** by a lot of Asian countries.
 - The **2018 World Bank's Logistics Performance Index (LPI)** ranked **India 44th among 160 countries.** Singapore was ranked seventh, China 26th and Malaysia 41th. The average ship turnaround time in Singapore was less than a day and in India, it was 2.04 days.
- **Red Tapism: Bureaucratic procedures and corruption** make India less attractive for investors.

Maharatna Status to REC

Why in News?

Recently, Rural Electrification Corporation (REC) has been accorded the status of a '**Maharatna**' Central Public Sector Enterprise (CPSE).

What do we know about REC & Maharatna Status?

- **About REC:**
 - REC is a **Non-Banking Financial Company (NBFC),**

incorporated in 1969, focusing on **Power Sector Financing and Development** across India.

- It comes under the purview of the **Ministry of Power.**
- It has been appointed as a Nodal Agency for Government of India's flagship schemes as following:
 - **Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGAYA)**
 - Deen Dayal Upadhaya Gram Jyoti Yojana (DDUGJY)
 - National Electricity Fund (NEF)
- REC also assists the Ministry of Power in monitoring the **Ujjwal Discom Assurance Yojana (UDAY).**
- **Benefits to Maharatna Status to REC:**
 - The Board of a 'Maharatna' CPSE can **make equity investments to undertake financial joint ventures and wholly-owned subsidiaries and undertake mergers and acquisitions** in India and abroad, subject to a **ceiling of 15% of the Net Worth** of the concerned CPSE, limited to **₹5,000 crores in one project.**
 - The Board can also **structure and implement schemes** relating to personnel and Human Resource Management and Training.
 - REC now can also enter into technology **Joint Ventures** or other strategic alliances among others.
- **Maharatna Status:**
 - **The Maharatna dispensation** was ushered in by the Union government for mega **Central Public Sector Enterprises (CPSEs)** to become global giants (introduced in 2010).
 - CPSEs are those companies in **which the direct holding of the Central Government** or other CPSEs is 51% or more.
 - "Maharatna" status is granted to a company which has recorded **more than Rs. 5,000 crores of net profit for three consecutive years, an average annual turnover of Rs. 25,000 crore** for three years or should have an **average annual net worth of Rs. 15,000 crore** for three years. It should also have global operations or footprints.
 - A CPSE should also have a **Navratna status, be listed on an Indian stock exchange.**

Note:

Classification of CPSEs			
Category	Launch	Criteria	Examples
Maharatna	<ul style="list-style-type: none"> ○ Maharatna Scheme was introduced for CPSEs in May, 2010, in order to empower mega CPSEs to expand their operations and emerge as global giants. 	<ul style="list-style-type: none"> ○ Having Navratna status. ○ Listed on Indian stock exchange with minimum prescribed public shareholding under Securities and Exchange Board of India (SEBI) regulations. ○ An average annual turnover of more than Rs. 25,000 crore during the last 3 years. ○ An average annual net worth of more than Rs. 15,000 crore during the last 3 years. ○ An average annual net profit after tax of more than Rs. 5,000 crore during the last 3 years. ○ Should have significant global presence/international operations. 	<ul style="list-style-type: none"> ○ Bharat Heavy Electricals Limited, Bharat Petroleum Corporation Limited, Coal India Limited, GAIL (India) Limited, etc.
Navratna	<ul style="list-style-type: none"> ○ Navratna Scheme was introduced in 1997 in order to identify CPSEs that enjoy comparative advantages in their respective sectors and to support them in their drive to become global players. 	<ul style="list-style-type: none"> ○ The Miniratna Category – I and Schedule ‘A’ CPSEs, which have obtained ‘excellent’ or ‘very good’ rating under the Memorandum of Understanding system in three of the last five years, and have composite score of 60 or above in the six selected performance parameters, namely, <ul style="list-style-type: none"> ○ Net profit to net worth. ○ Manpower cost to total cost of production/services. ○ Profit before depreciation, interest and taxes to capital employed. ○ Profit before interest and taxes to turnover. ○ Earning per share. ○ Inter-sectoral performance. 	<ul style="list-style-type: none"> ○ Bharat Electronics Limited, Hindustan Aeronautics Limited, etc.
Miniratna	<ul style="list-style-type: none"> ○ Miniratna scheme was introduced in 1997 in pursuance of the policy objective to make the public sector more efficient and competitive and to grant enhanced autonomy and delegation of powers to the profit-making public sector enterprises. 	<ul style="list-style-type: none"> ○ Miniratna Category-I: The CPSEs which have made profit in the last three years continuously, pre-tax profit is Rs.30 crores or more in at least one of the three years and have a positive net worth are eligible to be considered for grant of Miniratna-I status. ○ Miniratna Category-II: The CPSEs which have made profit for the last three years continuously and have a positive net worth are eligible to be considered for grant of Miniratna-II status. ○ Miniratna CPSEs should have not defaulted in the repayment of loans/interest payment on any loans due to the Government. ○ Miniratna CPSEs shall not depend upon budgetary support or Government guarantees. 	<ul style="list-style-type: none"> ○ Category-I: Airports Authority of India, Antrix Corporation Limited, etc. ○ Category-II: Artificial Limbs Manufacturing Corporation of India, Bharat Pumps & Compressors Limited, etc.

Modified Incentive Scheme for Semiconductor Chip-Making

Why in News?

Recently, the Centre approved changes to the scheme for the development of a **semiconductor** and display manufacturing ecosystem in the country in order to **make India’s \$10 billion chip-making initiative more attractive to investors.**

What are the Approved Changes to India’s Chip-making Scheme?

➤ Background:

- In 2021, India announced its roughly **\$10 billion dollar Production-Linked Incentive (PLI) scheme** to encourage semiconductor and display manufacturing in the country.

- Also, a **Design-Linked Initiative (DLI) scheme** to drive global and domestic investment related to design software, IP rights etc. was announced.

➤ Changes:

- **Uniform 50% Fiscal Support:** In the previous version of the scheme, the Centre was offering to fund 30% of the project cost for 45nm to 65nm chip production, 40% for 28nm to 45nm, and 50% or half of the funding for chips 28nm or below. The modified scheme provides **uniform 50% fiscal support for all nodes.**
- **Setting-up of New Semiconductor Plants:** Vedanta and Taiwanese chipmaker Foxconn have signed a Memorandum of Understanding (MoU) to set up a ₹1,54,000 crore **semiconductor plant in Gujarat.**
- **Two other projects have also been announced:**

Note:

- **A \$3 billion plant in Karnataka** by the International consortium **ISMC**.
 - ISMC is a joint venture between Abu Dhabi-based Next Orbit Ventures and Israel's Tower Semiconductor.
- **A \$3.5 billion plant in Tamil Nadu** by Singapore's **IGSS Ventures**.
- **Production of the 45nm Chip:** The modified scheme also **emphasised** the production of the 45nm chip, which is **fairly less time-consuming and economical** in terms of production.
 - These chips have **high demand, driven primarily by automotive, power and telecom applications**.
- **Significance:**
 - The changes will lead to the **harmonisation of government incentives for all technology nodes of semiconductors**.
 - It will encourage all areas of chip-making to **create an integrated ecosystem in India**.
 - PLI and DLI schemes had attracted many global semiconductor players for setting up semiconductor fabrication plants (fabs) in India and the **modified programme would further expedite these investments and bring in more applicants**.
- **Associated Concern:**
 - Although the scheme is an encouraging move, chip production is a **resource-intensive and expensive process**. The new scheme **provides equal funding** for all steps of the process. **However, the outlay of the scheme remains \$10 billion**.
 - It requires an **investment of anywhere between \$3 and \$7 billion** to just set up one semiconductor fab.

What are Semiconductor Chips?

- **About:**
 - **Semiconductors** are materials which have a **conductivity between conductors and insulators**.
 - They can be pure elements, **silicon or germanium** or compounds; **gallium, arsenide or cadmium selenide**.
 - The **basic component of a semiconductor chip is a sliver of silicon**, which is **etched with billions of microscopic transistors** and projected to specific minerals and gases, forming **patterns to control the flow of current** while following different

computational instructions.

- The **most-advanced semiconductor technology nodes** available today are the **3 nm and the 5 nanometer (nm) ones**.
- Semiconductors having **higher nanometer value are applied in automobiles, consumer electronics and so on**, while those with **lower values are used in devices such as smartphones and laptops**.
- The **chip-making Process** is complex and highly exact, having **multiple other steps in the supply chain** such as **chip-designing** done by companies to develop new circuitry for use in appliances, **designing software for chips and patenting them through core Intellectual Property Rights (IPR)**.
 - It also **involves making chip-fabrication machines; setting up fabs or factories; and ATMP**.
- **Significance:**
 - Semiconductors are the thumbnail-sized **building blocks of almost every modern electronic device** from smartphones to connected devices in the **Internet of Things (IoT)**. They help give computational power to devices.
- **Global Scenario:**
 - The chip-making industry is a **highly-concentrated one**, with the big players being Taiwan, South Korea and the U.S. among others. Infact, **90% of 5nm chips are mass-produced in Taiwan**, by the Taiwan Semiconductor Manufacturing Company (TSMC).
 - Therefore, the **global chip shortage, U.S.-China tensions over Taiwan**, and the **supply chain blockages owing to the Russia-Ukraine conflict** have **led major economies to enter the chip-making sector with a renewed push**.
 - The **global semiconductor industry is currently valued at \$500-\$600 billion** and caters to the **global electronics industry** currently valued at about **\$3 trillion**.
- **Indian Scenario:**
 - **India currently imports all chips** and the market is estimated to touch \$100 billion by 2025 from \$24 billion now. However, for the domestic manufacturing of semiconductor chips, **India has recently launched several initiatives:**
 - The Union Cabinet has allocated an amount of ₹76,000 crore for supporting the development

Note:

of a 'semiconductors and display manufacturing ecosystem'.

- India has also launched the **Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)** for manufacturing electronics components and semiconductors.
- In 2021, the MeitY also launched the **Design Linked Incentive (DLI) Scheme** to nurture at least 20 domestic companies involved in semiconductor design and facilitate them to achieve a turnover of more than Rs.1500 Crore in the next 5 years.
- India's own consumption of semiconductors is **expected to cross \$80 billion by 2026 and to \$10 billion by 2030.**

What can be the Way

Ahead for India's Semiconductor Dream?

- Though India is focusing on "lagging-edge" technology nodes in the start to supply to the automotive and appliance sector, **creating global demand may be difficult as big players like Taiwan offer viable cutting-edge chip-tech worldwide.** Thus, **attracting global players to set up here would be beneficial** as they come with their customer base.
- Much of the current scheme outlay could be allocated to supporting other elements including display fabs, packaging and testing facilities, and chip design centres. However, the **initial funding should focus on areas like design and R&D**, for which India already has an established talent pool.
- Chip-making also **requires gallons of ultrapure water in a single day**, which could be a task for the **government to provide to factories, compounded also by the drought conditions** which often prevail in large parts of the country.
 - Besides, an uninterrupted supply of power is central to the process, with just seconds of fluctuations or spikes causing millions in losses.
- Another task for the government is to **drive up consumer demand in the semiconductor industry** to not end up in a situation where these ventures remain successful only till taxpayers are forced to fund required subsidies.

Quarterly Employment Survey (QES)

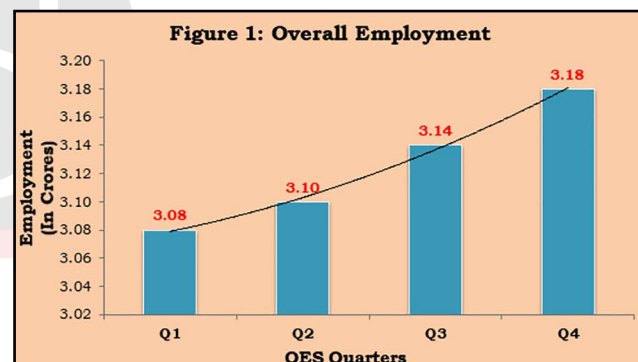
Why in News?

Recently, the **Fourth Round (January-March, 2022)** of **Quarterly Employment Survey (QES)**, part of **All India Quarterly Establishment based Employment Survey (AQEES)**, was released by the **Labour Bureau**, Ministry of Labour and Employment.

What are the Key Findings of QES 2022?

➤ Overall Employment:

- An estimated total of **3.18 crore workers** were engaged in **5.31 lakh establishments** during the 4th round, compared to a total of **3.14 crores** in the 3rd quarter.



➤ Sector Wise Figures:

- **Manufacturing sector:** 38.5%
- **Education:** 21.7%
- **Information Technology /Business Process Outsourcing (BPO):** 12%
- **Health sector:** 10.6%

➤ Size of the Organisations:

- In terms of **number of workers**, an estimated 80% of the establishments engaged 10 to 99 workers.
 - The figure increases to 88% if **establishments with 10 or more workers are considered.**
 - About 12% of the establishments reported less than 10 workers.
- Only **1.4% of the establishments reported at least 500 workers.**
 - Such large establishments were mostly in the IT/ BPO sector and in the health sector.

Note:

- **Female Participation:**
 - Female workers participation reported a marginal increase from **31.6% in the 3rd quarter to 31.8% in the 4th quarter report.**
- **Sector Wise Participation:**
 - **Health:** 52%
 - **Education:** 44%
 - **Financial Services:** 41%
 - **IT/BPO:** 36%
- It is noteworthy that in Financial Services, females far outnumber males among self-employed persons.

What is the AQEES?

- The AQEES has been taken up by the **Labour Bureau** to provide **frequent (quarterly) updates about the employment and related variables** of establishments, in both **organised and unorganised segments** of nine selected sectors.
- There are two components under AQEES:

- **Quarterly Employment Survey (QES):** It provides the employment estimates for the establishments employing 10 or more workers in the organised segment in 9 sectors.
 - **The 9 sectors are** Manufacturing, Construction, Trade, Transport, Education, Health, Accommodation and Restaurants, IT/BPO, Financial Service Activities.
- **Area Frame Establishment Survey (AFES):** It covers the unorganised segment (with less than 10 workers) through a sample survey.

What is the Difference between QES & Periodic Labour Force Survey (PLFS)?

- While the **QES provides a demand-side picture**, the **National Sample Survey or Periodic Labour Force Survey (PLFS)** gives the **supply side picture** of the labour market.
- Also, PLFS is conducted by the **National Statistical Organization (NSO)**, MoSPI (Ministry of Statistics and Programme Implementation).

Note:

Social Issues

Highlights

- Megh Chakra Operation
- Tribal Forest Rights
- Poshan Abhiyan
- Social Audit of Social Sector Schemes
- Economically Weaker Section (EWS) Quota
- Aliva: A Data-Driven Approach to Eradicate Child Marriage
- India Discrimination Report

Megh Chakra Operation

Why in News?

The operation code-named “Megh Chakra” is being carried out following the inputs received from Interpol’s Singapore special unit based on the information received from the authorities in New Zealand.

- It is a pan-India drive against the circulation and sharing of **Child Sexual Abuse Material (CSAM)** conducted by the **Central Bureau of Investigation (CBI)**.

What are the Key Highlights of the Megh Chakra Operation?

- Searches at 59 locations across 20 States and one Union Territory were conducted.
- It has been alleged that a **large number of Indian nationals were involved in the online circulation, downloading and transmission of the CSAM using cloud-based storage.**
- The operation is sought to **collate information from various law enforcement agencies in India**, engage with the relevant law enforcement agencies globally and coordinate closely through the Interpol channels on the issue.
- The probe had led to the **identification of over 50 groups with more than 5,000 offenders, including the nationals of about 100 countries.**
- A similar exercise code named “**Operation Carbon**” was conducted by CBI in November 2021.

What are the Issues Related to Child Sexual Abuse?

- **Multi-layered Problem:** Child sexual abuse is a multi-layered problem which negatively impacts

children’s physical safety, mental health, well-being and behavioural aspects.

- **Amplification Due to Digital Technologies:** Mobile and digital technologies have further amplified child abuse and exploitation. New forms of child abuse like online bullying, harassment and **Child Pornography** have also emerged.
- **Ineffective Legislation:** Although Government of India has enacted the **Protection of Children against Sexual Offences Act 2012 (POCSO Act)**, it has **failed to protect children from sexual abuse**. The reasons for this can be the following:
 - **Low Conviction Rate:** The rate of conviction under the **POCSO act is only about 32%** if one takes the average of the past 5 years and the percentage of cases pending is 90%.
 - **Judicial Delay:** The Kathua Rape case took 16 months for the main accused to be convicted whereas the POCSO Act clearly mentions that the entire trial and conviction process has to be done in one year.
 - **Unfriendly to Child:** Challenges related to age-determination of the child. Especially laws that focus on biological age and not mental age.

What is Protection of Children from Sexual Offences Act, 2012?

- It was enacted to protect the children from offences of sexual assault, sexual harassment and pornography with due regard for safeguarding the interest and well-being of children.
- It defines a child as **any person below eighteen years of age** and regards the best interests and welfare of the child as a matter of paramount importance at every stage, to ensure the healthy physical, emotional, intellectual and social development of the child.

Note:

- It defines different forms of sexual abuse, including penetrative and non-penetrative assault, as well as sexual harassment and pornography.
- It deems a sexual assault to be “aggravated” under certain circumstances, such as when the abused child is mentally ill or when the abuse is committed by a person in a position of trust or authority like a family member, police officer, teacher, or doctor.
- It also casts the police in the role of child protectors during the investigative process.
- The Act stipulates that a case of child sexual abuse must be disposed of within one year from the date the offence is reported.
- It was amended in August 2019 to provide more stringent punishment, including the death penalty, for sexual crimes against children.

What are the Related Constitutional Provisions?

- The Constitution guarantees to every child the right to live with dignity (Article 21), the right to personal liberty (Article 21), the right to privacy (Article 21), the right to equality (Article 14) and/or the right against discrimination (Article 15), the right against exploitation (Article 23 & 24).
 - Right to free and compulsory elementary education for all children in the 6–14-year age group (Article 21 A).
- The Directive Principles of State Policy, and in particular Article 39(f), cast an obligation on the State to ensure that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.

What are the Related Initiatives?

- Child Abuse Prevention and Investigation Unit
- Beti Bachao, Beti Padhao
- Juvenile Justice Act/Care and Protection Act, 2000
- Child Marriage Prohibition Act (2006)
- Child Labour Prohibition and Regulation Act, 2016

Tribal Forest Rights

Why in News?

Recently, residents of Karipani and Budra villages in Chhattisgarh carried out a massive afforestation drive

over 100 acres, as it was the last-ditch effort of the villagers to secure rights over their forest land.

- As many as 10 villages in protected areas of the state received the Community Forest Resource Rights (CFRR) titles on Adivasi Divas observed on August 9, 2022 but Karipani and Budra were not among them. What are Community Forest Resource Rights?
- The Community Forest Resource rights under Section 3(1)(i) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (Commonly referred to as the Forest Rights Act) provides for recognition of the right to “protect, regenerate or conserve or manage” the community forest resource.
- These rights allow the community to formulate rules for forest use by itself and others and thereby discharge its responsibilities under Section 5 of the Forest Rights Act.
- CFR rights, along with Community Rights (CRs) under Sections 3(1)(b) and 3(1)(c), which include nistar rights and rights over non-timber forest products, ensure sustainable livelihoods of the community.
- Once CFRR is recognised by a community, the ownership of the forest passes into the hands of the Gram Sabha instead of the forest department.
- Effectively, the Gram Sabha has become the nodal body for management of the forests.
- These rights give authority to the Gram Sabha adopt local traditional practices of forest conservation and management within the community forest resource boundary.
- Chhattisgarh is only the second state to have recognised CFR rights inside a national park i.e., Kanger Ghati National Park.
- In 2016, the Odisha government was the first to recognise Community Forest Resources (CFRs) inside the Simlipal National Park.

What is the Forest Rights Act, 2006?

- The Act recognizes and vests the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.
- Forest rights can also be claimed by any member or community who has for at least three generations

Note:

(75 years) prior to the 13th day of December, 2005 primarily resided in forest land for bona fide livelihood needs.

- It strengthens the **conservation regime** of the forests while ensuring livelihood and food security of the FDST and OTFD.
- The **Gram Sabha** is the authority to initiate the process for determining the nature and extent of **Individual Forest Rights (IFR)** or **Community Forest Rights (CFR)** or both that may be given to FDST and OTFD.
- The Act identifies **four types of rights**:
 - **Title rights**: It gives FDST and OTFD the **right to ownership** to land farmed by tribals or forest dwellers subject to a maximum of **4 hectares**. Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted.
 - **Use rights**: The rights of the dwellers extend to **extracting Minor Forest Produce, grazing areas** etc.
 - **Relief and development rights**: To **rehabilitate** in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.
 - **Forest management rights**: It includes the right to **protect, regenerate or conserve** or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.

Poshan Abhiyan

Why in News?

Recently, under various interventions of the Ministry of Women and Child Development jointly (MWCD) with Ministry of Ayush, close to 4.37 lakh Anganwadi Centres have set up **Poshan Vatikas**.

- Under ongoing **Poshan Maah 2022**, activities for setting-up Poshan Vatikas with backyard poultry / fishery units is being carried out in a big way across the country.
- Additionally, so far, 1.10 lakh medicinal saplings have also been planted across some of the selected districts of 6 States.

What do we Know about Poshan Maah?

- The Rashtriya Poshan Maah is being **celebrated during the month of September every year** under **POSHAN Abhiyaan**.
- It includes a month-long activity focused on antenatal care, optimal breastfeeding, Anemia, growth monitoring, girls' education, diet, right age of marriage, hygiene and sanitation and eating healthy (Food Fortification).
- The activities focus on **Social and Behavioural Change Communication (SBCC)** and are based on **Jan Andolan Guidelines**.
 - SBCC is the strategic use of communication approaches to promote changes in knowledge, attitudes, norms, beliefs and behaviours.

What do we know about Poshan Vatika?

- **About:**
 - Poshan Vatika means that **small piece of land where the people of the house grow vegetables** to make sure that all in the family specially children and women should not become victim of mal-nutrition.
- **Objective:**
 - Its main objective is to **ensure supply of nutrition through organically home-grown vegetables and fruits** simultaneously ensuring that the soil must also remain healthy.
- **Implementation:**
 - Plantation drives for Poshan Vatikas would be taken up by all the stakeholders in the space available at anganwadis, school premises and gram panchayats.

What do we Know about Poshan Abhiyan?

- **About**
 - **POSHAN Abhiyaan (National Nutrition Mission)** was launched by the government on March 8, 2018.
- **Aim:**
 - The Abhiyaan targets to **reduce stunting, undernutrition, anemia (among young children, women and adolescent girls)** and reduce low birth weight by 2%, 2%, 3% and 2% per annum respectively.
 - The target of the mission is to bring down stunting among children in the age group 0-6 years from 38.4% to 25% by 2022.
 - POSHAN Abhiyaan aims to **ensure service delivery and interventions by use of technology, behavioural**

Note:

change through convergence and lays-down specific targets to be achieved across different monitoring parameters.

- Under the Abhiyaan, **Swasth Bharat Preraks will be deployed one in each district for coordinating with district officials** and enabling fast and efficient execution of the Abhiyaan across the country. Swasth Bharat Preraks would function as catalyst for fast tracking the implementation of the Abhiyaan.

➤ **POSHAN 2.0:**

○ **About:**

- The government has amalgamated various programmes with similar objectives such as **Supplementary Nutrition Programme** and POSHAN Abhiyaan under one umbrella—Mission POSHAN 2.0—for **creating synergies in operations and adopting an integrated approach** in the nutrition services mechanism.

○ **Components:**

- **Convergence:** The Abhiyaan is to ensure convergence of all nutrition related schemes of MWCD on the target population. The Abhiyaan will ensure convergence of various programmes.
- **ICDS-CAS: Software based tracking of nutritional status** will be done.
- **Behavioral change:** The Abhiyaan will be run as a **Jan Andolan where mass involvement of people is desired**. A community-based event will happen once a month to create awareness and address issues.
- **Incentives:** Front line workers will be given incentives for performance.
- **Training and Capacity Building:** Incremental Learning Approach will be adopted to teach 21 thematic modules. The training will be given by Master Trainers to front line workers.
- **Grievance Redressal:** A call centre will be set up for ease of access to solutions to any issues faced.

What was the Need for Poshan Abhiyan?

➤ **Malnutrition and Anaemia among Children:**

- According to the **National Family Health Survey (NFHS)-5**, India has unacceptably high levels of stunting, despite marginal improvement over the years.

- In 2019-21, **35.5%** of children below five years were stunted and **32.1%** were underweight.

➤ **Global Nutrition Report-2021:**

- According to the **Global Nutrition Report (GNR, 2021)**, India has made no progress on anaemia and childhood wasting.

- Over **17% of Indian children** under 5 years of age are affected due to childhood wasting.
- The **data in NFHS 2019-21** shows the **highest spike in anaemia** was reported among children aged 6-59 months from **67.1% (NFHS-5) from 58.6% (NFHS-4, 2015-16)**.

○ **Human Capital Index (2020):**

- India ranks **116 out of 180 countries** on the **human capital index**.
 - **Human capital** consists of the knowledge, skills, and health that people accumulate over their lives, enabling them to realize their potential as productive members of society.

What are the other Related Initiatives?

- **Anemia Mukh Bharat Abhiyan.**
- **The National Food Security Act (NFSA), 2013.**
- **Pradhan Mantri Matru Vandana Yojana (PMMVY).**
- **PM-POSHAN Scheme.**

Social Audit of Social Sector Schemes

Why in News?

Recently, the Rajasthan government has decided to **set up a specialised social and performance audit authority** to conduct social audit of schemes, a first-of-its-kind in the country.

What is the Significance of this Decision?

➤ **Ensure Public Accountability:**

- The authority will **ensure public accountability, transparency and citizen participation** in implementation of government schemes, programs and services, and also conduct performance assessment of implementing agencies.

➤ **Assess the Quality Service Delivery:**

- The authority will also **assess the quality service delivery** by the government schemes and programs.

Note:

- It will also **perform people satisfaction surveys** to ascertain the outcome of various schemes.
- **Plan Social Audit and Performance Audit:**
 - The authority will **plan, conduct and finalise the social audit and performance audit of the government departments**, undertakings, schemes (central and state), programs, projects and activities in the state of Rajasthan.
 - It will **ascertain the efficiency and effectiveness of the services delivery** and whether public money has been spent economically.
- **Identify and Build Capacity of Civil Services Organisation:**
 - It will provide technical assistance towards effective implementation of various schemes and programmes; provide technical assistance to finance and planning department towards strengthening of annual plans and outcome budgeting; and assess the **quality standards of development and infrastructure works** in rural and as well as urban areas.

What is Social Audit?

- **About:**
 - Social Audit is the **audit of a scheme jointly by the Government and the people**, especially by those who are affected by the scheme or its beneficiaries.
 - Social audit is different from financial audits **which involve inspecting and assessing documents** related to financial transactions in an organization to provide a true picture of its profits, losses and financial stability.
- **Social Audit and MGNREGA:**
 - Under Section 17 of the MGNREGA, **all works executed under the program must undergo a social audit.**
 - Every Social Audit Unit is entitled to **funds equivalent to 0.5% of the MNREGA expenditure** incurred by the State in the previous year.
 - The audit **involves quality checks of infrastructure** created under the MNREGA, financial misappropriation in wages, and checking for any procedural deviations.
 - The report titled '**Social audit calendar vs audits completed**' was released recently by the Union Rural Development Ministry (MoRD) highlights that **only 14.29% of the planned audits have been completed in 2021-2022.**

- The Ministry also held that failure to carry out a social audit of the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** by states will invite action, including withholding of funds.
- However, it is the **Centre that bears the administrative cost of these Social Audit Units**, and the inordinate delay in the release of funds has left many of these cash-strapped units nearly paralysed.
- **Challenges:**
 - **Lack of Administrative Will:**
 - The **lack of adequate administrative and political will** in institutionalising social audits to deter corruption has meant that social audits in many parts of the country are not independent of the influence of implementing agencies.
 - The Social Audit Units of some states such as Kerala, Telangana, Himachal Pradesh, and Chhattisgarh, had not received the administrative funds that the Centre owes them. Therefore, **auditors' wages have been delayed** by three months to one year.
 - **Resistance and Intimidation:**
 - Social audit units, including village social audit facilitators find it difficult to even access primary records for verification.
 - **Lack of People's Participation:**
 - People's participation has been minuscule due to the lack of education, awareness and capacity building among the common masses.
 - **Absence of Independent Agency:**
 - There is an **absence of an independent agency** to investigate and act on social audit findings.

Economically Weaker Section (EWS) Quota

Why in News?

Recently, the **Attorney-General of India** articulated that the **10% quota for Economically Weaker Sections (EWS)** of society does not erode the rights of the **Scheduled Castes, the Scheduled Tribes or the Other Backward Classes.**

Note:

What are the Government's Views?

- **Doesn't Harm Quota of Other Classes:** The **EWS quota** was given independently of the already **existing 50% reservation granted for the backward classes**, that is, the scheduled communities and the OBCs.
 - The **Attorney general** rejected arguments by petitioners that the exclusion of backward classes from the EWS quota amounted to discrimination, as they have been **loaded with benefits by way of affirmative actions**.
 - For example, the members of the Scheduled Caste and Scheduled Tribe communities have been given several benefits under the Constitution, including **Article 16(4)(a)** (special provision for promotion), **Article 243D** (reservation in panchayat and municipality seats), **Article 330** (reservation in the Lok Sabha) and **Article 332** (reservation in state legislative assemblies).
- **Necessary to Uplift the Weaker Section:** The reservation for the backward classes, and now the EWS quota, should be considered by the court as "one single approach of the state intended for the upliftment of the weaker sections of the society".
 - Altogether **18.2% of the total population in the general category belonged to EWS** and referred to the **Multi-dimensional Poverty Index** used by the **Niti Ayog**, which would be about 350 million (3.5 crores) of the population.
- **Confer the Constitution:** The reservation for OBCs, SCs and STs fall under different silos other than the EWS quota and it does not violate the basic structure of the Constitution.
- **Examples:** As per the written submissions submitted by government referred to how the top court had stood by the validity of the **Right of Children to Free and Compulsory Education Act, 2009**.
 - The court had held that the 2009 Act **seeks to remove all barriers, including financial and psychological barriers** which a child belonging to the weaker section and disadvantaged group has to face while seeking admission and therefore **upheld it under Article 21 of the Constitution**.

What are the Opponent's views?

- The amendments **run contrary to the constitutional scheme**, where no segment of available seats/posts can be reserved, only on the basis of economic criteria.

- The amendments also run contrary to the judgment pronounced in the **Indra Sawhney V. Union of India 1992 case**, that a **backward class cannot be determined only and exclusively with reference to economic criteria**.
- The amendments **alter the 50% quota limit** set up in **Indra Sawhney V. Union of India 1992 case**, which according to the petitioner is a part **Basic Structure of the Constitution**.

What is Economically Weaker Section (EWS) Quota?

- **About:**
 - The **10% EWS quota** was introduced under the **103rd Constitution (Amendment) Act, 2019** by amending **Articles 15 and 16**.
 - It inserted **Article 15 (6) and Article 16 (6)**.
 - It is for **economic reservation** in jobs and admissions in educational institutes for **Economically Weaker Sections (EWS)**.
 - It was enacted to promote the welfare of the poor not covered by the 50% reservation policy for **Scheduled Castes (SCs), Scheduled Tribes (STs) and Socially and Educationally Backward Classes (SEBC)**.
 - It enables both the **Centre and the States** to provide reservations to the **EWS of society**.
- **Significance:**
 - **Addresses Inequality:**
 - The **10% quota is progressive** and could **address the issues of educational and income inequality in India** since the **economically weaker sections of citizens have remained excluded** from attending higher educational institutions and public employment due to their financial incapacity.
 - **Recognition of the Economic Backwards:**
 - There are many people or classes other than backward classes who are **living under hunger and poverty-stricken conditions**.
 - The proposed reservation through a constitutional amendment would **give constitutional recognition to the poor from the upper castes**.
 - **Reduction of Caste-Based Discrimination:**
 - Moreover, it will **gradually remove the stigma associated with reservation** because reservation

Note:

has historically been related to caste and most often the upper caste looks down upon those who come through the reservation.

➤ **Concerns:**

○ **Unavailability of Data:**

- The Union or state governments have **no such data to prove that 'upper' caste individuals**, who have less than Rs 8 lakh annual income, **are not adequately represented in government jobs** and higher educational institutions. There is a strong possibility that they are actually over-represented in these places.

○ **Arbitrary Criteria:**

- The criteria used by the government to decide the eligibility for this reservation is vague and is not based on any data or study.
- Even the SC questioned the government whether they have checked the **GDP per capita for every State** while deciding the monetary limit for giving the EWS reservation.

- Statistics show that the **per capita income in states differs widely** - Goa is the state having the highest per capita income of almost Rs. 4 lakhs whereas Bihar is at the bottom with Rs.40,000.

Aliva: A Data-Driven Approach to Eradicate Child Marriage

Why in News?

Recently, **Nayagarh, a district in Odisha**, has adopted a **unique initiative- Aliva to eradicate child marriage**.

- As per Odisha's child marriage prevention strategy, the State aims to **eradicate child marriage by 2030**.

What are the Key Highlights of the Initiative?

➤ **About:**

- The programme was **launched in January, 2022**.
- **Anganwadi workers** had been asked to **identify every adolescent girl in their jurisdiction** and keep tabs on them.
- **Details about adolescent girls-** birth registration date, Aadhaar, family details, skill training, etc., are **recorded in registers named – Aliva** available in the Anganwadi centres of the district.

- The age of the girl is approved by the local school head master, father, supervisor and Child Marriage Prohibition Officer (CMPO).
- As of now, the district has **registered information of 48,642 adolescent girls in the Aliva registers**.
- When tipped off about child marriages, **district administration and the police refer to registers for ascertaining proof of girls' age**.
- The district has **decided to maintain the record for a period of 10 years-2020 to 2030**.

➤ **Significance:**

- The **Aliva registers are by far the most comprehensive ones** that keep tabs on girls' lives for 10 years.
 - The register has been **useful for law enforcement agencies, as parents attempt to lie about the age of their girls** to escape punishment.
- Though the register was conceptualised to prevent child marriages, it has been very **useful for tracking the health of girls especially if they are anaemic**.

What is the Current

Status of Child Marriages in India?

- United Nations Children's Fund (UNICEF) estimates suggest that **each year, at least 1.5 million girls under 18 get married in India**, which makes it home to the largest number of child brides in the world - accounting for a third of the global total.
- According to **NFHS-5, 23.3% women surveyed got married before attaining the legal age of 18 years**, down from 26.8% reported in NFHS-4. The figure for **underage marriage among men is 17.7% (NFHS-5) and 20.3% (NFHS-4)**.
 - **West Bengal and Bihar**, with around 41% such women each, had the **highest prevalence of girl child marriage**.
 - Underage marriages are **lowest in J&K, Lakshadweep, Ladakh, Himachal Pradesh, Goa, Nagaland, Kerala, Puducherry and Tamil Nadu**, according to NHFS-5.
 - The share of **women aged 20-24 who married before turning 18 has declined from 27% to 23%** in the last five years.
 - **The maximum reduction** in the proportion of underage marriages was observed in **Rajasthan, Madhya Pradesh, and Haryana**.

Note:

What are the Government Laws and Initiatives to Prevent Child Marriage?

- **Minimum Age for Marriage:**
 - For Hindus, **The Hindu Marriage Act, 1955**, sets **18 years as the minimum age of marriage for the bride and 21 years as the minimum age for the groom.**
 - In Islam, the marriage of a minor who has attained puberty is considered valid.
 - The **Special Marriage Act, 1954** also prescribes **18 and 21 years as the minimum age of consent for marriage for women and men respectively.**
- **Prohibition of Child Marriage Act, 2006** replaced the **Child Marriage Restraint Act, 1929** which was enacted during the British era.
 - It defines a **child to mean a male below 21 years and female below 18 years.**
 - “Minor” is defined as a person who has not attained the age of majority as per the **Majority Act.**
 - The **legal status of Child Marriage is voidable if so desired** by one of the parties.
 - However, **if the consent is obtained by fraud, deceit or if the child is enticed away from his/her lawful guardians, and if the sole purpose is to use the child for trafficking or other immoral purposes, marriage would be void.**
 - There is also a **provision for maintenance of girl child. Husband is liable to pay maintenance if he is a major.**
 - In case, the **husband is also a minor, his parents would be liable to pay maintenance.**
 - It envisages preventing child marriage with punishments of **rigorous imprisonment for two years and/ or fine of Rs. 1 lakh.**
 - The Act also provides for the **appointment of CPMO whose duties are to prevent child marriages and spread awareness** regarding the same.
- **India's Efforts for Reducing Gender Gap:**
 - India had ratified the **Convention on the Elimination of All Forms of Discrimination Against Women in 1993.**
 - **Article 16** of this Convention strictly **forbids child marriage** and asks governments to identify and enforce the minimum marriage age for women.

- Since 1998, India has had **national legislation exclusively on human rights protections** drafted in consonance with international instruments such as the **Universal Declaration of Human Rights, 1948.**

India Discrimination Report

Why in News?

The **India Discrimination Report** which is released by **Oxfam India** highlighted that women and marginalized communities suffered discrimination in the job market.

What are the Key Highlights of the Report?

- The dataset was taken from the 61st round of the **National Sample Survey on employment unemployment (2004-05)**, the **Periodic Labour Force Survey (PLFS)** in 2018-19 and 2019-20, and the **All-India Debt and Investment Survey** by the Centre.
 - **Schedule caste/Schedule tribe:** There has been a **decline in discrimination in urban areas** due to education and supportive government policies.
 - **Difference in Earning:** The average earning of self-employed workers in 2019-20 was Rs 15,878 for people from non-SCs/ST categories, while it is Rs 10,533 for those from SC or ST backgrounds.
 - Self-employed **non-SC/ST workers earn a third more than** their counterparts from **SC or ST backgrounds.**
 - **Rise in discrimination in Rural areas:** The SC and ST communities in rural India are facing an increase in discrimination in casual employment.
 - **Women:** Discrimination against women is so high that there is **hardly any difference** across **religion or caste-based sub-groups**, or the rural-urban divide.
 - The discrimination increased for women in this period — **from 67.2% in 2004-05 to 75.7% in 2019-20.**
 - **Earning Gap between Males & Females:** The earning gaps are large, both in rural and urban areas for casual workers ranging between 50% and 70%. The range is low for regular workers, **with earnings of men exceeding those of women by 20 and 60%.**
 - In the case of the self-employed, the disparity is much higher, with men earning 4 to 5 times that of women.

Note:

- Gender discrimination in India is structural which results in great disparities between earnings of men and women under 'normal circumstances.

What are the Constitutional Provisions against Discrimination?

- **Right to Equality (Article 14, 15, 16):**
 - **Equality Before Law: Article 14** says that no person shall be denied treatment of equality before the law or the equal protection of the laws within the territory of India.
 - The right is extended to all persons whether citizens or foreigners, statutory corporations, companies, registered societies or any other type of legal person.
 - **Prohibition of Discrimination: Article 15** provides that **no citizen shall be discriminated on grounds only of religion, race, caste, sex or place of birth.**
 - **Equality of Opportunity in Public Employment: Article 16** of the Indian constitution provides for equality of opportunity for all citizens in matters of employment or appointment to any public office.

What are the Government Initiatives Related to Women Empowerment?

- **Beti Bachao Beti Padhao Scheme**
- **Ujjawala Yojna**
- **Swadhar Greh**
- **Pradhan Mantri Matru Vandana Yojana**
- **Pradhan Mantri Mahila Shakti Kendra Scheme**
- **One Stop Centre**

What do we know about the Periodic Labour Force Survey (PLFS)?

- The **National Statistical Office (NSO)** launched the Periodic Labour Force Survey (PLFS) in April 2017.
- The objective of PLFS is primarily twofold:
 - To estimate the key employment and unemployment indicators (viz. **Worker Population Ratio, Labour Force Participation Rate, Unemployment Rate**) in the short time interval of three months for the urban areas only in the **CWS**.
 - To **estimate employment and unemployment indicators** in both usual Status and CWS in both rural and urban areas annually.

Note:

Science & Technology

Highlights

- World Heart Day
- Saturn's Mysterious Rings & Extreme Tilt
- Non-Communicable Diseases
- INSPIRE Awards
- First Meeting of the Reconstituted National Medical Device Promotion Council (NMDPC)
- Floods on Mars
- Rohini Sounding Rocket
- eSIMs Technology
- Artificial Intelligence and Ethics
- Double Asteroid Redirection Test (DART) Mission: NASA
- Ebola Virus Disease

World Heart Day

Why in News?

World Heart Day is celebrated on 29th September, every year. Maharashtra's STEMI project helps detect over 2,000 heart attacks in a year.

What is World Heart Day?

➤ About:

- It was first observed in the year 2000 after the World Heart Federation collaborated with the World Health Organization (WHO).
- It is a global campaign through which the federation unites people in the fight against the Cardiovascular Disease (CVD) burden as well as inspires and drives international action to encourage heart-healthy living.

➤ Theme:

- The theme for World Heart Day 2022 is, "Use Heart For Every Heart".

What are Cardio Vascular Diseases (CVDs)?

➤ About:

- CVDs are a group of disorders of the heart and blood vessels and include coronary heart disease, cerebrovascular disease, rheumatic heart disease and other conditions.

➤ Global Scenario:

- CVDs are the leading cause of death globally, taking an estimated 17.9 million lives in 2019 according to WHO.

- More than four out of five CVD deaths are due to heart attacks and strokes, and one third of these deaths occur prematurely in people under 70 years of age.

➤ Indian Scenario:

- As per WHO, India reported 63% of total deaths in 2016 due to NCDs, of which 27% were attributed to CVDs.
- CVDs also account for 45% of deaths in the 40–69-year age group.

➤ Risk Factors:

- The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and alcohol consumption.
- The effects of behavioural risk factors may show up in individuals as intermediate risk factors such as raised blood pressure, raised blood glucose, raised blood lipids, and obesity.

➤ Indian Initiative:

- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) is being implemented under the National Health Mission (NHM).
- Affordable Medicines and Reliable Implants for Treatment (AMRIT) Deendayal outlets have been opened at 159 Institutions/Hospitals with an objective to make available Cancer and Cardiovascular Diseases drugs and implants at discounted prices to the patients.
- Jan Aushadhi stores are set up by the Department of Pharmaceuticals to provide generic medicines at affordable prices.

Note:



- **ST-Elevation Myocardial Infarction (STEMI) Project:** The **Maharashtra government** launched the STEMI programme recognised by **NHM** in 2021 to **enable rapid diagnosis of heart disease**.
 - ST-Elevation Myocardial Infarction (STEMI) is a condition wherein one of the **heart's major arteries, supplying oxygen-rich blood to the heart** muscle, gets completely blocked.

Saturn's Mysterious Rings & Extreme Tilt

Why in News?

According to a recent study, a pre-existing moon named **Chrysalis** likely left Saturn with its bright rings and extreme tilt.

What are the Key Highlights of the Study?

- **Substantial Tilt:** **Saturn** has a tilt of 26.73 degrees and is unlikely to have had a tilt during its formation stages.
 - Currently, **Neptune, Uranus and Saturn** have a **substantial tilt**, suggesting that this feature did not arise during the formation stages.
- **Reason for Tilt:** Various theories suggest that Saturn got its tilt **due to gravitational interactions with its neighbour Neptune**.
 - But the new study argues that Saturn is no longer under Neptune's gravitational influence.
 - Further, it stated that instead, Titan — Saturn's largest satellite — may have been responsible, as per observations from **NASA's Cassini spacecraft**, which orbited Saturn from 2004-2017.
 - **Titan's Migration:** Titan is migrating from Saturn at about 11 centimetres per year, 100 times faster than previous estimates.
 - Titan's fast **migration caused the planet to tilt further**, reducing Neptune's gravitational influence on Saturn.
 - **Role of Former Moon (Chrysalis):** Scientists conducted simulations of the planet's axis of rotation and how it has changed over time, it revealed that a former moon could be involved, as removing the moon gives Saturn its tilt, according to the model.

- Chrysalis likely orbited Saturn for several billion years, roughly 160 million years ago, Chrysalis became unstable and came too close to its planet. This encounter likely pushed the moon away or destroyed it.

What do we Know about Saturn?

- Saturn is the **sixth planet from the Sun and the second largest planet** in our solar system.
- Adorned with thousands of beautiful ringlets, Saturn is unique among the planets.
- It is not the only planet to have rings—made of chunks of ice and rock—but none are as spectacular or as complicated as Saturn's.
- **Saturn** has the highest number of satellites or moon, i.e., 82 in the solar system.
- Like fellow gas giant Jupiter, Saturn is a massive ball made mostly of hydrogen and helium.
- **Few missions** have visited Saturn: **Pioneer 11** and **Voyagers 1** and 2 flew by, But **Cassini** orbited Saturn 294 times from 2004 to 2017.

Non-Communicable Diseases

Why in News?

Recently, the **World Health Organisation (WHO)** released its report "Invisible Numbers — The True Extent of Non-communicable Diseases and What To Do About Them", which stated that every two seconds, one person under the age of 70 dies of a **non-communicable disease (NCD)** with 86% of those deaths occurring in low- and middle-income countries.

What are the Key Highlights of the Report?

- Globally, one in three deaths – 17.9 million a year – are due to **cardiovascular diseases (CVDs)**.
- Two-thirds of the people with hypertension live in low- and middle-income countries, but almost **half of the people with hypertension are not even aware they have it**, it currently affects around 1.3 billion adults aged between 30 and 79.
- **Major Diseases:**
 - **Diabetes:** One in 28 deaths - 2.0 million people a year – is due to diabetes.
 - **More than 95% of diabetes cases globally are of type 2 diabetes.**

Note:

- **Cancer:** It causes **one in six deaths – 9.3 million people a year**, a further 44% of cancer deaths could have been prevented or delayed by eliminating risks to health.
- **Respiratory Disease:** It indicated that 70% of deaths due to chronic respiratory diseases could have been prevented or delayed by eliminating risks to health.
- Further, **Covid-19 highlighted the links between NCDs and infectious disease**, with serious impacts on NCD care. In the early months of the pandemic, 75% of countries reported **disruption to essential NCD services**.
- As per WHO portal only a handful of countries were on track to meet the **Sustainable Development Goal** target to reduce early deaths from NCDs by a third by 2030.

What are Non-Communicable Diseases?

- **About:**
 - Non-communicable diseases (NCDs), also known as chronic diseases, **tend to be of long duration** and are the result of a **combination of genetic, physiological, environmental and behavioural factors**.
 - The main types of NCD are **cardiovascular diseases** (such as heart attacks and stroke), **cancers, chronic respiratory diseases** (such as chronic obstructive pulmonary disease and asthma) and **diabetes**.
- **Causes:**
 - Tobacco use, unhealthy diet, harmful use of alcohol, physical inactivity and air pollution are the main risk factors contributing to these conditions.
- **Status of Non-Communicable Diseases in India:**
 - According to WHO, over **60.46 lakh people died due to NCDs in India in 2019**.
 - **Over 25.66 lakh deaths** in 2019 in the country were **due to cardiovascular diseases** while 11.46 lakh deaths were **due to chronic respiratory diseases**.
 - Cancer led to 9.20 lakh deaths while 3.49 lakh deaths in the country were attributed to diabetes.
- **Indian Initiatives:**
 - **National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)** is being implemented under the **National Health Mission (NHM)**.

- The Central Government is implementing the Strengthening of Tertiary Care Cancer facilities scheme to support the setting up of **State Cancer Institutes (SCI)** and **Tertiary Care Centres (TCCC)** in different parts of the country.
- Oncology in its various aspects has a focus in case of new AIIMS and many upgraded institutions under **Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)**.
- **Affordable Medicines and Reliable Implants for Treatment (AMRIT)** Deendayal outlets have been opened at 159 Institutions/Hospitals with an objective to **make available Cancer and Cardiovascular Diseases drugs and implants at discounted prices to the patients**.
- **Jan Aushadhi stores** are set up by the Department of Pharmaceuticals to provide generic medicines at affordable prices.

➤ Global:

- **Agenda for Sustainable Development:** As part of the 2030 Agenda for Sustainable Development, **heads of state and government committed to develop ambitious national responses, by 2030**, to reduce by one third premature mortality from NCDs through prevention and treatment (SDG target 3.4).
 - WHO plays a key leadership role in the coordination and promotion of the global fight against NCDs.
- **Global action Plan:** In 2019, the World Health Assembly extended the WHO Global action plan for the **prevention and control of NCDs 2013–2020 to 2030** and called for the **development of an Implementation Roadmap 2023 to 2030 to accelerate progress on preventing and controlling NCDs**.
 - It supports actions to achieve a set of nine global targets with the greatest impact towards prevention and management of NCDs.

INSPIRE Awards

Why in News?

Recently, the 9th **National Level Exhibition and Project Competition (NLEPC)** for the **INSPIRE Awards – MANAK** (Million Minds Augmenting National Aspiration and Knowledge), has commenced.

Note:

What is the **INSPIRE (Innovation in Science Pursuit for Inspired Research) Award?**

➤ About:

- It is aligned with the **'Start-up India'** initiative and is being executed by **DST** (Department of Science and Technology) with **National Innovation Foundation – India (NIF)**, an autonomous body of DST.
- Under this, the **students are invited from all government or private schools throughout the country**, irrespective of their educational boards (national and state).
- Financial support of Rs 10,000 each would be provided so that they could develop prototypes of the ideas which they submitted for the scheme.
- As a next step, they competed at respective **District Level Exhibition and Project Competition (DLEPC)** and **State Level Exhibition and Project Competition (SLEPC)** and finally **National Level Exhibition and Project Competition (NLEPC)**.

➤ Aim:

- To **motivate students** to become future **innovators and critical thinkers**.

➤ Objectives:

- To target one million original ideas/innovations rooted in science and societal applications to **foster a culture of creativity and innovative thinking** among school children.
- To address the **societal needs through science and technology** and nurture them to become

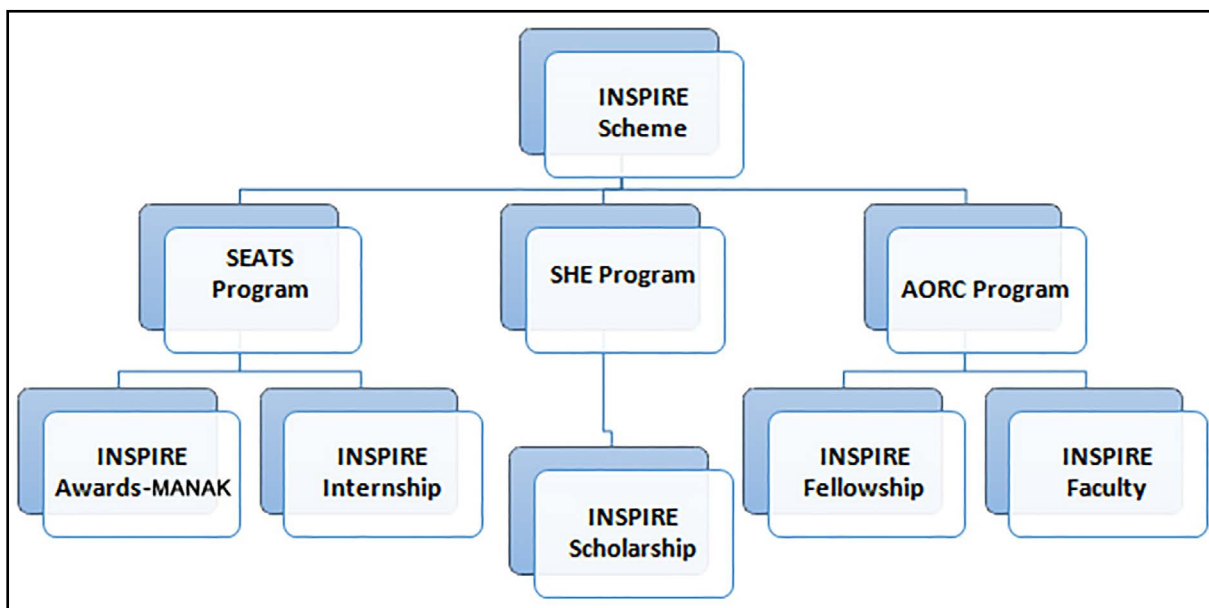
sensitive and responsible citizens and innovation leaders of tomorrow.

➤ **INSPIRE Awards 2022:**

- The INSPIRE Awards were presented to 60 Start-Ups and financial support was provided to 53,021 students.
- It touched an **unparalleled level of inclusivity by representing ideas and innovations** of 702 districts of the country (96%) including 123 out of 124 aspirational districts, **with 51% representation from girls, 84% participation from schools located in rural areas of the country** and 71% of the schools run by the State / UT Governments.

What do we Know about **INSPIRE Scheme?**

- The INSPIRE (Innovation in Science Pursuit for Inspired Research) scheme is **one of the flagship programmes** of the **Ministry of Science and Technology**.
- Its **objective is to communicate to the youth population** of the country the creative pursuit of science and attract talent to the **study of science at an early stage** and build the **required critical human resource pool** for strengthening and expanding the Science & Technology system and Research & Development base.
- The Government of India has successfully implemented the INSPIRE scheme **since 2010**. The scheme **covers students in the age group of 10-32 years** and has five components.
 - The **INSPIRE Awards- MANAK** is one of its components.



Note:

What are the Other Related Initiatives?

➤ Draft National Science Technology and Innovation Policy, 2020:

- Its aim is to identify and address strengths and weaknesses of the Indian Science Technology and Innovation (STI) ecosystem to catalyse socio-economic development of the country and also make the Indian STI ecosystem globally competitive.

➤ SERB-POWER Scheme:

- It is a scheme designed exclusively for women scientists to mitigate gender disparity in science and engineering research in various science and technology (S&T) programmes in Indian academic institutions and Research and Development (R&D) laboratories.

➤ Swarna Jayanti Fellowship:

- It provides special assistance and support to a selected number of young scientists with a proven track record to enable them to pursue basic research in frontier areas of science and technology.

First Meeting of the Reconstituted National Medical Device Promotion Council (NMDPC)

Why in News?

Recently, important issues of Medical Technology (MedTech) Industry were taken-up at the first meeting of the reconstituted National Medical Device Promotion Council (NMDPC).

What were the Key Highlights of the Meeting?

➤ Agenda:

- Central Drugs Standards and Control Organisation (CDSCO) and the State Licensing Authorities (SLAs) provided updates for the smooth transition to licensing of Class A and B Medical Devices w.e.f 1st October 2022.
 - Medical devices under Medical Devices Rules, 2017 are classified as:
 - Class A (low risk): E.g., absorbent cotton balls, alcohol swabs.
 - Class B (low moderate risk): E.g., thermometer, BP monitoring device.

- Class C (moderate high risk): E.g., implants.

- Class D (high risk): E.g., heart valves.

- Department of Pharmaceuticals provided the latest status of the various initiatives such as 100% Foreign direct Investment (FDI) in MedTech Sector on automatic route, Production-Linked Incentive Scheme (PLI) scheme for Medical Devices, Medical Devices Parks in four States (Himachal Pradesh, Tamil Nadu, Madhya Pradesh and Uttar Pradesh), etc.
- The discussion regarding the requirement of National Accreditation Board for Testing and Calibration Laboratories (NABL) accreditation of In-House labs of the manufacturers of specific Medical Devices was taken-up during the meeting.

➤ Concerns Highlighted:

- There is a regulatory burden of labelling requirements of Medical Devices.
- There are only 18 certified Medical Device Testing Laboratories that have been approved by CDSCO and that is grossly insufficient keeping in view the size of the country.
- Indian Medical Devices Industry presently lacks research ecosystem and infrastructure for manufacturing of high tech, advanced medical devices (Class C&D).

What were the Key

Recommendations made by the NMDPC?

➤ Harmonize the Labelling Provisions:

- There is a need to move forward to harmonize the provisions of labeling of Medical Devices under the Legal Metrology (Packaged Commodity) Rules, 2011 into Medical Device Rules, 2017, for licensed medical devices.

➤ Investment in the Medical Devices Park:

- The Medical Devices Industry Associations representatives were encouraged to actively engage with states, which were sanctioned Medical Devices Parks by the Department for creating common infrastructure facilities and come forward to invest in the proposed parks to boost domestic manufacturing.

➤ Active Participation in the National MedTech Expo, 2022:

- The industry's support was also asked for the proposed National MedTech Expo, 2022 to showcase the strengths and capabilities of Indian Medical Devices Industry.

Note:



- **Need of More Certified Medical Devices Testing Laboratories:**
 - An adequate common infrastructure including accredited laboratories in various regions of the country for standard testing should be in place.
- **Post-market Surveillance system and Medical Device Registry:**
 - There must be a robust **IT enabled feedback driven post-market surveillance system and medical device registry**, particularly for implants to **ensure traceability of patient who has received the implant** in order to assess the performance of the implant.
- **New Legislation for a New Regulator:**
 - The Committee has recommended that the **new legislation should set up a new set of regulators at different levels for regulating the medical devices industry.**
 - The Ministry of Chemicals and Fertilizers should allow the new regulator to involve institutions such as **Indian Institute of Science (IISc), Council of Scientific and Industrial Research (CSIR), Defence Research and Development Organisation (DRDO)** and network of **Indian Institute of Technology (IITs)** to test medical devices for safety and efficacy.
 - **Medical device regulations must be dispensed with by qualified and well-trained Medical Device Officers** to give a boost to the Medical Device industry in the country.
- **Research Linked Incentive (RLI) Scheme:**
 - The Committee recommended the Department to start a **RLI Scheme** in Line with the PLI scheme.
- **Upskilling of the Medical Device Officers:**
 - The Ministry should work in synergy with State governments and **impart the necessary skills to the local medical device officers.**
- **A Single Window Clearing Platform:**
 - A **single window clearing platform for application of license for manufacturing, export, import must be set up** that shall also integrate all these bodies involved in the regulation of medical devices.
 - The Ministry must incorporate such an **all-encompassing "single window clearing/approval system" in the proposed new separate Act for the regulation of Medical Devices.**

What is NMDPC?

➤ About:

- **National Medical Device Promotion Council (NMDPC)** is chaired by the **Secretary, Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers.**
 - It has **members from stakeholder departments/ organizations**, functions of which have a bearing on the growth of the sector.
 - Also, it has **representation from several medical device industry associations**, representing the sector in India.

➤ Significance:

- NMDPC, going forward, is **expected to become a vibrant forum for all issues relating to the medical devices sector**, which is a sunrise sector with **huge potential for social obligations and the economic aspirations of India.**

Floods on Mars

Why in News?

China's Zhurong rover that landed on Mars in 2021 has found evidence of major floods that took place billions of years ago by studying underground layers.

- The rover **studied its landing site - Utopia Planitia** - vast plains in Mars's northern hemisphere.
- These are the **rover's first results** of the radar imager. Radio waves from the radar bounce off **underground materials to reveal their grain size and ability to hold an electric charge.** Stronger signals typically indicate larger objects.

What are the Findings?

- The radar did not find any evidence of liquid water down to 80 metres, but it did detect **two horizontal layers with interesting patterns.**
 - In a layer between 10 and 30 metres deep, the reflection signals strengthened with increasing depth.
 - An older, thicker layer between 30 and 80 metres down showed a similar pattern.
- The **older layers** (30 and 80 metres) are probably the result of rapid flooding that carried sediments to the region more than **three billion years ago**, when there was a lot of water activity on Mars.

Note:

- The **upper layer** (between 10 and 30 metres deep) could have been created by another flood **some 1.6 billion years ago**, when there was lots of glacial activity.
- Radar data is not enough to discern if the underground materials were sediments or volcanic remnants.

What is Zhurong Rover?

- Zhurong named after a Chinese mythical fire god, is **China's first Mars** rover carried by **China's Tianwen-1 spacecraft** in 2021.
- During the mission, Zhurong will explore the colossal basin of **Utopia Planitia** on Mars' northern hemisphere, which was probably formed by an impact early in the planet's history.
- Weighing about 240 kilograms, the 'Zhurong' rover is **slightly heavier than NASA's Spirit and Opportunity rovers**, but only one-fourth the weight of **Perseverance and Curiosity (NASA)**.
- It is powered by **retractable solar panels and fitted with seven primary instruments** — cameras, ground-penetrating radar, a magnetic field detector and a weather station.
- The purpose of the radar is **to look for signs of ancient life as well as subsurface water**.

What are the Key Points Related to Mars?

- **Size and Distance:**
 - It is the **fourth planet from the Sun** and the second-smallest planet in the Solar System.
 - Mars is about half the size of Earth.
- **Similarity to the Earth (Orbit and Rotation):**
 - As Mars orbits the Sun, it completes one rotation every 24.6 hours, which is very similar to one day on Earth (23.9 hours).
 - Mars' axis of **rotation is tilted 25 degrees** with respect to the plane of its orbit around the Sun. This is similar to Earth, which has an axial tilt of 23.4 degrees.
 - Mars has distinct seasons like Earth, but they last longer than seasons on Earth.
 - Martian days are called **sols—short for 'solar day'**.
- **Other Features:**
 - The reason Mars looks reddish is due to oxidation or rusting of iron in the rocks, and dust of Mars. Hence it is also called the Red Planet.

- It has the largest volcano in the solar system i.e., Olympus Mons.
- It has two small moons, **Phobos and Deimos**.

What are the Various Mars Missions?

- **ExoMars rover (2021) (European Space Agency)**
- **Tianwen-1: China's Mars Mission (2021)**
- **UAE's Hope Mars Mission (UAE's first-ever interplanetary mission) (2021)**
- **India's Mars Orbiter Mission (MOM) or Mangalyaan (2013)**
- **Mars 2 and Mars 3 (1971) (Soviet Union)**

Rohini Sounding Rocket

Why in News?

The **Indian Space Research Organisation (ISRO)** is planning the **200th successful launch** of the **Rohini RH-200** sounding rocket in a row.

- RH-200 of the Rohini sounding rocket family has completed **198 consecutive successful** flights.
- The 199th launch will happen in October 2022 during the **World Space Week (4th-10th October)** celebrations. The 200th will take place either towards the end of October or the beginning of November 2022.

What are the Sounding Rockets?

- **About:**
 - Sounding rockets are **one or two stage solid propellant rockets** used for probing the upper atmospheric regions and for space research.
 - Sounding rockets take their name from the nautical term "to sound," which means to take measurements.
 - They also serve as **easily affordable platforms to test or prove prototypes** of new components or subsystems intended for use in launch vehicles and satellites.
- **History:**
 - The Thumba Equatorial Rocket Launching Station (TERLS) was established on 21st November 1963. Its southern tip is close to **earth's magnetic equator**.
 - The launch of the first sounding rocket (American Nike-Apache) from Thumba in 1963, **marked the beginning of the Indian Space Programme** and was the bedrock of all the vehicles built.

Note:



- ISRO began with the launch of **indigenously built sounding rockets from 1965**. The ISRO launched its own version - **Rohini RH-75 - in 1967**.
- In 1975, all sounding rocket activities were **cluttered under the Rohini Sounding Rocket (RSR) Programme**.
- The series of sounding rockets are called **Rohini series with RH 200, RH 300 and RH 560 being the most important** among them.

➤ RH-200:

- RH-200 is a **two-stage rocket capable of climbing to a height of 70 km** bearing scientific payloads.
- The first and second stages of RH-200 are powered by solid motors.
- For years, the RH-200 rocket had used a **polyvinyl chloride (PVC)-based propellant**.
- The first RH-200 to use a new propellant based on hydroxyl-terminated Polybutadiene (HTPB) was successfully flown from the TERLS in September 2020.
 - As compared to PVC based propellants, HTPB based propellant is more energetic, higher mechanical & interface properties and has less

defects due to lower processing temperature.

- The '200' in the name **denotes the diameter of the rocket in mm**. Other operational Rohini variants are **RH-300 Mk-II and RH-560 Mk-III**.

Some details of Sounding Rockets:

Vehicle	RH-200	RH-300-Mk-II	RH-560-MK-II
Payload (Kg)	10	60	100
Altitude (Kms)	80	160	470
Purpose	Meteorology	Aeronomy	Aeronomy
Launch Pad	Thumba Balasore	SDSC-SHAR	SDSC-SHAR

eSIMs Technology

Why in News?

Apple Inc., an American multinational technology company, has come up without a **physical SIM slot** or an eSIM in order to **access mobile networks**.

Switch Operators at Will

Mobile phone users may soon be able to change operators on a whim, thanks to embedded SIM, or eSIM cards. Telecom providers will be able to raise their game to retain users, say company executives and experts



Its uses...

Subscribers can use the eSim to activate a mobile tariff plan without recourse to a physical SIM



Mobile number portability, which allows consumers to change operators without altering numbers, will become easier with eSIM

Who or what will suffer...

Carriers will have to work harder to retain or acquire new customers



This may lead to competition intensifying



Margins may be hurt as customer cost may rise

Telcos' Stance

Vodafone Idea & Bharti Airtel say they are ready to work with eSIMs

Airtel & Reliance Jio have already partnered with **Apple** to sell eSIM enabled **Apple Watches**

Its current application...

eSIMs are largely being used for IoT and Machine-2-Machine solutions

Challenges

The handset ecosystem is at a nascent stage

eSIMs adoption rate among consumers has been slow as it has been introduced only on high-end devices

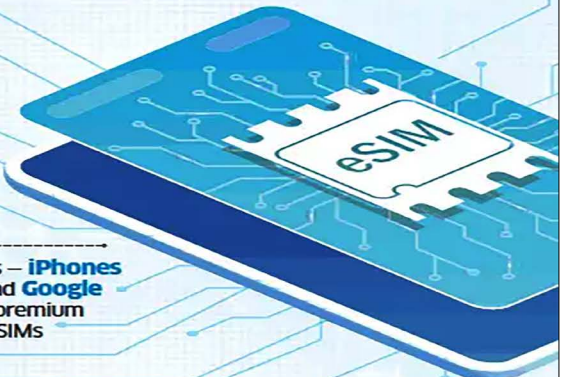
Only a few smartphones – **iPhones XS, XS Max, XR** and **Google Pixel 3**, which are premium devices – support eSIMs

Future Outlook

eSIM penetration in India is less than **1%**. It is expected to grow to **25%** by **2025**

Globally, the eSIM market is estimated to grow to **\$978.3 million** in **2023** from **\$253.8 million** in **2018**

Text: Tina Gurnaney



Note:

What is an e-SIM?

- eSIMs were first established in 2012.
- It is an **embedded SIM**, which is permanently embedded in the same hardware of a regular sim card chip.
- Just like a traditional SIM card, an **eSIM also consists of some components**, which are part of a phone's internal organs. They also function the same way, acting as a **unique identifier for telecom operators** and other consumers to reach your exact smartphone when they make a call or send a text.
- However, being attached to the motherboard also allows re-programming, letting users switch operators **without having to replace any physical SIM cards**.

What are the Advantages?

- **Security:**
 - An eSIM provides security to sim theft, as there is no physical element to pull out and use in another device.
 - Attackers cannot use your phone after being robbed to breach your social media or bank accounts.
- **One less opening on your phone:**
 - One less opening on the frame of your phone reduce the likelihood of elements like dust and water entering the phone.
 - It also saves some space on the inside of the phone **to be used elsewhere**.

What are the Disadvantages?

- **Emergencies:**
 - If your phone stops working, runs out of battery or simply falls and gets a cracked screen, your communication is brought to a complete standstill with eSIMs. Traditional SIMs, meanwhile, can be quickly pulled out of the affected phone and into another backup device or secondary phone.
- **Unusable in countries with no eSIM support:**
 - eSIM phones cannot be used in a country **where the telecom operators simply don't support the technology yet**.
 - This isn't an issue if your phone supports both eSIM and traditional SIMs, but is a problem on devices like the US-version iPhone 14, which will solely rely on eSIM alone.
- **Telcos have more control:**

- An eSIM may save one's initial trip to the telecom operator's store to get a SIM card, but one has to rely on the operator while switching one's phone.
- Operators may charge extra for **eSIM plans or for switching phones**, in the future.

Artificial Intelligence and Ethics**Why in News?**

UNESCO's Global Agreement on the Ethics of AI can guide governments and companies alike.

What is Artificial Intelligence?

- It describes the **action of machines accomplishing tasks** that have historically required human intelligence.
- It **includes technologies** like machine learning, pattern recognition, big data, neural networks, self-algorithms etc.
- The **origin of the concept can be traced back to Greek mythology**, although it is only during modern history when stored program electronic computers were developed.
 - **Example:** Millions of algorithms and codes are there around humans to understand their commands and perform human-like tasks. **Facebook's list of suggested friends** for its users, **a pop-up page**, suggesting about an upcoming sale of the favourite brand of shoes and clothes, that comes on screen while browsing the internet, are the work of artificial intelligence.
- AI involves complex things such as **feeding a particular data into the machine** and making it react as per different situations. It is basically about **creating self-learning patterns** where the machine can give answers to the never answered questions like a human would ever do.
- India has made great strides in the development of responsible and ethical AI governance, starting with **NITI Aayog's #AIForAll** campaign to the many corporate strategies that have been adopted to ensure that AI is developed with common, humanistic values at its core.

What are the Ethical**Concerns related to Artificial Intelligence?**

- **Risk of Unemployment:** The hierarchy of labour is concerned primarily with automation. Robotics and

Note:

AI companies are building intelligent machines that perform tasks typically carried out by low-income workers: self-service kiosks to replace cashiers, fruit-picking robots to replace field workers, etc.

- Moreover, the day is not far when many desk jobs will also be edged out by AI, such as accountants, financial traders, and middle managers.
- **Exacerbating Inequalities:** Using artificial intelligence, a company can drastically cut down on relying on the human workforce, and this means that revenues will go to fewer people.
 - Consequently, individuals who have ownership in AI-driven companies will make all the money. Also, AI could compound digital exclusion.
 - Further, **investment is likely to shift to countries** where AI-related work is already established, widening gaps among and within countries.
- **Tech Addiction:** Technological addiction is the **new frontier of human dependency**. AI has already become effective at directing human attention and triggering certain actions.
 - When used right, this **could evolve into an opportunity to nudge society towards more beneficial behavior**.
 - However, in the wrong hands, it could prove detrimental.
- **Discriminating Robots:** We shouldn't forget that AI systems are **created by humans, who can be biased and judgemental**.
 - It can lead to **AI facial recognition** and surveillance technology to discriminate against people of color and minorities.
- **Data Privacy Concerns:** AI also presents serious data privacy concerns. The algorithm's never-ending quest for data has led to our digital footprints being harvested and sold without our knowledge or informed consent.
 - The **case of Cambridge Analytica**, in which such algorithms and big data were **used to alter voting decisions**, should serve as a potent warning of the individual and societal concerns resulting from current AI business models.
- **AI Turning against Humans:** What if artificial intelligence itself turned against humans?
 - Imagine an AI system that is asked to eradicate cancer in the world. After a lot of computing, it spits out a formula that does, in fact, bring about the end of cancer – by killing everyone on the planet.

What are the Global Standards for Artificial Intelligence Ethics?

- In 2021, the **Recommendation on the Ethics of Artificial Intelligence** was adopted by UNESCO's General Conference at its 41st session.
 - It aims to fundamentally shift the balance of power between people, and the businesses and governments developing AI.
- **UNESCO** members have agreed to **use affirmative action** to make sure that women and minority groups are fairly represented on AI design teams.
- The recommendation also underscores the importance of the proper management of data, privacy and access to information.
- It calls on member states to ensure that appropriate safeguards are devised for the processing of sensitive data and effective accountability and redress mechanisms are provided.
- The Recommendation takes a strong stance that
 - AI systems **should not be used for social scoring or mass surveillance purposes**
 - Attention **must be paid to the psychological and cognitive impact** that these systems can have on children.
 - Member states **should invest and promote not only digital, media and information literacy skills**, but also socio-emotional and AI ethics skills.
- UNESCO is also in the process of developing tools to help assess the readiness in the implementation of the recommendations.

Double Asteroid Redirection Test (DART) Mission: NASA

Why in News?

The **National Aeronautics and Space Administration (NASA)** is about to launch its Double Asteroid Redirection Test (DART) mission.

What is the Launch?

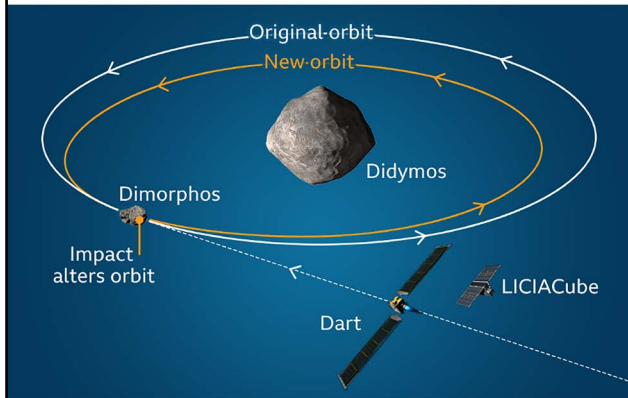
- It is the first **Kinetic Impactor Method** of planetary defence, where a DART spacecraft will be colliding with the **asteroid Dimorphos**.
 - The Kinetic Impactor Method involves sending one or more large, high-speed spacecraft into the path

Note:

of an approaching near-earth object. This could deflect the asteroid into a different trajectory, steering it away from the Earth's orbital path.

- Data obtained from DART's crash will be **compared to the data from various computer simulations** run by scientists to **ascertain whether this kinetic impactor method will remain a viable option** in case of an actual threatening asteroid.
- Scientists don't yet know the exact mass of Dimorphos but it is estimated to be around five billion kilograms. The **DART spacecraft weighs around 600 kilograms**.

Nasa spacecraft will crash into asteroid's moon



What is a DART mission?

- **About:**
 - DART is a **low-cost spacecraft**.
 - It has **two solar arrays** and uses **hydrazine propellant** for maneuvering the spacecraft.
 - It also carries about **10 kg of xenon** which will be used to demonstrate the agency's new thrusters called **NASA Evolutionary Xenon Thruster-Commercial (NEXT-C)** in space.
 - NEXT-C gridded ion thruster system provides a **combination of performance and spacecraft integration capabilities** that make it uniquely suited for deep space robotic missions.
 - The spacecraft carries a **high-resolution imager called Didymos Reconnaissance and Asteroid Camera for Optical Navigation (DRACO)**.
 - Images from DRACO will be sent to **Earth in real-time** and will help study the **impact site and surface of Dimorphos** (the target asteroid).
 - DART will also carry a **small satellite or CubeSat named LICIACube** (Light Italian CubeSat for Imaging of Asteroids).

- LICIACube is expected to capture images of the impact and the impact crater formed as a result of the collision.

➤ Objectives:

- The mission is to test **the new technology to be prepared in case an asteroid** heads towards Earth in the future.
- The aim is to test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course.
- The target of the spacecraft is a small moonlet called Dimorphos (Greek for "two forms").
 - Dimorphos orbits a larger asteroid named Didymos (Greek for "twin").
- It is a **suicide mission** and the **spacecraft will be completely destroyed**.

What is the Reason for Choosing Dimorphos?

- The goal of the mission is to determine how much DART's impact alters the moonlet's velocity in space by measuring the change in its orbit around Didymos.
- Scientists think the collision will change the speed of Dimorphos by a fraction of one percent.
- It should alter the moonlet's orbital period around the larger asteroid by several minutes – enough to be observed and measured by telescopes on Earth.

Ebola Virus Disease

Why in News?

Recently, an **outbreak of Ebola Virus Disease (EVD)** has been declared in **Uganda** following the confirmation of a **relatively rare Sudan strain case**.

What is Ebola Virus Disease (EVD)?

- **About:**
 - EVD, formerly known as **Ebola haemorrhagic fever** is a deadly disease with occasional outbreaks that occur mostly on the African continent.
 - Ebola virus was **first discovered in 1976 near the Ebola River** in what is now the **Democratic Republic of Congo**.
 - It most commonly **affects people and nonhuman primates (such as monkeys, gorillas, and chimpanzees)**.

Note:

- It is caused by an infection with a group of viruses within the genus *Ebolavirus*:
 - Ebola virus (species *Zaire ebolavirus*)
 - Sudan virus (species *Sudan ebolavirus*)
 - Tai Forest virus (species *Tai Forest ebolavirus*, formerly *Côte d'Ivoire ebolavirus*)
 - Bundibugyo virus (species *Bundibugyo ebolavirus*)
 - Reston virus (species *Reston ebolavirus*)
 - Bombali virus (species *Bombali ebolavirus*)
- **Host:** **Fruit bats of the Pteropodidae family** are natural Ebola virus hosts.
- **Transmission:**
 - **Animal to Human Transmission occurs** through close contact with the blood, secretions, organs or other bodily fluids of infected animals such as fruit bats, chimpanzees, gorillas, monkeys, forest antelope or porcupines found ill or dead or in the rainforest.
 - **Human-to-Human Transmission occurs** via direct contact (through broken skin or mucous membranes) with Blood or body fluids of a person who is sick with or has died from Ebola.
- **Signs and Symptoms:**
 - Symptoms may appear anywhere from **2 to 21 days** after contact with the virus, with an average of 8 to 10 days which include **Fever, Fatigue, Muscle pain**, Body weakness, Headache, Sore throat, Vomiting, Diarrhoea, Symptoms of impaired kidney and liver function, in some cases, both **internal and external bleeding**.
- **Diagnosis:**
 - It can be **difficult to clinically distinguish** Ebola from other infectious diseases such as **malaria**, typhoid fever, and meningitis but confirmation that symptoms are caused by Ebola virus infection are made using the following diagnostic methods:
 - **ELISA** (antibody-capture enzyme-linked immunosorbent assay)
 - **Reverse transcriptase polymerase chain reaction** (RT-PCR) assay, etc.
- **Vaccines:**
 - The **Ervebo (rVSV-ZEBOV) vaccine** has been highly effective in containing the disease.
 - However, this vaccine has only been approved to protect against the
 - Zaire strain of the virus.



Note:



drishti

Environment & Ecology

Highlights

- New Tiger Reserve in Uttar Pradesh
- Dibang Hydel Project
- World Environmental Health Day
- India at Global Clean Energy Action Forum
- Breakthrough Agenda Report 2022
- India Observed 28th World Ozone Day
- Stubble Burning
- Shallow Water Mining
- Asiatic Caracal
- White Fly
- New Target to Reduce Air Pollution

New Tiger Reserve in Uttar Pradesh

Why in News?

Recently, **Uttar Pradesh (UP)** approved the notification of the state's **fourth tiger reserve in the Ranipur Wildlife Sanctuary (RWS)** in Chitrakoot district.

- This will be the 54th Tiger Reserve in India. **Guru Ghasidas National Park of Chhattisgarh** is the 53rd Tiger Reserve in India.
- A **Ranipur Tiger Conservation Foundation** will also be established for the protection and conservation of tigers in the region.



What are the Key Highlights about Ranipur Wildlife Sanctuary (RWS)?

- **About:**

- RWS **founded in 1977**, has no resident tiger. However, it is an **important corridor for the movement of tigers**, according to the Status of tigers, co-predators and prey in India report by the **National Tiger Conservation Authority (NTCA)**.
- The Ranipur Tiger Reserve will be the **fourth in UP**.
- It will also be the **first in the Bundelkhand region of the state**.

➤ Flora:

- There is **dry deciduous forest** of Bamboo, Palash, Khair, Mahua, Dhau, Saal, Tendu, etc.

➤ Fauna:

- **Blackbuck, Chinkara**, Sambar, Cheetal, Bear, **Leopard**, Wolf, Wild dog, Blue bull, etc.

➤ Other Tiger Reserves in UP:

- **Dudhwa National Park**
- **Pilibhit Tiger Reserve**
- Amargarh Tiger Reserve

Dibang Hydel Project

Why in News?

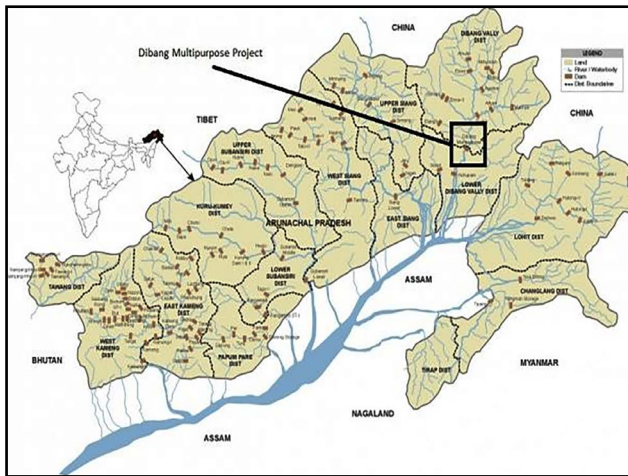
Recently, the **National Green Tribunal (NGT)** has dismissed the case it **took up suo motu on the grant of forest clearance** for the 3000-MW Dibang hydel project without meeting the precondition of declaring a National Park.

- The Tribunal did so after it was informed by Arunachal Pradesh that the local people are not willing to part away their land for declaration of National Park.

Note:

What are the Key Points of Dibang Hydro Power Project?

- It is a flood control cum **hydroelectric power project** planned to be developed on the Dibang River, a **tributary of Brahmaputra River**, in Arunachal Pradesh.
- The Dam site is located about 1.5 km upstream of the confluence of **Ashu Pani and Dibang rivers** and about 43 km from Roing, District Headquarter.
- The project would moderate flooding in the areas downstream of the Dibang Dam during the entire monsoon period to the extent of 3000 cumecs.
- It will be developed with an estimated investment of USD 4 billion.
- The Dibang hydropower project is expected to generate up to 11,222 million units (MU) of electricity a year.



What is the National Green Tribunal (NGT)?

- It is a specialized body set up under the **National Green Tribunal Act (2010)** for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- With the establishment of the NGT, India became the **third country in the world** to set up a specialised environmental tribunal, only **after Australia and New Zealand**, and the first developing country to do so.
- NGT is mandated to make disposal of applications or appeals finally within 6 months of filing of the same.
- The NGT has five places of sitting, New Delhi is the principal place of sitting and Bhopal, Pune, Kolkata and Chennai are the other four.

World Environmental Health Day

Why in News?

World Environmental Health Day 2022 is observed annually on September 26 to spread awareness globally regarding the health of the environment.

- The central idea behind celebrating this day is that the health of the human race is irrevocably intertwined with the health of the environment.

What are the Key Highlights of World Environmental Health Day?

- **History:**
 - The day was first observed by the **International Federation of Environmental Health (IFEH)** in the year 2011. The main aim is the well-being of people across the globe.
 - The IFEH is wholly dedicated to the development and dissemination of knowledge on the protection and subsequent improvement of environmental health.
- **Theme:**
 - The theme for this year is **'Strengthening Environmental Health Systems for the implementation of the Sustainable Development Goals.'**
- **Significance:**
 - It is necessary that the world understands there is an integral connection between the environment, health and the economy. It is therefore **important to invest in healthy and green recovery**, close to all communities.
 - It becomes all the more important for the human race to pay attention to the environment and try to create balance.
 - The World Health Organization launched the **"Manifesto for a healthy recovery of COVID-19"**, with the objective of taking advantage of the momentum that we are facing worldwide.
 - **Environmental Health plays** a pivotal role in the implementation of the SDGs. It is interesting to note that Environmental Health fits into 7 SDGs, 19 targets and 30 indicators of the SDGs.

Note:

What do we Know about India's Environmental Health?

- **Present status:**
 - India was ranked at the **bottom of the list of 180 countries with a paltry score of 18.9** on the **Environmental Performance Index 2022**.
 - India ranked behind Myanmar at 179, Vietnam (178), Bangladesh (177) and Pakistan (176).
- **Related Initiatives:**
 - **Nagar Vana Udyan Scheme:** This scheme aims to **develop at least one city forest in each city having Municipal Corporation or Class 1 Cities (over 200)** to accommodate a wholesome healthy environment.
 - **National Wetland Conservation Programme (NWCP):** The initiative was launched to **conserve and make use of wetlands in the country**.
 - **Green Skill Development Programme :** The Ministry of Environment, Forest and Climate launched the **Green Skill Development Programme** in June 2017 to teach skills required for conserving and protecting the environment among the youth.
 - **Save Soil Movement :** On World Environment Day 2022, the Prime Minister launched the '**Save Soil Movement**'. The initiative focuses on five things making the **soil chemical-free, saving organisms that live in the soil, maintaining soil moisture, increasing the availability of water**, and stopping the continuous erosion of soil due to the reduction of forests.
 - India has set a **goal of making 26 million hectares of barren land fertile by 2030** and aims to be **Net-Zero in emissions by 2070**.

India at Global Clean Energy Action Forum

Why in News?

Recently, at the **Global Clean Energy Action Forum-2022** at Pittsburgh, Pennsylvania in the United States, India's representative has said that "**sustainable biofuels play a key role to reduce GreenHouse Gas (GHG) emissions from the transport sector.**"

What do we need to know about the Global Clean Energy Action Forum 2022?

- **About:**
 - The US, for the first time, hosted **Global Clean Energy Action Forum**, a joint convening of the **13th Clean Energy Ministerial (CEM 13)** and the **7th Mission Innovation Ministerial (MI-7)**, from 21st to 23rd September 2022.
- **Theme:**
 - The theme for CEM13/MI-7 is **Rapid Innovation and Deployment**.
 - This means **accelerating the pace and scale of innovation** through collaboration and shared strategies for the **deployment of clean energy technologies**.
- **Objectives of the Forum:**
 - Define **international clean energy leadership and collaboration** in 2022 through an interactive, inspiring, and impactful event spotlighting global leaders fulfilling their climate pledges.
 - Focus on actions that deliver a low-cost, **zero-emissions energy future** that provides opportunities for all, especially good-paying jobs.
 - Demonstrate progress in moving along the **innovation-to-deployment continuum** at an unprecedented pace and scale to meet climate goals, and to innovate with a purpose.
- **India's Stand at the Forum:**
 - **At International Collaboration to Accelerate Clean Energy:**
 - India has reported **establishing 5 Bioenergy Centers** with an interdisciplinary team working on advanced sustainable biofuels using modern biotechnology tools.
 - In April 2022, India hosted the **Mission Innovation Annual Gathering** at New Delhi, the **Mission Integrated Biorefineries** was launched by Co-leads India and Netherlands, uniting key members to accelerate innovation for renewable fuels, chemicals, and materials for a low-carbon future.
 - **At India Clean Energy Showcase:**
 - India, being one of the founding members of the **Clean Energy Ministerial (CEM)** will be hosting **CEM-14 in 2023 in Bengaluru** along with its Presidency of G-20 in the same year.

Note:

- India is among the few countries in the world to design a **Cooling Action Plan (CAP)** with a long-term vision (spanning a 20-year period from 2017-18 to 2037-38) that addresses **cooling requirements across sectors**.
- India has committed to an ambitious **Nationally Determined Contributions (NDCs)** of reducing emission intensity **by 33-35% in 2030** against the levels of 2005.
- India is implementing the largest **Renewable Energy (RE) expansion program** in the world envisaging a **5-fold increase in the overall RE capacity** in the country from 32 GW in 2014 to 175 GW by 2022, and further to 500 GW of renewable power in the country by 2030.

What is the Clean Energy Ministerial and Mission Innovation Ministerial?

- **Clean Energy Ministerial:**
 - **Establishment:**
 - It was **established in December 2009** at the **UN's Framework Convention on Climate Change conference of parties** in Copenhagen.
 - **Purpose:**
 - CEM is a **high-level global forum to promote policies and programs** that advance **clean energy technology**, to **share lessons learned and best practices**, and to encourage the transition to a global clean energy economy.
 - **Focus Areas:**
 - The CEM is focused on **three global climate and energy policy goals:**
 - Improve energy efficiency worldwide.
 - Enhance clean energy supply.
 - Expand clean energy access.
 - **Members:**
 - 29 countries are part of CEM.
 - India is also a member country.
- **Mission Innovation Ministerial:**
 - **About:**
 - Mission Innovation (MI) is a **global initiative catalysing a decade of action and investment** in research, development and demonstration to make clean energy affordable, attractive and accessible for all. This will accelerate progress towards the Paris Agreement goals and pathways to net zero.

- **Mission:**
 - Zero-Emission Shipping
 - Green Powered Future
 - Clean Hydrogen
 - Removal of Carbon Dioxide
 - Urban Transitions
 - Net Zero Industries
 - Integrated Biorefineries

What are Biofuels?

- **About:**
 - Any **hydrocarbon fuel** that is produced from an **organic matter** (living or once living material) in a **short period of time** (days, weeks, or even months) is considered a **biofuel**.
 - Biofuels may be **solid, liquid or gaseous** in nature.
 - **Solid:** Wood, dried plant material, and manure
 - **Liquid:** Bioethanol and Biodiesel
 - **Gaseous:** Biogas
 - These can be used to **replace or can be used in addition to diesel, petrol or other fossil fuels** for transport, stationary, portable and other applications.
 - Also, they can be used to generate heat and electricity.
 - Some of the main reasons for shifting to biofuels are the **rising prices of oil**, **emission of greenhouse gases from fossil fuels** and the interest in **obtaining fuel from agricultural crops** for the benefit of farmers.
- **India's Initiatives for Sustainable Biofuels:**
 - **Pradhan Mantri JI-VAN Yojana, 2019**
 - **Ethanol blending**
 - **GOBAR (Galvanizing Organic Bio-Agro Resources) DHAN scheme, 2018**
 - **Repurpose Used Cooking Oil (RUCO)**
 - **National Policy on Biofuels, 2018**
- **Initiatives under 5 Bioenergy Centers:**
 - **"DBT Pan IIT Center for Bioenergy"** have developed engineered thermostable and glucose tolerant β -glucosidase.
 - **DBT –ICGEB Bioenergy Centre** has developed Cellulase Enzyme Technology for 2G Ethanol Production and it' under scale-up.

Note:

- **DBT-Indian Oil Cooperation Limited Bio-energy Centre**, Faridabad has evaluated a process for conversion of biomass to ethanol utilizing the glycan hydrolases developed at the Centre in a demonstration plant (10 tons biomass per day) that is under construction.
- **DBT-ICT Centre for Energy Biosciences** aims Biological and Chemical transformations for generating commercially viable technologies for adding value to waste.
- **DBT-TERI Bioenergy Research Center** is exploring actively on development of clean technologies for production of advanced biofuels; biodiesel, biohydrogen, pyrolytic biooil, using algae biomass as next generation feed.

Breakthrough Agenda Report 2022

Why in News?

Recently, **The Breakthrough Agenda Report 2022** was released by the **International Energy Agency (IEA)**, the **International Renewable Energy Agency (IRENA)** and the UN Climate Change High-Level Champions, focusing on international collaboration to drive faster reductions in **greenhouse gas emissions**.

What are the Key Points of the Report?

➤ About:

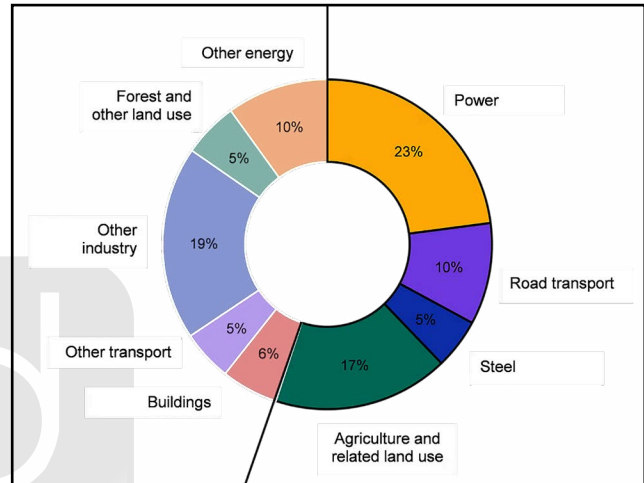
- It assesses **progress on reducing emissions** in five key sectors – power, hydrogen, road transport, steel and agriculture.
- It is a first-of-its-kind **annual progress report**, requested by world leaders at the UN Climate Change Conference **COP26 in November 2021** as part of the launch of the Breakthrough Agenda.
- The Breakthrough Agenda currently covers more than two-thirds of the global economy, with endorsement from 45 world leaders, including those of the **G7**, China and India.

➤ Findings:

- There is an increase in **practical international cooperation** in recent years, and progress in **deploying the technologies needed**, including a forecast increase in global renewable capacity of

8% in 2022 – pushing through the 300GW mark for the first time and equivalent to **powering approximately 225 million homes**.

- The five sectors analyzed in the report together account for nearly **60% of global greenhouse gas (GHG) emissions**, and may deliver the bulk of the **emission reductions needed by 2030** in a pathway that would make a significant contribution to limiting global **warming to a maximum of 1.5°C**, in line with the **Paris Agreement** goals.



- World is in the midst of the **first truly global energy crisis**, with devastating knock-on consequences across the world economy, especially in developing countries.

- The energy crisis has emerged in oil, gas and electricity markets and aggravated by **Pandemic, Oil Prices and Russia-Ukraine conflict**.

- The energy and climate crisis has **exposed the weaknesses and vulnerabilities of a system** heavily reliant on fuels of the 20th century.

➤ Recommendations:

- Demonstrate and test flexible low-carbon power systems to **expand the range of solutions and increase** the share of variable renewables
- Create **new cross-border supergrids** this decade to increase trade in low-carbon power, reduce emissions, improve energy security and enhance system flexibility.
- Set up **new international centres of expertise to channel finance** and technical assistance to help coal-producing countries' transition
- Agree a **common definition and target dates** by which all new road vehicles will be net zero,

Note:



targeting 2035 for cars and vans and the 2040s for heavy duty vehicles

- Mobilise **investment in charging infrastructure**, including prioritised assistance for developing countries and harmonise international charging standards to drive investment and accelerate adoption globally
- Standards to **boost the recyclability of batteries and supercharging research** into alternative chemistries for batteries to reduce reliance on precious metals, such as cobalt and lithium.
- Government policies and **private-sector purchase commitments to drive demand and deployment of low-carbon and renewable hydrogen** alongside standards to enable global trade
- Investment for agriculture technologies and farming practices that can **cut emissions from livestock and fertilisers**, expand availability of alternative proteins and accelerate the development of climate resilient crops.

India Observed 28th World Ozone Day

Why in News?

Recently, India observed 28th **World Ozone Day**.

- Every year, **16th September** is observed as the **International Day for the Preservation of the Ozone layer (World Ozone Day)** to commemorate the signing of the **Montreal Protocol**.
- The theme of World Ozone Day 2022 is **“Montreal Protocol@35: global cooperation protecting life on earth”**.

What were the Key Highlights of World Ozone Day?

- **The 23rd edition of “The Montreal Protocol: India’s Success Story” was released.**
- The other publications of the Ozone Cell of the Ministry of Environment, Forests and Climate Change released on the occasion include:
 - **Action Plan** for implementing the recommendations of the **India Cooling Action Plan (ICAP)** for the thematic area space cooling in buildings.

- **iStudy Report** on Public Procurement Policies for **Refrigeration and Air-Conditioning (RAC) Equipment** using **non-Ozone Depleting Substance (ODS)** based refrigerants.
- **Study Report on Cold Chain sector in India** for promoting **non-ODS and Low-Global Warming Potential (GWP) Refrigerants**.
- Booklet on **Good Servicing Practices for Energy Efficient operation of Room Air conditioners**.
- The winning entries for a **national level poster making and slogan writing competition for school children on ‘Save Our Ozone Layer’** were announced.
- **Call for adoption for Lifestyle for the Environment (LiFE)** that’s in line with the concept of sustainable lifestyle, encouraging us to adopt mindful and not mindless consumption and utilization of resources.
- **Collaboration with eight Indian Institutes of Technology** (Bombay, Roorkee, Hyderabad, Kanpur, Guwahati, Banaras, Madras and Delhi) to promote research and development of chemicals with low global warming potential, including blends. These can be used as **alternatives to substances controlled under the Montreal Protocol**.
- It will also help promote the **Make in India** initiative of the Government.

What is India Cooling Action Plan (ICAP)?

➤ About:

- The **Indian Cooling Action Plan (ICAP)** was launched in March 2019 by the **Ministry of Environment, Forests and Climate Change**.
- The ICAP provides a **20-year perspective and outlines actions** needed to provide access to sustainable cooling.
- The plan seeks to:
 - **Reduce cooling demand** across sectors by 20% to 25% by 2037-38
 - **Reduce refrigerant demand** by 25% to 30% by 2037-38
 - **Reduce cooling energy requirements** by 25% to 40% by 2037-38
 - **Recognise “cooling and related areas”** as a thrust area of research under National Science and Technology Programme
 - **Training and certification of 100,000 servicing sector technicians** by 2022-23, synergizing with **Skill India Mission**.

Note:

➤ Significance:

- Implementation of actions emerging from ICAP will supplement efforts in **adopting climate-friendly alternatives and promotion of energy efficiency** during the implementation of Hydrofluorocarbon (HFC) phase-out under the **Kigali Amendment**.
 - This will significantly contribute to **India's climate action in achieving the net zero emissions by 2070, through the 'Panchamrits',** committed by the Prime Minister of India, at the **26th Climate Change Conference of Parties (CoP26) in 2021.**

What is Montreal Protocol?

- **The Montreal Protocol** is a worldwide agreement to **stop the production of substances causing ozone-depletion.**
- Adopted on 16 September 1987, the Protocol is to date the **only UN treaty ever that has been ratified by every country on Earth - all UN Member States.**
- It has led to the **phase-out of 99% of ozone-depleting chemicals** in refrigerators, air-conditioners and many other products.
- **India** is a party to the Montreal Protocol since **June 1992.**

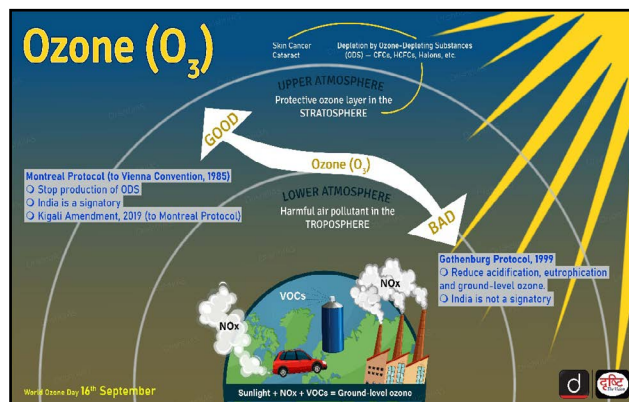
What are India's Achievements in Implementation of the Montreal Protocol?

- India **phased out Chlorofluorocarbons (CFCs), Carbon tetrachloride, Halons, Methyl Bromide and Methyl Chloroform for controlled uses** as on 1 January 2010, **in line with the Montreal Protocol schedule.**
- Currently, **Hydrochlorofluorocarbons (HCFCs) are being phased out** as per the accelerated schedule of the Montreal Protocol.
 - **Hydrochlorofluorocarbons Phase-out Management Plan (HPMP) Stage-I** has been successfully implemented from 2012 to 2016.
 - **HPMP Stage-II** is under implementation since 2017 and will be completed by 2023.
 - **HPMP Stage-III**, the last of the HPMPs to phase out remaining HCFCs, will be implemented from 2023 - 2030.
 - The **phase-out of HCFCs in all manufacturing sectors**, comprising refrigeration and air-conditioning manufacturing sectors, **will be completed by 1st January 2025** and the **activities relating to the servicing sector will be continued till 2030.**

What is Ozone Layer?

- **Ozone is a special form of oxygen** with the chemical formula O_3 . The oxygen we breathe and that is so vital to life on earth is O_2 .
- About **90% of ozone occurs naturally** in the Earth's upper atmosphere (Stratosphere) **between 10 and 40km above Earth's surface**, where it forms a protective layer that **shields us from the sun's harmful ultraviolet rays.**
- This "**good**" ozone is **gradually being destroyed** by man-made chemicals referred to as **Ozone-Depleting Substances (ODS)**, including CFCs, HCFCs, halons, methyl bromide, carbon tetrachloride, and methyl chloroform.
 - When **chlorine and bromine atoms come into contact with ozone** in the stratosphere, **they destroy ozone molecules.**
 - One chlorine atom can destroy over 100,000 ozone molecules before it is removed from the stratosphere.
 - Ozone can be destroyed more quickly than it is naturally created.
- **Ozone layer depletion** leads to an **uptick in the incidence of skin cancer and cataracts in humans.**

Ozone



How Wildfires are Affecting the Ozone Layer?

- **Rising global temperatures and drier conditions** are leading to **frequent, massive wildfires** around the world, according to the UN **Intergovernmental Panel on Climate Change (IPCC).**
- The frequency of extreme wildfires will **likely rise by 30% by 2050**, according to the **United Nations Environment Programme (UNEP).**

Note:

- Such events could undo 35 years of efforts under the Montreal Protocol.
- Wildfires could also trigger a vicious cycle. They have found that **depletion of the ozone layer strengthens the southern polar vortex**, a pocket of low pressure and cool air over the South Pole.
 - It creates a feedback loop: the stronger the polar vortex, the more it depletes the surrounding ozone and the longer it keeps the hole open.
- **Forest fires in Australia** continued from June 2019 to March 2020, and released over 1 million tonnes of smoke that reached to the stratosphere and affected the ozone layer by **triggering the widening of the Ozone Hole**.
 - They burned over 33 million hectares, killed or displaced 3 billion animals and caused damage to property, becoming the **worst natural disaster in the country**.

- It rapidly converts crop residues, animal waste, dung and other waste into organic manure.
- It is an inexpensive and effective technology for agricultural waste and crop residue management.
- **Benefits:**
 - The decomposer **improves the fertility and productivity of the soil** as the stubble works as manure and compost for the crops and **lesser fertiliser consumption** is required in the future.
 - The soil loses its richness due to stubble burning and it also destroys the useful bacteria and fungi in the soil, apart from causing harm to the environment.
 - It is an **efficient and effective, cheaper, doable and practical technique** to stop stubble burning.
 - It is an **eco-friendly and environmentally** useful technology and will contribute to achieve **Swachh Bharat Mission**.

Stubble Burning

Why in News?

Recently, the Delhi government announced that it would spray **Pusa bio-decomposer** free of cost over 5,000 acres of paddy fields in the city as this would **help in controlling stubble burning and air pollution during winter**.

What is Pusa Bio-Decomposer?

- **About:**
 - It is essentially a **fungi-based liquid solution** that can soften hard stubble to the extent that it can be easily mixed with soil in the field to act as compost.
 - The fungi thrive at 30-32 degree Celsius, which is the temperature prevailing when paddy is harvested and wheat is sown.
 - It produce **enzymes to digest cellulose, lignin and pectin in paddy straw**.
 - It is developed by the **Indian Council of Agricultural Research (ICAR)** and named after ICAR's campus at Pusa in Delhi,

What is Stubble Burning?

- **About:**
 - Stubble (parali) burning is a method of removing paddy crop residues from the field to sow wheat from the last week of September to November, coinciding with the withdrawal of **southwest monsoon**.
 - Stubble burning is a process of setting on fire the straw stubble, left after the harvesting of grains, like paddy, wheat, etc. It is usually required in areas that use the combined harvesting method which leaves crop residue behind.
 - It is a common practice in **October and November across North West India**, but primarily in Punjab, Haryana, and Uttar Pradesh.
- **Effects of Stubble Burning:**
 - **Pollution:**
 - Emits large amounts of **toxic pollutants in the atmosphere which contain harmful gases** like methane (CH₄), Carbon Monoxide (CO), Volatile Organic compounds (VOC) and carcinogenic polycyclic aromatic hydrocarbons.
 - These pollutants disperse in the surroundings, may undergo a physical and chemical transformation and eventually adversely affect human health by causing a **thick blanket of smog**.

Note:

- **Soil Fertility:**
 - Burning husk on the ground **destroys the nutrients in the soil**, making it less fertile.
 - **Heat Penetration:**
 - The heat generated by stubble burning **penetrates into the soil, leading to the loss of moisture** and useful microbes.
 - **Alternatives to Stubble Burning:**
 - **In-Situ Treatment of Stubble:** For example, crop residue management by zero-tiller machine and Use of bio-decomposers.
 - **Ex-Situ (off-site) Treatment:** For example, Use of rice straw as cattle fodder.
 - **Use of Technology-** For example **Turbo Happy Seeder (THS) machine**, which can uproot the stubble and also sow seeds in the area cleared. The stubble can then be used as mulch for the field.
- What is Other Related Initiative?
- The State Governments of Punjab, National Capital Region (NCR) States and the Government of National Capital Territory of Delhi (GNCTD) have developed **detailed monitorable action plans** based on the framework by the **Commission for Air Quality Management (CAQM)** to tackle the problem of air pollution.

Shallow Water Mining

Why in News?

Recently, a group of researchers has suggested that **Shallow Water Mining** is in direct conflict with **Biodiversity Conservation and Sustainability Goals**, as the activity poses **severe environmental risks**.

What is Shallow Water Mining?

- Shallow-water mining takes place **at depths less than 200 metres** and it has been touted as **less destructive than terrestrial mining** and less risky than mining in **Deep-Water** Ecosystems.
- It is considered a relatively low-risk and low-cost option to satisfy the demand for metals and minerals. Also, technology for shallow-water mining already exists.

- Shallow-water mining projects are already underway in **Namibia and Indonesia**, and projects have been proposed in **Mexico, New Zealand, and Sweden**.

What are the Findings?

- **About:**
 - Shallow Water Mining is not a sustainable substitute for **Deep-Sea Mining**.
 - The part of the ocean that lies **below a depth of 200 meters is defined as the deep sea**, and the process of extracting minerals from this area is known as **deep-sea mining**.
 - Mining metals from the shallow-water ocean floor **requires removing large amounts of sediment**.
 - **Removing these sediments, which takes thousands of years to accumulate, means jeopardizing** organisms that call it home.
- **Impact:**
 - As shallow-water ecosystems are already under stress due to pollution, and the impacts of **climate change**, even seemingly small-scale mining activities **can drastically affect marine ecosystems, especially at local scales**.
 - Mineral mining alters habitats as well as causes **local biodiversity loss and changes in species communities**.
 - The indirect effects of mining, such as the **spread of seabed material and harmful substances released** from the seafloor and the **clouding of water, contribute to impairing the state of the marine environment**.
 - The overall environmental effects of shallow-water mining are similar to those of **operations where the seafloor is excavated**, such as dredging. This means that **it can take decades for the ecosystems to recover**.

What are the Suggestions?

- Shallow-water mining activities should not be considered the **“silver bullet to resolve the growing global need for metals”** until the environmental and socioeconomic impacts are thoroughly investigated.

Note:

- Without this information, one could not understand the potential risks of the mining activity for deep-ocean biodiversity, ecosystems and human well-being.
- The precautionary principle should be **applied to mining in shallow marine areas**. They believe **operations should not be permitted until their risks have been fully mapped**.

Asiatic Caracal

Why in News?

Caracal, which was used by **India's nobility in the sport of coursing like the cheetah**, is struggling to survive, although both species had a similar distribution in the past.



What are the Key Points of Caracal?

- **Scientific Name:** *Caracal Caracal Schmitzi*
- **About:**
 - The Asiatic caracal is a medium-sized and locally threatened cat species, which has been widely reported to be on the **brink of extinction in India**.
 - It is also known by its persian name Siyahgosh or 'black ears'.
- **Distribution:**
 - They are found mostly in Rajasthan, Gujarat and Madhya Pradesh and are located in **Kutch, the Malwa Plateau, the Aravalli hill range**.

- Besides India, the caracal is found in several dozen countries across **Africa, the Middle East, Central and South Asia**.
- **Habitats:**
 - It occurs in semi-deserts, steppes, savannah, scrubland, dry forest and moist woodland or evergreen forest.
 - It prefers open terrain and drier, scrubby, arid habitats and needs cover.
- **Threats:**
 - Large-scale hunting, illegal trading and **loss of natural habitats** are considered significant threats to the species.
- **Protection Status:**
 - **IUCN Red List:** Least Concern
 - **Wildlife Protection Act, 1972:** Schedule I
 - **CITES:** Appendix I
- **Conservation Initiatives:**
 - In 2021, the **National Board for Wildlife** and the Ministry of Environment, Forest and Climate Change included Caracal in the list of Critically Endangered species under critically endangered species recovery programme.

What is a Species Recovery Programme?

- It is one of the three components of the **Integrated Development of Wildlife Habitats (IDWH)**.
- IDWH was started in 2008-09 as a Centrally sponsored Scheme. It is meant for providing support to protected areas (national parks, wildlife sanctuaries, conservation reserves and community reserves except tiger reserves), protection of wildlife outside protected areas and recovery programmes for saving critically endangered species and habitats.
- There are **22 species** on the **critically endangered species recovery programme**.
 - Snow Leopard, Bustard (including Floricans), Dolphin, Hangul, Nilgiri Tahr, Marine Turtles, Dugongs, Edible Nest Swiftlet, Asian Wild Buffalo, Nicobar Megapode, Manipur Brow-antlered Deer, Vultures, Malabar Civet, Indian Rhinoceros, Asiatic Lion, Swamp Deer, Jerdon's Courser, the Northern River Terrapin, Clouded Leopard, Arabian Sea Humpback Whale, Red Panda and Caracal.

Note:

Reintroduction of Cheetah

Cheetah

Common Name – Cheetah

Scientific Name – *Acinonyx jubatus*

- *Acinonyx jubatus jubatus* (African Cheetah)
- *Acinonyx jubatus venaticus* (Asiatic Cheetah)

Reintroduction of Cheetah to India:

- The "Action Plan for Introduction of Cheetah in India" was released by MoEF&CC at the 19th meeting of the National Tiger Conservation Authority (NTCA) (January 2022).
- Such a plan was first proposed in 2009.
- In September 2022, eight cheetahs landed in India from Namibia.
 - The 8 cheetahs have been relocated to the Kuno-Palpur National Park, Madhya Pradesh.
 - The relocation of cheetahs to India from Namibia is the world's first inter-continental large wild carnivore translocation project.

Slightly brownish and golden skin; thicker than the Asiatic Cheetahs

More prominent spots and lines on the face

Found all over the African continent

IUCN Red List Status – Vulnerable

African Cheetah


Slightly smaller than the African ones.

Pale yellowish fawn coloured skin – more fur under body, belly specifically.

Found only in Iran; the country claims there are only 12 of them left. Year 1952 – Asiatic Cheetah officially declared extinct from India.

IUCN Red List Status – Critically Endangered

Asiatic Cheetah



White Fly

Why in News?

Recently, there has been a rise in the number of white fly attacks on cotton in various states like Punjab and Rajasthan.



What do we Know about White Fly?

➤ About:

- **Whitefly** is a serious pest of cotton that lowers yield by feeding on the underside of the leaf and spreading diseases like Cotton Leaf Curl Virus.
- They feed on the sap of the leaves and release fluid onto the leaves on which a black fungus grows, this affects photosynthesis, the food-making process of the plant, and so lowers the strength of the plant.

➤ Spread:

- The first reported invasive spiralling whitefly (*Aleurodicus dispersus*) is now distributed throughout India.
- Similarly, the rugose spiralling whitefly (*Aleurodicus rugioperculatus*) which was reported in Pollachi, Tamil Nadu in 2016 has now spread throughout the country.
- *Aleurodicus dispersus* and *Aleurodicus rugioperculatus* have been reported on over 320 and 40 plant species, respectively.
- Most of the whitefly species are native to the Caribbean islands or Central America.

➤ Reasons for Spread:

- The host range of all of the invasive whiteflies has been increasing due to their polyphagous nature (ability to feed on various kinds of food) and prolific breeding (produces a large number offsprings).
- The increasing import of plants and increasing globalization and movement of people have aided the spread of different varieties and their subsequent growth into invasive species.

➤ Concerns:

- **Damage to Crops:**
 - Whiteflies reduce the production yield and also damage crops. Approximately 1.35 lakh hectares of coconut and oil palm in India are affected by the rugose spiralling whitefly.
 - Other invasive whiteflies were also found to expand their host range on valuable plant species, especially coconut, banana, mango, sapota, guava, cashew, oil palm, and ornamental plants such as bottle palm, false bird of paradise, butterfly palm and important medicinal plants.
- **Ineffectiveness of Insecticides:**
 - Whiteflies have been difficult to control by using available synthetic insecticides.

➤ Controlling Whiteflies:

Note:

- They are currently being controlled by naturally occurring **insect predators, parasitoids** (natural enemies of pests, provide biological control of pests in greenhouses and crop fields) and **entomopathogenic fungi** (fungi that can kill insects).

What are other Pests/Insects Attacking Crops?

➤ **Fall Armyworm (FAW) Attack:**

- It is a dangerous transboundary insect with a high potential to spread rapidly due to its natural distribution capacity and opportunities presented by international trade.
- In 2020, the Directorate of Agriculture reported an armyworm attack on the standing crops in the northeastern Dhemaji district of Assam.

➤ **Locust Invasion:**

- A locust (Migratory insect also known as tiddi) is a large, mainly tropical grasshopper with strong powers of flight. They differ from ordinary grasshoppers in their ability to change behaviour (gregarize) and form swarms that can migrate over large distances.
- Locust adults can eat their own weight every day, i.e. about two grams of fresh vegetation per day. A very small swarm eats as much in one day as about 35,000 people, posing a devastating threat to crops and food security.

➤ **Pink Bollworm (PBW):**

- It (*Pectinophora gossypiella*), is an insect known for being a pest in **cotton farming**.
- The pink bollworm is native to Asia but has become an invasive species in most of the world's cotton-growing regions.

New Target to Reduce Air Pollution

Why in News?

Recently, the Centre has set a **new target of a 40% reduction in particulate matter concentration** in cities covered under the **National Clean Air Programme (NCAP)** by 2026, updating the earlier goal of 20 to 30% reduction by 2024.

What is the National Clean Air Programme?

➤ **About:**

- It was launched by the Ministry of Environment, Forests and Climate Change (MoEFCC) in **January 2019**.

- It is the **first-ever effort in the country to frame a national framework** for air quality management with a time-bound reduction target.
- It **seeks to cut the concentration of coarse** (particulate matter of diameter 10 micrometer or less, or PM10) and fine particles (particulate matter of diameter 2.5 micrometer or less, or PM2.5) by at least 20% in the next five years, with 2017 as the base year for comparison.
- It covers 132 non-attainment cities which were identified by the **Central Pollution Control Board (CPCB)**.
 - **Non-attainment cities** are those that have fallen short of the **National Ambient Air Quality Standards (NAAQS)** for over five years.
- NAAQs are the standards for ambient air quality with reference to various identified pollutant notified by the CPCB under **the Air (Prevention and Control of Pollution) Act, 1981**. List of pollutants under NAAQS: PM10, PM2.5, SO₂, NO₂, CO, NH₃, Ozone, Lead, Benzene, Benzo-Pyrene, Arsenic and Nickel.
- **Objective:**
 - To augment and evolve effective and proficient ambient air quality monitoring networks across the country.
 - To have **efficient data dissemination and public outreach mechanisms** for timely measures for prevention and mitigation of air pollution.
 - To have a **feasible management plan for prevention, control and abatement of air pollution**.

What are Initiatives taken by India for Controlling Air Pollution?

- **System of Air Quality and Weather Forecasting and Research (SAFAR) Portal**
- **Air Quality Index:** AQI has been developed for eight pollutants viz. PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulphur dioxide, ozone, and carbon monoxide.
- **Graded Response Action Plan** (for Delhi)
- For Reducing Vehicular Pollution:
 - **BS-VI Vehicles,**
 - **Push for Electric Vehicles (EVs),**
 - **Odd-Even Policy** as an emergency measure (for Delhi)
- **New Commission for Air Quality Management**
- Subsidy to farmers for buying **Turbo Happy Seeder (THS) Machine** for reducing stubble burning.
- **National Air Quality Monitoring Programme (NAMP):**
 - Under NAMP, four air pollutants viz. SO₂, NO₂, PM10, and PM2.5 have been identified for regular monitoring at all locations.

Note:

History

Highlights

- Return of Nizam's Sword
- ASI finds Buddhist Caves in Bandhavgarh Forests
- Ambedkar Circuit
- Bhagat Singh's Birth Anniversary

Return of Nizam's Sword

Why in News?

A 14th century ceremonial sword that was sold in Hyderabad to a British General in the early 20th century is set to return to India.

- The sword is among the seven objects being repatriated by Glasgow Life, which manages Glasgow's museums.



What do we Need to Know about the Sword?

- **History of Sword:**
 - The sword was exhibited by Mahbub Ali Khan, Asaf Jah VI, Nizam of Hyderabad (1896-1911) at the 1903 Delhi or Imperial Durbar, a ceremonial reception held to commemorate the coronation of King Edward VII and Queen Alexandra as Emperor and Empress of India.
 - The tulwar (sword) was purchased in 1905 by General Sir Archibald Hunter, Commander-in-Chief, Bombay Command (1903-1907), from Maharaja Sir Kishen Pershad Bahadur Yamin us-Sultanat, the Prime Minister of Hyderabad.
 - Kishen Pershad hailed from the family of Maharaja Chandoo Lal, who was the prime minister for Nizam Sikander Jah twice.

- Kishen Pershad was known for his munificence where he was known to throw out coins to people chasing his motorcar.

- The tulwar was donated by Sir Hunter's nephew, Mr. Archibald Hunter Service, to Glasgow Life museums' collections in 1978.

Features:

- The sword, shaped like a snake, has serrated edges and a damascene pattern, with gold etchings of an elephant and tigers.

Other Indian Objects at Glasgow:

- Six of the items include several 14th Century carvings and 11th Century stone door jams. They were stolen from shrines and temples in the 19th Century.

ASI finds Buddhist Caves in Bandhavgarh Forests

Why in News?

The Archaeological Survey of India (ASI) discovered Buddhist caves and stupas at Bandhavgarh Tiger Reserve in Madhya Pradesh.

What are the Findings?

Buddhist Caves:

- 26 Buddhist Caves were discovered dating back to the 2nd and 5th centuries, pertaining to the Mahayana sect of Buddhism.
- The caves and some of their remains had 'Chaitya' (rounded) doors and stone beds typical of Mahayana Buddhism sites.

Inscriptions in Brahmi text:

- 24 inscriptions in Brahmi text were, all dating back to the 2nd-5th centuries.

Note:



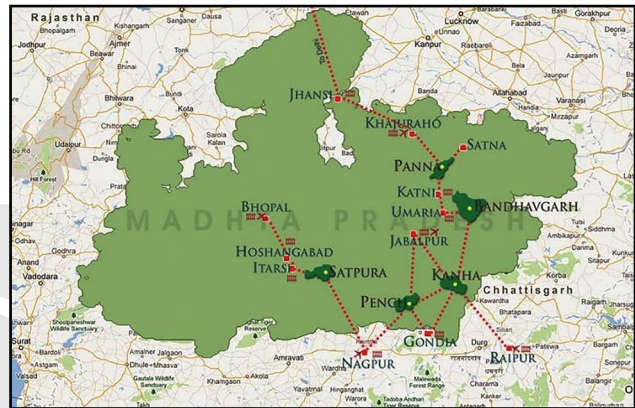
- The inscriptions mention sites such as Mathura and Kaushambi, and Pavata, Vejabharada and Sapatanaairikaa.
- The kings they mention include Bhimsena, Pothasiri and Bhattadeva.
- **Remains of Temples:**
 - The remains of 26 temples dating to the Kalachuri period between 9th-11th centuries and the possibly world's largest Varaha sculpture also dating to the same period were found.
 - The Kalachuri dynasty, which spread over parts of Gujarat, Maharashtra and Madhya Pradesh, is also associated with the earliest Ellora and Elephanta cave monuments.
 - The Varaha sculpture is among the many monolithic sculptures of the 10 incarnations of Lord Vishnu.
 - Two Saiva mutts have also been found.
- **Remains of the Gupta Period:**
 - Some remains of the Gupta period, such as door jambs and carvings in caves, have been found.

What are the Key Points of Bandhavgarh Tiger Reserve?

- **About:**
 - In 1968, it was notified as a national park and in 1993 was declared a tiger reserve- under the Project Tiger Network at the neighbouring Panpatha Sanctuary.
- **Historical Significance:** Its mention can be found in the ancient books of the 'Narad Pancharatra' and the 'Shiv Purana' that this place is being associated with Ramayana.
 - The Bandhavgarh Fort is a great masterpiece of "Treta Yuga" (one of the ages of mankind in Hinduism).
 - It was ruled by major dynasties including Sengars, the Kalchuris, and the Baghels (believed to rule the regions for the longer period).
- **Geographical Aspect:** It resides on the extreme north eastern border of Madhya Pradesh and the northern edges of the Satpura mountain ranges.
 - **Climate:** Tropical monsoon climatic zone.
 - **Streams:** The whole park is filled with more than 20 streams out of which some of the most important streams are Johilla, Janadh,

Charanganga, Damnar, Banbei, Ambanala and Andhiyari Jhiria. These streams then merge into the Son river (an important southern tributary to the river Ganga).

- **Biodiversity:** There is a large number of tigers in the core zone. There are more than 22 species of mammals and 250 species of birds.
 - **Species Found:** Asiatic Jackal, Bengal Fox, Sloth Bear, Striped Hyena, Leopard and Tiger, Wild Pigs, Nilgai, Chinkara and Gaur (a herbivore and the only coarse feeder).



What is the Archaeological Survey of India?

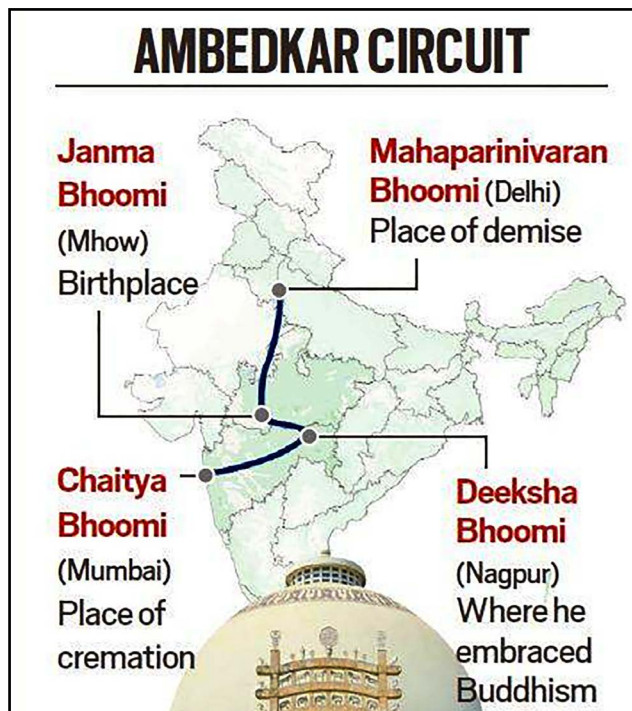
- ASI, under the Ministry of Culture, is the premier organization for the archaeological research and protection of the cultural heritage of the nation.
- It administers more than 3650 ancient monuments, archaeological sites and remains of national importance.
- Its activities include carrying out surveys of antiquarian remains, exploration and excavation of archaeological sites, conservation and maintenance of protected monuments etc.
- It was founded in 1861 by Alexander Cunningham- the first Director-General of ASI. Alexander Cunningham is also known as the "Father of Indian Archaeology".

Ambedkar Circuit

Why in News?

Recently, the Central government announced a special tourist circuit named Ambedkar circuit, which encompasses five key sites associated with Dr B.R. Ambedkar.

Note:



What is Ambedkar Circuit?

➤ About:

- The government had first proposed the Ambedkar Circuit, or **Panchteerth**, in 2016, but the conceptualisation of the plan could be held recently.
- The five cities in the tourist circuit as announced by the government are:
 - **Janma Bhoomi**- Ambedkar's birthplace in Madhya Pradesh's Mhow.
 - **Shiksha Bhoomi**- the place in London where he stayed while studying in the UK.
 - **Deeksha Bhoomi**- the place in Nagpur where he embraced Buddhism.
 - **Mahaparinirvan Bhoomi**- the place of his demise in Delhi.
 - **Chaitya Bhoomi**-the place of his cremation is in Mumbai.

➤ Significance:

- **Focus on Tourism:**
 - The idea is to **attract tourists beyond the Dalit community**, who mostly visit these places as a pilgrimage.
 - The journey will include meals, ground transportation, and entry to the site.

○ Development of the Area:

- The creation of special circuits allows the government to focus better on the **comprehensive development of all sites related to the theme**, including infrastructure, road and rail connectivity, and visitor facilities.

What are the Issues

Related to Ambedkar Circuit?

➤ Promoting Government's Local and Nationalistic Perspective:

- Various Dalit scholars and Ambedkarites argued that the five spots **do not do justice to Ambedkar's real legacy** and have been chosen to just fit into a "localised and nationalistic" narrative of the government.

➤ Lack of other Important Sites:

- Critics claim that there are a host of other sites which did not get recognition like:
 - In the Raigarh district of Maharashtra where Dr Ambedkar led the **Mahad Satyagraha**,
 - **Pune**, where he held the first negotiations with Mahatma Gandhi in Yerwada jail on a **separate electorate for depressed classes**,
 - The result was the **Poona Pact signed by Dr Ambedkar on behalf of the depressed classes** and by Madan Mohan Malviya on behalf of upper caste Hindus.
 - **Sri Lanka**, where he attended a **Buddhist conclave** that is said to have influenced him to convert to Buddhism,
 - **Kolhapur**, where in March 1920, another legendary social reformer, Chatrapati Shahuji Maharaj, declared Dr Ambedkar the **true leader of the oppressed classes in India**.

What are Other Tourism Circuits?

- The government had identified 15 tourist circuits under the **Swadesh Darshan scheme** in 2014-15.
- Besides the Ramayana and Buddhist Circuits, others include Coastal Circuit, Desert Circuit, Eco Circuit, Heritage, North East, Himalayan, Sufi, Krishna, Rural, Tribal, and Tirthankar Circuits.
- In terms of train collaboration, the Ramayana, Buddhist, and North East Circuits are already active, while Ambedkar will be fourth.

Note:

What do we Know about Dr B.R Ambedkar?**➤ About:**

- Dr. B.R. Ambedkar was born in 1891 in **Mhow**, Central Province (now Madhya Pradesh).
- He is known as the **Father of the Indian Constitution** and was **India's first Law Minister**.
 - He was the **Chairman of the Drafting Committee** for the new Constitution.
- Dr. Ambedkar was a social reformer, jurist, economist, author, polyglot (knowing or using several languages) orator, a scholar and thinker of comparative religions.
- He **participated in all three Round Table Conferences**.
- In 1932 Dr. Ambedkar **signed the Poona pact with Mahatma Gandhi**, which **abandoned the idea of separate electorates** for the depressed classes (Communal Award).
 - However, the **seats reserved for the depressed classes were increased** from 71 to 147 in provincial legislatures and to 18% of the total in the Central Legislature.
- His ideas before the **Hilton Young Commission** served as the **foundation of the Reserve Bank of India (RBI)**.
- In 1936, he was **elected to the Bombay Legislative Assembly** as a legislator (MLA).
- He was **appointed to the Executive Council of Viceroy** as a **Labour member** in 1942.
- In 1947, Dr. Ambedkar accepted PM Nehru's invitation to become Minister of Law in the first Cabinet of independent India.
- He resigned from the cabinet in 1951, over differences on the **Hindu Code Bill**.
- He converted to **Buddhism**. He passed away on 6th December 1956. **Chaitya Bhoomi** is a memorial to B. R. Ambedkar, located in Mumbai.

➤ Contributions:

- **Journals:** Dr. Ambedkar launched various journals like:
 - Mooknayak (1920),
 - Bahishkrit Bharat (1927),
 - Samatha (1929),
 - Janata (1930).

○ Books:

- Annihilation of Caste,
- Buddha or Karl Marx,
- The Untouchable: Who are They and Why They Have Become, Untouchables,
- Buddha and His Dhamma,
- The Rise and Fall of Hindu Women.

○ Organisations:

- Bahishkrit Hitkarini Sabha (1923),
- Independent Labor Party (1936),
- Scheduled Castes Federation (1942).

Bhagat Singh's Birth Anniversary

Why in News?

Recently, Prime Minister **paid tribute to India's revolutionary Bhagat Singh on his birth anniversary and announced that the Chandigarh airport will be renamed after Bhagat Singh** as a tribute to the great freedom fighter.

Who was Bhagat Singh?**➤ Early Life:**

- Born as Bhaganwala on the **26th September 1907**, Bhagat Singh grew up in a petty-bourgeois family of Sandhu Jats settled in the Jullundur Doab district of Punjab.
 - He belonged to a **generation that was to intervene between two decisive phases** of the Indian national movement - the phase of the **'Extremism' of Lal-Bal-Pal** and the **Gandhian phase of nonviolent mass action**.

➤ Role in Freedom Struggle:

- In 1923, Bhagat Singh **joined the National College, Lahore** which was founded and managed by **Lala Lajpat Rai and Bhai Parmanand**.
 - The **College was set up as an alternative to the institutions** run by the Government, bringing to the field of education the idea of Swadeshi.
- In 1924 in Kanpur, he became a member of the **Hindustan Republican Association**, started by **Sachindranath Sanyal** a year earlier. The main organiser of the Association was **Chandra Shekhar Azad and Bhagat Singh** became very close to him.

Note:

- It was as a **member of the HRA that Bhagat Singh began to take seriously the Philosophy of the Bomb.**
 - **Revolutionary Bhagwati Charan Vohra** wrote the famous article **Philosophy of the Bomb.** Including the philosophy of the bomb, he authored three important political documents; the other two were the **Manifesto of Naujawan Sabha** and the **Manifesto of HSRA.**
 - **Armed revolution** was understood to be the only weapon with which to fight British imperialism.
 - In 1925, **Bhagat Singh returned to Lahore** and within the next year he and his colleagues started a militant youth organisation called the **Naujawan Bharat Sabha.**
 - In April 1926, **Bhagat Singh established contact with Sohan Singh Josh** and through him the **'Workers and Peasants Party'** which brought out the monthly magazine **Kirti in Punjab.**
 - For the next year **Bhagat Singh worked with Josh** and joined the editorial board of Kirti.
 - In 1927, **he was first arrested on charges of association with the Kakori Case,** accused for an article written under the pseudonym Vidrohi (Rebel).
 - In 1928, Bhagat Singh **changed the name of the Hindustan Republican Association to the Hindustan Socialist Republican Association (HSRA).**
 - In 1930, when Azad was shot, the HSRA collapsed.
 - **Naujawan Bharat Sabha** replaced **HSRA in Punjab.**
 - To take **revenge for the death of Lala Lajpat Rai,** Bhagat Singh and his associates plotted the assassination of James A. Scott, the Superintendent of Police. However, the revolutionaries **mistakenly killed J.P. Saunders.** The incident is famously known as **Lahore Conspiracy case (1929).**
 - In 1928, Lala Lajpat Rai had led a procession to protest against the arrival of the Simon Commission. The police resorted to a brutal lathi charge, in which Lala Lajpat Rai was severely injured and later succumbed to his injuries.
 - Bhagat Singh and B.K. Dutt **threw a bomb** on 8th April, 1929 in the **Central Legislative Assembly,** in protest against the passing of two repressive bills, the **Public Safety Bill and the Trade Dispute Bill.**
 - The aim, as their leaflet explained, was not to kill but to make the deaf hear, and to remind the foreign government of its callous exploitation.
 - Both Bhagat Singh and B.K. Dutt surrendered thereafter and faced trial so they could further promote their cause. They were awarded life imprisonment for this incident.
 - However, Bhagat Singh was **re-arrested for the murder of J.P. Saunders** and bomb manufacturing in the Lahore Conspiracy case. He was found guilty in this case and was hanged on **23rd March, 1931** in Lahore along with Sukhdev and Rajguru.
 - Every year, **23rd March is observed as Martyrs' Day** as a tribute to freedom fighters Bhagat Singh, Sukhdev, and Rajguru.
- **Publications:**
- Why I Am an Atheist: An Autobiographical Discourse
 - The Jail Notebook and Other Writings.



Note:

Geography

Highlights

- Thamirabarani River

- Impact of Climate Change on Indian Monsoon

Thamirabarani River

Why in News?

The district administration of Tirunelveli in Tamil Nadu along with **Ashoka Trust for Research in Ecology and the Environment (ATREE)**, a non-profit Organisation, are using a 'hyper local' approach called TamiraSES to restore the **Thamirabarani River**.

What is the Project About?

- **Need:**
 - The Thamirabarani is of great importance to southern Tamil Nadu environmentally and historically. But it too has suffered, which is why the restoration project has been started.
 - While the Thamirabarani landscape, in general, appears water-rich, it **faced severe drought in 2016 despite** the diverse water storage systems in place.
 - Settlements have been on the rise, **which has led to the shrinkage of agricultural land** and water bodies.
- **TamiraSES project:**
 - It is a district level initiative, which aims to **restore the Social Ecological Systems of Tamiraparani river riverscape from head-waters to the estuary to enable conditions for native biodiversity to thrive** and maintain and enhance multiple ecosystem services to local stakeholders.
 - Five social ecological observatories will be set up **as part of the first phase of the project**. These will serve as pilots to scale up from the learnings from these sites.
 - The idea is to rejuvenate not just the **Thamirabarani but all the water bodies in the riverscape of Tirunelveli**.

What are the Key

Points of Thamirabarani River?

- The Thamiraparani is the **only perennial** (continuous flow of water) **river in Tamil Nadu**.
- This is the shortest river in the state, the Thamirabarani **starts in Pothigai hills of the Western Ghats** in the Ambasamudram taluk, flows through Tirunelveli and Thoothukudi districts and empties at Korkai (Tirunelveli district) into the **Gulf of Mannar (Bay of Bengal)**. It thus **originates and ends in the same state**.
- The river supports wildlife such as the Nilgiri marten, **slender loris**, lion-tailed macaque, white spotted bush frog, galaxy frog, Sri Lankan Atlas moth and the **great hornbill**.
- Besides the ecosystem services it provides, the river also has **historical value for the people of the state**. It is mentioned extensively in **Sangam Era literature**.



Note:

Impact of Climate Change on Indian Monsoon

Why in News?

Recently, Research has shown that global warming, triggered by **Climate Change**, increases the fluctuations in the **monsoon**, resulting in **both long dry periods and short spells of heavy rains**.

- The Year 2022 has seen the **second highest extreme events since 1902**. An alarming case as incidents of **floods** and **droughts** have increased.

What are the Impacts of Climate Change on Indian Monsoon?

➤ Contrasting Rainfall Patterns:

- A shift in the track of monsoon systems has been seen such as low pressure and **depression travelling south of their position and flash floods**.
 - Monsoon depression originally refers to a low-pressure **system affecting the North Indian Ocean and the Bay of Bengal** in summer. It encompasses a **relatively large area and the diameter of closed isobar** can be as wide as 1000 km.
- Madhya Pradesh, Gujarat, Rajasthan and parts of Maharashtra have recorded excess rainfall in 2022, in contrast, **West Bengal, Jharkhand and Bihar did not receive normal rains**
- August 2022 too saw two back-to-back depressions forming in the Bay of Bengal and traveling across Central India.
- While summer monsoon rainfall each year is unique, there has been a **large regional and temporal variability in rainfall in 2022**.

➤ Causes:

- Persistence of intense **La Nina conditions**, the abnormal warming of East Indian Ocean, negative **Indian Ocean Dipole (IOD)**, southward movement of most of the monsoon depressions and lows and pre-monsoon heating over the **Himalayan region** and melting glaciers.

- IOD is defined by the difference in sea surface temperature between two areas (or poles, hence a dipole) – a western pole in the Arabian Sea (western Indian Ocean) and an eastern pole in the eastern Indian Ocean south of Indonesia.

- The IOD affects the climate of Australia and other countries that surround the **Indian Ocean Basin, and is a significant contributor to rainfall variability** in this region.

➤ Impacts:

○ Kharif Crops:

- One of the major impacts of changes in track of monsoon systems can be seen on kharif crops, particularly rice production. They form a significant share of more than 50% of total food grain production during this period.
- The fall in Kharif output **may keep rice prices at elevated levels**.
- Bihar, West Bengal and Uttar Pradesh, which account for a third of the country's total rice production, have been **highly deficit despite an active monsoon current in July and August**.

○ Quality of Grains:

- These uneven distribution rains may impact the quality of the grain as well as **the nutrition value may vary**.

- According to a study, 'Climate change, the monsoon, and rice yield in India', very high temperatures (> 35°C) induce heat stress and affect plant physiological processes, leading to **spikelet sterility, non-viable pollen and reduced grain quality**.

○ Food security:

- Monsoon rainfall became **less frequent but more intense in India** during the latter half of the 20th century.
- Scientists and food experts believe that a better rainfall scenario could have helped increase the harvest.
- However, India's hundreds of millions of rice producers and consumers are being affected negatively with these unprecedented changes which are also raising concerns over **food security**.



Note:



drishti

Indian Heritage, Art and Culture

Highlights

- Kuchipudi
- Ayurveda in India
- Mohiniyattam

Kuchipudi

Kuchipudi (Andhra Pradesh)

Origin
Originated in a village named Krishna district in Andhra Pradesh. Siddhendra Yogi systematized the modern version in 17th century. Lakshminarayan Shastry, in early 20th century, brought in new practices such as solo recitals and female participation. Predominance of Shringara ras. Theme: Secular.

Instruments

- Mridangam
- Cymbal
- Violin or veena

Solo Performance
Manduka Shabdham: Story of frog maiden.
Tarangam: The dancer performs with his/her feet on the edges of a brass plate and balancing a pot of water on the head or a set of diyas.
Jala Chitra Nritya: Dancer draws pictures on the floor with his or her toes while dancing.

Group Performance
Involves Nritya, Natya and Nritya. Kavutvams: Nritya (extensive acrobatics) and Nritya (pure dance). Sollakath or Patakshara : Nritya part. Central Theme: Stories of Bhagavat Purana. Dancers are known as Bhagavathalus. Both Lasya and Tandava elements are important.

Famous Proponents

- Radha Reddy
- Raja Reddy
- Yamini
- Krishnamurthy
- Indrani Rehman

Drishiti IAS

Ayurveda in India

Why in News?

Ayurveda, India's traditional medicine, has been in practice for close to 3,000 years and has been serving the health-care needs of millions of Indians.

- Ayurveda, for long, has been facing challenges to address a few areas, which need to be discussed.

What is Ayurveda?

➤ About:

- The word Ayurveda derived from **AYU** and **VEDA**. **AYU** means life, **VEDA** means science or knowledge;

Ayurveda means the science of life.

- Ayurveda embraces all living things, human and non-human.
- It is divided into three main branches
 - **Nara Ayurveda:** dealing with human life.
 - **Satva Ayurveda:** dealing with animal life and its diseases.
 - **Vriksha Ayurveda:** dealing with plant life, its growth and diseases.
- Ayurveda is **not only a system of medicine** but also **a way of life** for complete positive health and spiritual attainments.

➤ Practice of Ayurveda:

- **The Indian Medical Council** which was set up in 1971 establishes **suitable qualifications** in Indian medicine and recognizes various forms of traditional practice including **Ayurveda, Unani, and Siddha**.
- Ayurveda has both preventive and curative aspects.
 - **The preventive component** emphasizes the **need for a strict code of personal and social hygiene**, the details of which depend upon individual, climatic, and environmental needs.
 - **The curative aspects of Ayurveda** involve the use of herbal medicines, external preparations, physiotherapy, and diet.
- It is a principle of Ayurveda that the preventive and therapeutic measures be adapted to the personal requirements of each patient.

➤ Significance:

- In Ayurveda it is believed **living man is a conglomeration of three humors (Vata, Pitta & Kapha)**, seven basic tissues (**Rasa, Rakta, Mansa, Meda, Asthi, Majja & Shukra**) and the waste products of the body i.e., **mala, mutra and sweda**.
 - The growth and decay of this body matrix and its constituents **revolve psychological mechanisms of these elements and its balance** is the main reason for the state of one's health.
- The treatment approach in the Ayurveda system

Note:

is holistic and individualized, having **preventive, curative, mitigative, recuperative and rehabilitative aspects.**

- The principal objectives of Ayurveda are **maintenance and promotion of health, prevention of disease and cure of sickness.**

What are the Key Challenges faced by Ayurveda in the Modern World?

➤ Outdated Ideas:

- On benefits of **physical exercise**, Ayurveda states “A sense of ease, improved fitness, easy digestion, ideal body-weight, and handsomeness of bodily features are the benefits that would accrue from regular exercise.”
 - However, such continued validity cannot be claimed for the **physiological and pathological conjectures** the same text contains.
- On **urine formation**, the Ayurveda text posits that **tiny ducts from the intestines carry urine** to fill the bladder. This simplistic scheme of urine formation **has no role for the kidneys at all.**
 - This outdated idea can have no place in current medical education except as an anecdote from history.

➤ Ineffective Treatment in Emergency Cases:

- The inadequacies of Ayurveda in treating **acute infections** and other emergencies including **surgery, and lack of meaningful research in therapeutics** continue to limit the universal acceptance of Ayurveda.
- Ayurveda therapeutics are **complex** and there are **too many dos and don'ts.**
- Ayurvedic medicines are **slow to act and heal.** It is difficult if not impossible to predict a response or prognosis.

➤ Lack of Homogeneity:

- The **medical practices in Ayurveda** are not uniform. It is because the medicinal plants used in it **vary with geography and climate and local agriculture practices.**
- Unlike Ayurveda, in modern medicine, **the diseases are classified and treated as per prior set uniform criteria.**

➤ Misleading Propaganda by Ayurvedic Pharmas:

- The Ayurvedic pharmacopeia industry claimed that its **manufacturing practices were consistent with the classic Ayurveda texts.**
- For better market appeal of ayurvedic medicines, the pharmaceutical companies **publicized many**


medicinal claims about their ayurvedic products without sufficient scientific basis.

- This led to further **obsession for drugs in the community** and ailments requiring **lifestyle correction** were instead treated with poly-pharmacy.

What Initiatives has the Government taken for Development of Ayurveda?

- **National Ayush Mission**
- **Aahaar Kranti Mission**
- **New Portals on Ayush Sector**
- **ACCR Portal and Ayush Sanjivani App**

Mohiniyattam



Drishti IAS

Mohiniyattam (Kerala)

- Also known as the dance of Mohini (an incarnation of Lord Vishnu).
- Performed by women.
- Thumping of footsteps is absent.
- Footwork is gentle.
- Narrates the story of the feminine dance of Vishnu.

Performance

Mostly a solo performance	The Lasya aspect (beauty, grace) of dance is dominant	Inculcates elements of Bharatanatyam (grace & elegance) and Kathakali (vigor)	The famous Malayali poet V. N. Menon revived it along with Kalyani Amma
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References of Mohiniyattam:

- Vyavaharamala written in 1709 by Mazhamagalam Narayanan Namboodiri.
- Ghoshayatra, written later by poet Kunjan Nambiar.


Instruments

Edakka (Main)	Mridangam	Veena	Flute	Kuzhitalam or Cymbals
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Costumes

- Kasavu saree of Kerala.
- White and off-white being the principal colors and the presence of gold colored brocade designs.
- Leather strap with bells (Ghungroo).

–‘Atavakul or Atavus’ is the collection of forty basic dance movements.



Note:

Security

Highlights

- BrahMos Missiles
- Adivasi Group Agreement
- Short-Range Air Defence System (VSHORADS)
- Ban on PFI

BrahMos Missiles

Why in News?

Recently, the Ministry of Defense has signed a Rs 1700 crore contract with BrahMos Aerospace Pvt Ltd to buy additional **dual-role capable BrahMos missiles** for the Indian Navy.

- Dual role capability refers to the use of BrahMos missiles for **land as well as anti-ship attacks**. They can be launched from land, air and sea, and all three variants are in service in the Indian armed forces.

What is the Significance of the Deal?

- Induction of these dual-role capable missiles is going to **significantly enhance the operational capability of Indian Navy fleet assets**.
- The following contract is going to provide **an important boost to indigenous production** of the critical weapon system.
- The BrahMos missiles are also expected to **enhance ammunition with the active participation of indigenous industry**.

What are the BrahMos Missile?

- The BrahMos missile, an Indo-Russian joint venture, **has a range of 290 km** and is the **fastest cruise missile** in the world with a top speed of Mach 2.8 (nearly three times the speed of sound).
 - BrahMos is named for the **rivers Brahmaputra and Moskva**.
- It is a **two-stage** (solid propellant engine in the first stage and liquid ramjet in second) missile.
- It is a **multiplatform missile** i.e., it can be **launched from land, air, and sea and multi capability missile** with pinpoint accuracy that works in both day and night irrespective of the weather conditions.

- It operates on the **"Fire and Forgets"** principle i.e. it does not require further guidance after launch.

What are the Recent Development?

- **In April 2022**, an anti-ship version of the **BrahMos supersonic cruise missile** was **successfully test-fired jointly by the Indian Navy and the Andaman and Nicobar Command**.
- **In January 2022**, an extended range sea-to-sea variant of the **BrahMos supersonic cruise missile** was test fired from stealth guided missile destroyer **INS Visakhapatnam**.

Adivasi Group Agreement

Why in News?

Recently, a historic agreement has been signed between the **Government of India, Government of Assam** and representatives of **eight Armed Adivasi Groups**.

- The agreement was signed to end the **decades old crisis of Adivasis and tea garden workers** in Assam.



Note:

What do we Need to Know about the Agreement?

- **About:**
 - With the signing of this tripartite agreement, **1182 cadres of tribal groups of Assam** have joined the mainstream by laying down arms.
- **Aim:**
 - The agreement is intended to **protect & strengthen** the social, cultural, linguistic and community-based identity of the groups.
 - It also aims to fulfill the **political, economic and educational aspirations** of the Adivasi groups.
 - It also aims to ensure **rapid and focused development of tea gardens** along with Adivasi villages/areas throughout the state.
- **Provisions of the Agreement:**
 - The agreement provides for the establishment of a **Tribal Welfare and Development Council** with a view to ensure speedy and focused development of tea gardens.
 - The agreement also provides for **rehabilitation and resettlement of armed cadres** and measures for the welfare of **tea garden workers**.
 - A **special development package** of Rs.1000 crore will be provided over a **period of five years** for **infrastructure development** in villages/areas with tribal population.
- **Recent Figures regarding Insurgency:**
 - Since 2014, around **8,000 insurgents** have joined the **mainstream of society** by laying down their arms.
 - 2020 recorded the **lowest number of insurgency incidents** in the last two decades.
 - In comparison to 2014, there has been a **74% reduction in the incidents of insurgency** in 2021.
 - In the same period, there has been a **60% reduction in the casualties of security forces** and **89% in the number of civilian casualties**.

What Efforts has the Government Taken for Peace in North East India?

- **Agreements:**
 - **NLFT Agreement 2019:**
 - **National Liberation Front of Tripura (NLFT)** has been banned under the **Unlawful Activities (Prevention) Act, 1967** since 1997 and has been involved in violence, operating from their camps across the international border.

- **NLFT Agreement 2019** resulted in the surrender of 88 cadres with 44 weapons.
- **BRU-REANG:**
 - Bru or Reang is a community **indigenous to Northeast India**, living mostly in Tripura, Mizoram and Assam. In Tripura, they are recognised as a **Particularly Vulnerable Tribal Group**.
 - A landmark agreement was signed on 16th January 2020 to resolve the **23-year-old Bru-Reang refugee crisis** by which more than **37,000 internally displaced people** are being settled in Tripura.
- **Bodo Accord 2020:**
 - Bodos are the **single largest community** among the notified **Scheduled Tribes** in Assam.
- They have been demanding a **Bodo state since 1967-68.**
 - To resolve the **five-decade-old Bodo issue in Assam**, Bodo Accord was signed on 27th January, 2020 resulting in the **surrender of 1615 cadres** with a huge cache of arms and ammunition at Guwahati on 30th January 2020.
- **Karbi Anglong Agreement 2021:**
 - It was signed to resolve the **long-running dispute in the Karbi regions of Assam** in which more than **1000 armed cadres renounced violence** and joined the mainstream of society.
- **Assam-Meghalaya Inter-State Boundary Agreement 2022:**
 - **AMISB Agreement 2022** was signed on 29th March 2022 to settle the **dispute over six out of total twelve areas of interstate boundary dispute** between the states of Assam and Meghalaya.
- **Partial Withdrawal of AFSPA:**
 - The government of India, in April 2022, partially withdrew the **Armed Forces Special Powers Act (AFSPA), 1958** from parts of three Northeast states namely Assam, Nagaland and Manipur.

Short-Range Air Defence System (VSHORADS)

Why in News?

Recently, **Defence Research and Development Organisation (DRDO)** conducted **two successful test flight of Very Short Range Air Defence System (VSHORADS) missile** from a ground based portable launcher at the **Integrated Test Range, Chandipur, off the coast of Odisha.**

Note:

- Both the flight tests have **completely met the mission objectives**.

What is VSHORADS?

- **About:**
 - Very Short-Range Air Defence System (VSHORADS) is a **Man Portable Air Defence System (MANPAD)** designed and developed indigenously by DRDO's Research Centre Imarat (RCI), Hyderabad in collaboration with other DRDO laboratories and Indian Industry Partners.
- **Design:**
 - VSHORADS missile incorporates many novel technologies including **miniaturized Reaction Control System (RCS)** and **integrated avionics**, which have been successfully proven during the tests.
 - The missile, meant for **neutralizing low-altitude aerial threats at short ranges**, is propelled by a **dual thrust solid motor**.
 - The design of the missile including launcher has been **highly optimized to ensure easy portability**.
- **Significance:**
 - This new missile equipped with modern technologies will give **further technological boost to the Armed Forces**.

What is a Reaction Control System?

- A Reaction Control System (RCS) is responsible for **attitude control** and steering by the **use of thrusters**.
- The RCS system is capable of **providing small amounts of thrust in any desired direction** or combination of directions.
- An RCS is also capable of **providing torque to allow control of rotation (pitch, yaw, and roll)**.
What are MANPADS?
- MANPADS are **short-range, lightweight and portable surface-to-air missiles** that can be fired by individuals or small groups to destroy aircraft or helicopters.
- They help **shield troops from aerial attacks** and are most effective in targeting low-flying aircraft.
- MANPATs or Man-Portable Anti-Tank Systems work in a similar manner but are used to destroy or incapacitate military tanks.
- MANPADS have a maximum range of 8 kilometers and can engage targets at altitudes of 4.5 km.
- The first MANPADS were introduced by the United States and Soviet Union in the 1960s.

Ban on PFI

Why in News?

The Government of India has **banned the Popular Front of India** and its affiliates for five years under the **Unlawful Activities (Prevention) Act 1967** for having terror links.

What is the Popular Front of India?

- The PFI was created in 2007 through the merger of three Muslim organisations in southern India namely **the National Democratic Front** in Kerala, **the Karnataka Forum for Dignity**, and **the Manitha Neethi Pasarai** in Tamil Nadu.
- The formation of the PFI was formally announced at a **rally in Bengaluru** during what was called the **"Empower India Conference"** on 16th February, 2007.

What did the Centre Banned PFI?

- **About Ban:**
 - **The Ministry of Home Affairs** declared the PFI an **"unlawful association"** along with its associates which includes :
 - **Rehab India Foundation (RIF), Campus Front of India (CFI), All India Imams Council (AIIC), National Confederation of Human Rights Organisation (NCHRO), National Women's Front, Junior Front, Empower India Foundation and Rehab Foundation, Kerala**.
- **Reason for the Ban:**
 - According to the government, some of the PFI's founding members are **leaders of the Students Islamic Movement of India (SIMI)** and the PFI also has **linkages with Jamaat-ul-Mujahideen Bangladesh (JMB)**, both of which are **proscribed organisations**.
 - There had been a number of instances of **international linkages of PFI with Global Terrorist Groups** like **Islamic State of Iraq and Syria (ISIS)**.

What is the Unlawful Activities (Prevention) Act?

- **About:**
 - **Originally enacted in 1967**, the UAPA was amended to be modelled as an **anti-terror law in 2004 and 2008**.

Note:

- In August 2019, **Parliament** cleared the **Unlawful Activities (Prevention) Amendment Bill, 2019** to designate **individuals as terrorists** on certain grounds provided in the Act.
- In order to deal with terrorism crimes, it **deviates from ordinary legal procedures and creates an exceptional regime** where **constitutional safeguards** of the accused are curtailed.
- **Provisions:**
 - **Section 7:**
 - Section 7 of the UAPA gives the **government the power to “prohibit use of funds”** by an **“unlawful association”**.
 - It says that **after an organisation is banned** and the **Centre is satisfied after an enquiry** that **“any person has custody of any moneys, securities or credits** which are being used or are intended to be used for the **purpose of the unlawful association, the Central Government may, by order in writing, prohibit such person** from paying, delivering, transferring or otherwise dealing in any manner whatsoever with such moneys, securities or credits or with any other moneys, securities or credits which may come into his custody after the making of the order”.
 - It also gives powers to **law enforcement agencies to search premises of such organisations** and to **examine their books of account**.
 - **Section 8:**
 - Section 8 of the UAPA gives powers to the Centre to **“notify any place which in its opinion is used for the purpose of such unlawful association”**.
 - The “place” here includes a **house or a building, or a part thereof, or even a tent or a vessel**.
 - **Section 10:**
 - Section 10 of the UAPA criminalises **membership of a banned organisation**.
 - It says that **“being a member of a banned organisation would be punishable with an imprisonment of two years** and may extend to life imprisonment or even death in certain circumstances”.
 - It also applies to any person who aids the objectives of the banned organisation.
- **UAPA Tribunal:**
 - **About:**
 - The UAPA provides for a **tribunal under a High Court judge** to be constituted by the government for **its bans to have long-term legal sanctity**.
 - Orders to declare an organisation as **“unlawful”** are issued by the Centre under **Section 3 of the UAPA**.
 - The provision says that “no such notification shall have effect until the tribunal has, by an order made under Section 4, confirmed the declaration made therein and the order is published in the Official Gazette”.
 - A government order **would not come into effect until the tribunal has confirmed it**.
 - **In exceptional circumstances**, the notification can come into effect **immediately once the reasons for it are recorded in writing**. The tribunal **can endorse or reject it**.
 - **Powers:**
 - The tribunal has power to regulate its own procedure, **including the place at which it holds its sittings**. Thus, it can hold hearings in **different states for allegations pertaining to those states**.
 - To make inquiries, **the tribunal has the same powers as vested in a civil court under the Code of Civil Procedure, 1908**.



Note:

Ethics

Highlights

- *Just War Theory*
- *Artificial Intelligence and Ethics*
- *Role of Philanthropy in Accelerating Economic Growth*
- *Assisted Suicide and Euthanasia*
- *Cognitive Dissonance*
- *Ethical Marketing of Drugs*
- *Ethical Issues due to Weather Modifications*

Just War Theory

What is Just War Theory?

- **Origin:**
 - The principles of a Just War **originated with classical Greek and Roman philosophers** like Plato and Cicero and were added to by Christian theologians like Augustine and Thomas Aquinas.
- **About:**
 - The just war theory is a largely **Christian philosophy that attempts to reconcile three things:**
 - taking human life is seriously wrong
 - states have a duty to defend their citizens, and defend justice
 - protecting innocent human life and defending important moral values sometimes requires willingness to use force and violence
 - The **theory specifies conditions for judging if it is just to go to war**, and conditions for how the war should be fought.
 - Although it was extensively developed by Christian theologians, it can be used by people of every faith and none.
 - According to the Just War theory, **war perhaps at times is morally right**. No war, however, is praiseworthy for being strategic, prudent, or bold. Occasionally, war represents an ethically appropriate use of mass political violence.
 - World War II, on the Allied side, is often cited as the definitive example of a just and good war.

What are the Elements of Just War Theory?

- Just war theory is divided into three parts that have Latin names. These parts are:

- **Jus Ad Bellum:** About the justice of resorting to war in the first place.
- **Jus in Bello:** It is about justice of conduct within war.
- **Jus Post Bellum:** This is about the justice of peace agreements and the termination phase of the war.

What is the Purpose of Just War Theory?

- The aim is to **provide a guide to the right way for states to act in potential conflict situations.**
 - It **only applies to states, and not to individuals** (although an individual can use the theory to help them decide whether it is morally right to take part in a particular war).
- The theory **provides a useful framework for individuals and political groups** to use for their discussions of possible wars.
- The theory is **not intended to justify wars but to prevent them**, by showing that going to war except in certain limited circumstances is wrong and thus motivates states to find other ways of resolving conflicts.

What are the Arguments against Just War Theory?

- **No Place in Ethical Theory:**
 - All war is unjust and has no place in any ethical theory:
 - Morality must always oppose deliberate violence.
 - Rather than limiting violence, just war ideas encourage it.
- **Disrupts Normal Rules of Society:**
 - As a result of war, the **normal rules of society are disrupted and morality goes out the window.**
- **Unrealistic Theory:**
 - The just war theory is unrealistic and pointless

Note:

- In a conflict “the strong do what they will, and the weak do what they must”.
- The decision to wage war is governed by realism and relative strength, not ethics.
- Morality thus has no use in war.

Artificial Intelligence and Ethics

Why in News?

UNESCO’s Global Agreement on the Ethics of AI can guide governments and companies alike.

What is Artificial Intelligence?

- It describes the **action of machines accomplishing tasks** that have historically required human intelligence.
- It **includes technologies** like machine learning, pattern recognition, big data, neural networks, self-algorithms etc.
- The **origin of the concept can be traced back to Greek mythology**, although it is only during modern history when stored program electronic computers were developed.
 - **Example:** Millions of algorithms and codes are there around humans to understand their commands and perform human-like tasks. **Facebook’s list of suggested friends** for its users, a **pop-up page**, suggesting about an upcoming sale of the favourite brand of shoes and clothes, that comes on screen while browsing the internet, are the work of artificial intelligence.
- AI involves complex things such as **feeding a particular data into the machine** and making it react as per different situations. It is basically about **creating self-learning patterns** where the machine can give answers to the never answered questions like a human would ever do.
- India has made great strides in the development of responsible and ethical AI governance, starting with **NITI Aayog’s #AIForAll** campaign to the many corporate strategies that have been adopted to ensure that AI is developed with common, humanistic values at its core.

What are the Ethical Concerns related to Artificial Intelligence?

- **Risk of Unemployment:** The hierarchy of labour is concerned primarily with automation. Robotics and

AI companies are building intelligent machines that perform tasks typically carried out by low-income workers: self-service kiosks to replace cashiers, fruit-picking robots to replace field workers, etc.

- Moreover, the day is not far when many desk jobs will also be edged out by AI, such as accountants, financial traders, and middle managers.
- **Exacerbating Inequalities:** Using artificial intelligence, **a company can drastically cut down on relying on the human workforce**, and this means that revenues will go to fewer people.
 - Consequently, individuals who have ownership in AI-driven companies will make all the money. Also, AI could compound digital exclusion.
 - Further, **investment is likely to shift to countries** where AI-related work is already established, widening gaps among and within countries.
- **Tech Addiction:** Technological addiction is the **new frontier of human dependency**. AI has already become effective at directing human attention and triggering certain actions.
 - When used right, this **could evolve into an opportunity to nudge society towards more beneficial behavior**.
 - However, in the wrong hands, it could prove detrimental.
- **Discriminating Robots:** We shouldn’t forget that AI systems are **created by humans, who can be biased and judgemental**.
 - It can lead to **AI facial recognition** and surveillance technology to discriminate against people of color and minorities.
- **Data Privacy Concerns:** AI also **presents serious data privacy concerns**. The algorithm’s never-ending quest for data has led to our digital footprints being harvested and sold without our knowledge or informed consent.
 - The **case of Cambridge Analytica**, in which such algorithms and big data were **used to alter voting decisions**, should serve as a potent warning of the individual and societal concerns resulting from current AI business models.
- **AI Turning against Humans:** What if artificial intelligence itself turned against humans?
 - Imagine an AI system that is asked to eradicate cancer in the world. After a lot of computing, it spits out a formula that does, in fact, bring about the end of cancer – by killing everyone on the planet.

Note:

What are the Global Standards for Artificial Intelligence Ethics?

- In 2021, the **Recommendation on the Ethics of Artificial Intelligence** was adopted by UNESCO's General Conference at its 41st session.
 - It aims to fundamentally shift the balance of power between people, and the businesses and governments developing AI.
- **UNESCO** members have agreed to **use affirmative action** to make sure that women and minority groups are fairly represented on AI design teams.
- The recommendation also underscores the importance of the proper management of data, privacy and access to information.
- It calls on member states to ensure that appropriate safeguards are devised for the processing of sensitive data and effective accountability and redress mechanisms are provided.
- The Recommendation takes a strong stance that
 - AI systems **should not be used for social scoring or mass surveillance purposes**
 - Attention **must be paid to the psychological and cognitive impact** that these systems can have on children.
 - Member states **should invest and promote not only digital, media and information literacy skills**, but also socio-emotional and AI ethics skills.
- UNESCO is also in the process of developing tools to help assess the readiness in the implementation of the recommendations.

Role of Philanthropy in Accelerating Economic Growth

Why in News?

Through philanthropy, India can reach a per capita income of USD15,000 by India@100 by 2047, accelerating inclusive and sustainable economic growth.

What is Philanthropy?

- Philanthropy refers to **charitable acts or other good works** that help others or society as a whole.
- Philanthropy can **include donating money to a worthy cause** or volunteering time, effort, or other forms of altruism.

What do we Know about Philanthropy in India?

- **Pre-Industrial India:**
 - **Philanthropy has long been embedded in the fabric of Indian society** and contributed heavily to the creation of modern-day India.
 - Pre-industrial India saw **business families giving away a proportion of their income to local charities**.
 - Industrialization **enabled rapid wealth creation**; business leaders like Sir Jamsetji Tata voiced their opinions on using wealth for social good, donating vast amounts to create exemplary institutions.
- **During Freedom Struggle:**
 - **Mahatma Gandhi** encouraged businessmen to contribute their wealth to society as India's Independence movement began.
 - Industrialists like **Jamnalal Bajaj and G.D. Birla supported Mahatma Gandhi's initiatives** during the **freedom movement** while pursuing their own philanthropic interests.

What is the Philanthropic Model in the United States?

- With prominent leaders at the forefront, **Indian philanthropy was thriving**, simultaneously, **America was witnessing the Carnegie-Rockefeller era of philanthropy**.
- Andrew Carnegie **built impressive institutions** (like Carnegie Library and Carnegie Mellon University), but also **inspired (and instigated) the rich**.
 - The last line of his book reads: **"The man who dies rich, dies disgraced."**
- John D. Rockefeller, a hard-nosed monopolist, eventually donated large amounts of money to systemic reforms, especially to improve the education system.
- The Rockefeller Foundation also **developed the vaccine to eradicate yellow fever**.

What are the Major Challenges inhibited Indian Philanthropy?

- **A Trust Deficit:**
 - Budding philanthropists **haven't yet come to fully appreciate the good work** being done in the impact sector.
- **Parochial Nature of Giving:**
 - The parochial nature of giving risks some of the poorest parts of the country being ignored.

Note:

- **Programmatic Nature of Giving:**
 - The results of **programmatic giving are unsatisfactory.**
 - **Example:** a number of foundations and NGOs work on school education, yet learning outcomes have not improved.

Assisted Suicide and Euthanasia

Why in News?

Recently, Jean-Luc Godard, one of the legends of French New Wave cinema, died by assisted suicide at the age of 91.

What is Assisted Suicide?

- **About:**
 - Assisted suicide and euthanasia **both are practices under which a person intentionally ends their life** with active assistance from others.
 - Several European nations, some states in Australia and Colombia in South America allow assisted suicide and euthanasia under certain circumstances.
- **Types:**
 - **Active:**
 - Active euthanasia, which is legal in only a few countries, entails the use of substances to end the life of the patient.
 - **Passive:**
 - It involves simply **stopping lifesaving treatment or medical intervention** with the consent of the patient or a family member or a close friend representing the patient.

What are the Arguments for and against Assisted Suicide?

- **Arguments for:**
 - **Freedom of Choice:**
 - Advocates argue that the **person should be able to make their own choice.**
 - **Quality of Life:**
 - Only the individual really knows how they feel, and how the physical and emotional pain of illness and prolonged death impacts their quality of life.

- **Dignity:**
 - Every individual should be able to die with dignity.
- **Resources:**
 - It **makes more sense to channel the resources of highly skilled staff**, equipment, hospital beds, and medications toward lifesaving treatments for those who wish to live, rather than those who do not.
- **Humane:**
 - It is **more humane to allow a person with intractable suffering** to be allowed to choose to end that suffering.
- **Loved ones:**
 - It can **help to shorten the grief** and suffering of loved ones.
- **Arguments Against:**
 - **Moral and Religious Arguments:**
 - Several faiths see **euthanasia as a form of murder and morally unacceptable.** Suicide, too, is “illegal” in some religions. Morally, there is an argument that euthanasia will weaken society’s respect for the sanctity of life.
 - **Patient Competence:**
 - **Euthanasia is only voluntary if the patient is mentally competent**, with a lucid understanding of available options and consequences, and the ability to express that understanding and their wish to terminate their own life. Determining or defining competence is not straightforward.
 - **Guilt:**
 - Patients may feel they are a burden on resources and are psychologically pressured into consenting. They may feel that the financial, emotional, and mental burden on their family is too great.
 - **Slippery slope:**
 - There is a risk that **physician-assisted suicide will start with those who are terminally ill** and wish to die because of intractable suffering, but then begin to include other individuals.
 - **Regulation:** Euthanasia cannot be properly regulated.

Does India allow Assisted Suicide or Euthanasia?

- In a landmark judgment, the **Supreme Court of India legalised passive euthanasia** in 2018, stating that it was a **matter of ‘living will’.**

Note:

- According to the judgment, **an adult in his conscious mind is permitted to refuse medical treatment or voluntarily decide not to take medical treatment** to embrace death in a natural way, under certain conditions.
- The **court laid down a set of guidelines for 'living will'** and defined passive euthanasia and euthanasia as well.
- It also laid **down guidelines for 'living will' made by terminally ill patients** who beforehand know about their chances of slipping into a permanent vegetative state.
- The court specifically stated that the **rights of a patient, in such cases, would not fall out of the purview of Article 21** (right to life and liberty) of the Indian Constitution.
- The SC's judgment was in **accordance with its verdict in March 2011** on a separate plea.
 - While ruling on a petition on behalf of Aruna Shanbaug, the **court had allowed passive euthanasia for the nurse** who had spent decades in a **vegetative state**. Shanbaug had become central to debates on the legality of right to die and euthanasia in India.
 - A vegetative state is **when a person is awake but is showing no signs of awareness**.
- However, another bench of the Supreme Court, in 2014, **cited inconsistencies in earlier verdicts on passive euthanasia**, including the one given in the Shanbaug case, and referred the matter to a Constitution bench.

Cognitive Dissonance

What is Cognitive Dissonance?

- **About:**
 - Cognitive dissonance's definition is a **feeling of unease when there is tension between one's beliefs, attitudes, values, and one's actions**.
 - The notion of cognitive dissonance was **developed by the American cognitive psychologist Leon Festinger** in the 1950s.
 - Festinger thought that **people were driven to promote the harmony and coherence** of their beliefs, attitudes, and behaviors. Thus, when people develop a sense that there has been a breakdown

in their mental harmony, they will attempt to end their cognitive dissonance.

- **Experiment:**
 - Festinger developed an **experiment in which people had to perform a mundane, repetitive task** (turning pegs).
 - They were then paid to lie to someone and attempt to convince the person that the task was interesting.
 - Festinger created two groups, one group's members were paid a small amount of money, and another group was paid a larger amount of money. Festinger found that those who were given more money experienced less cognitive dissonance.
- **Cognitive Dissonance Theory:**
 - It attempts to explain not only feelings of discomfort that arise from a tension between one's beliefs and actions **but also analyze how people resolve this tension**.

What are the Causes of Cognitive Dissonance?

- **Forced Compliance Behavior:**
 - Forced compliance is a situation in which a **person is forced to perform an action that is inconsistent with their beliefs**
 - Since the action already occurred and the behavior cannot be changed, the way to alleviate dissonance is for a person to re-evaluate what they have done.
- **Decision Making:**
 - Decisions **can often create dissonance because decisions involve choosing one alternative over another**, which may mean accepting the disadvantages of one choice
 - **Example:**
 - A person gets a job offer in a great city, but rejecting the job offer means getting to stay near friends and family
 - Both choices have positives and negatives: if the person takes the job, they will miss their loved ones, but if they turn down the job offer, they may miss the opportunities available in the city.
- **Effort:**
 - Most people tend to place higher value on value goals or items that require a lot of effort to achieve.
 - But **cognitive dissonance could occur if a person spends a lot of effort to achieve or acquire something** and it turns out to be negative or undesirable.

Note:

How can Cognitive Dissonance be Resolved?

➤ About:

- There were **different ways in which individuals or groups resolved cognitive dissonance** to best suit their situations.
- One could change one's thoughts, change one's behaviour to match one's thoughts, add a thought to justify the behaviour or trivialise the inconsistency between thoughts and behaviour.

➤ Example:

- X is a 25-year-old graduate (unemployed) who has newly started supporting a political party.
- He follows the political party as he believes in their promises of providing better job opportunities and development for youngsters in the country if they came to power.
- His party wins the elections. Despite five years of governance by his party, no significant changes occur in the employment sector and X is still unemployed. As the next elections approach, the political party members request his support. In such a situation, what would X do?
 - **X can Change his thought about the Situation:**
 - He looks at his neighbours B and C, who are also graduates. They have started a chai shop and samosa shop respectively, in their street.
 - X concludes that **though not in a conventional sense, jobs were created** after his party came into power, changing his opinion about the situation, and **reducing the inconsistency in his belief**. He will still vote for the same political party with a change in his perspective.
 - **X can Change his Behaviour towards the Situation:**
 - He understands and accepts that the promises made by the political party he supported were false and decides not to trust them anymore.
 - **X can add a Thought:**
 - He analyses the activities of his government and **concludes that though the government failed to provide jobs**, in the past five years under his party's leadership, there are **infrastructural development** such as the construction of the Supreme Court, bridges, roads etc.
 - He resolves the cognitive inconsistency between his thoughts and behaviour by adding

a **thought that rationalises his support of the political party**. He will still vote for the same party with the hope that the party will fulfil its promise and provide employment for its citizens in the next term.

● X can Trivialise the Inconsistency:

- He **compares the state of his country after his party came into power** with economically poorer neighbouring countries.
- He observes that **while only 40% of the educated youth in his country are employed**, the share is less than 30% in his neighbouring countries.
- In trivialising the faults in his political party's governance, **the tension created due to the inconsistency between his thoughts and behaviour is negated**.
- He will thus continue voting for the same political party as he has now justified the reason behind supporting the party.

What are the Some Instances where a Civil Servant may experience Cognitive Dissonance?

- An IPS officer who believes in non-violence or doing no harm to anyone when has to take decision of Lathi charge or using pellet guns to disperse crowd faces such cognitive dissonance.
 - **Strict adherence to ethical conduct** may cause problems in carrying out certain aims both in public and private life causing disaffection arising out of inability to reach goals. Being upright also pits the person against powerful vested interest, endangering his and his family's life, which may create inconsistency (dissonance) in civil servants' mind.
 - **Development v/s Environment:** A public servant faces dissonance when she has to take decision on displacement of tribal population for any development project.

Ethical Marketing of Drugs

Why in News?

Recently, **The Central Board for Direct Taxes (CBDT)** has accused the makers of the **Dolo-650 tablet** of spending **Rs 1,000 crore to distribute freebies to doctors** for prescribing the medicine.

Note:

- It is likely to put the stress on making the **Uniform Code for Pharmaceutical Marketing Practices (UCPMP)** a legally binding code of ethics.

What do we need to know about Freebies in Drug Marketing?

- **About:**
 - **Drug manufacturing companies** have been observed practicing 'Gift-giving': offering freebies ranging from **free dinners and drug samples to promotional merchandise** to doctors for their product marketing.
 - In order to promote their products, pharma companies allegedly **arrange accommodation in five-star hotels, local sight-seeing, etc.** in conferences conducted by doctors.
 - This is a **well-oiled racket that sees pharmaceutical (pharma) companies 'gifting' doctors** to push their respective drugs under the guise of marketing.
- **Pharma Company's Stand:**
 - Drug firms would offer **branded souvenirs** like pen stands, calendars, diaries or sanitizers to doctors.
 - The idea is to **ensure top-of-the-mind recall of their brands.**
 - The Indian market is price-controlled. Therefore, the differentiator here is the brands and this is common practice.
 - However, these practices **do not ensure doctors will prescribe their drugs.** It is simply a **marketing strategy.**
 - Around **95% of the items being gifted have a value less than Rs 500.**
 - It does not constitute a bribe. It is done to make the doctor remember a brand among the hundred others with a similar price point.
- **All India Drug Action Network's Stand:**
 - **Ethical marketing and promotion** should be brought within the ambit of the new **Drugs, Medical Devices, and Cosmetics Act** being formulated.
 - It is observed that often, **doctors are made lead investigators** in clinical trials, or made part of committees for which **they earn a hefty fee.**

What is Uniform Code for Pharmaceutical Marketing Practices (UCPMP)?

- **About:**
 - This is a **set of guidelines** published by the **Central Government in December 2014** to the

pharmaceutical industry for the **promotion and marketing** of drugs and medical devices.

- However, these guidelines are **voluntary code and not legally binding** on companies.
- **Significance:**
 - This code governs the **conduct of pharmaceutical companies** in their marketing practices, duly covering the various aspects such as **medical representatives, textual and audio-visual promotional materials, samples, gifts, etc.**
 - The code establishes **relationships with healthcare professionals**, wherein the provisions related to travel facilities, hospitality and cash or monetary grants to physicians or their families have been elaborated.
- **Key Provisions:**
 - According to **Clause 7.2 of the UCPMP**, "companies or their associations/representatives **shall not extend any hospitality like hotel accommodation to healthcare practitioners and their family members** under any pretext".
 - A drug **must not be promoted prior to receipt of marketing approval** by the competent authority.
 - The promotion of the drug must be **consistent with the terms of the marketing approval.**
 - **No gifts, pecuniary advantages or benefits in kind** may be offered/supplied to persons qualified to prescribe or supply drugs by a pharmaceutical company.
 - Gifts for the **personal benefit of healthcare professionals and family members** are also not to be offered or provided.

Ethical Issues due to Weather Modifications

Why in News?

- China has conducted over half a million weather-modification operations between 2002 and 2012.
- In 2020, China announced its plan **to expand its weather-modification programme** to generate **artificial rain** or snowfall over an area exceeding 5.5 million square kilometres — more than 1.5 times the total size of India.
- Many countries have **researched and deployed cloud seeding to deal with water scarcity**, ecological crisis and food security.

Note:

What is Weather Modification?

- Weather modification (also known as weather control) which is a part of **geoengineering** is the **act of intentionally manipulating or altering the weather**.
 - The **most common form of weather modification is cloud seeding**, which increases rain or snow, usually to increase the local water supply.
- Weather modification can also **have the goal of preventing damaging weather**, such as hail or hurricanes, from occurring; or of provoking damaging weather against the enemy, as a tactic of military or economic warfare like **Operation Popeye**, where clouds were seeded to prolong the monsoon in Vietnam.

What are the Ethical Issues due to Weather Modifications?

- **The tragedy of the Commons:**
 - The **'tragedy of the commons'** refers to the **situation when individuals, acting rationally in their own self-interest, nonetheless act irrationally as a collective group by irreparably depleting a resource that is owned in common**.
 - China's action is a potential example of 'the tragedy' on a global scale.
- **Skewed Vulnerabilities:**
 - For many of the most vulnerable countries and people who are not a part of China's actions regarding weather modification, appears to be seriously unfair and casts a notable shadow over the champions of environmental justice.
- **Intergenerational Ethics:**
 - A branch of ethics called **intergenerational ethics examines whether present-day humanity has a moral obligation to strive for environmental sustainability for the benefit of future generations**.

What are the Impacts of Weather Modifications?

- **Can Disrupt Monsoons:**
 - Injecting sulfate aerosols in the stratosphere above the Arctic to mimic volcano clouds, for example, can disrupt the monsoons in Asia and increase droughts, particularly in Africa, endangering food and water sources for two billion people.

- Also, **excess snow produced from cloud seeding can result in deaths, triggering a human-induced disaster**.
- **Conflict of Interests:**
 - Technological modernization is considered the best solution to environmental problems, but **in the absence of data, the technology acts as a precursor to man-made disasters**.
 - The authoritarian regime in China can control the viewpoints of all scientists.
 - Some people regard **geo-engineering** as a quick solution to **climate change**. There is nothing wrong with looking at weather modification as an extension of geo-engineering, but we need more research to make it more precise.

What is Geoengineering?

- **About:**
 - Geoengineering is a deliberate, large-scale intervention carried out in the Earth's natural systems to reverse the impacts of climate change, according to the Oxford Geoengineering Programme.
 - This involves techniques to physically manipulate the global climate to cool the planet.
- **Categories:**
 - These techniques fall primarily under **three categories**:
 - **Solar Radiation Management (SRM):** Solar geoengineering or 'dimming the sun' by spraying sulfates into the air to reflect sunlight back into space, cloud brightening or spraying saltwater to make clouds more reflective and more.
 - **Carbon Dioxide Removal (CDR):** ocean fertilisation or the dumping of iron or urea to stimulate phytoplankton growth to absorb more carbon.
- CDR technologies such as **carbon capture and storage (CCS)**, direct air capture (DAC) and **bioenergy with carbon capture and storage (BECCS)** are being proposed as a means to achieve 'net zero' emissions
 - **Weather Modification.**



Note:



drishti

Miscellaneous

Highlights

- Dvorak Technique
- International Day of Peace 2022
- World Tourism Day
- Controversy Around Nepal's Citizenship Law
- Dadasaheb Phalke Award

Dvorak Technique

Why in News?

Recently, the American meteorologist **Vernon Dvorak** passed away on whom **Dvorak Technique** was named to forecast Weather.

- Dvorak was an American meteorologist best credited for developing the **Dvorak (read as Do-rak) technique** in the early 1970s.

What is the Dvorak technique?

- The Dvorak technique is a **Cloud Pattern Recognition Technique (CPRT)** based on a concept model of the **development and decay** of the **tropical cyclone**.
- It was first developed in 1969 and tested for **observing storms in the northwest Pacific Ocean**.
- In this methodology, available satellite images obtained from **polar orbiting satellites** are used to **examine the features of the developing tropical storms** (hurricanes, cyclones and typhoons).
 - During daytime, images in the visible spectrum are used while at night, the **ocean is observed using infrared images**.
- From the satellite images the technique **helps forecasters do a pattern recognition** from the observed structure of the **storm, locate its eye and estimate the intensity** of the storm.
- Although it cannot help make any predictions, measure wind or pressure or any other meteorological parameters associated with the cyclone, it is **a guide to estimate the storm's intensity and possible intensification** — which is **crucial for local**

administration in planning evacuation measures of coastal or other nearby residents.

DEVELOPMENTAL PATTERN TYPES	PRE STORM	TROPICAL STORM		HURRICANE PATTERN TYPES		
		(Minimal)	(Strong)	(Minimal)	(Strong)	(Super)
	T1.5 - 4	T2.5	T3.5	T4.5	T5.5	T6.5 - T8
CURVED BAND PRIMARY PATTERN TYPE						
CURVED BAND EIR ONLY						
CDO PATTERN TYPE VIS ONLY						
SHEAR PATTERN TYPE				EYE TYPES		

Why is Technique still Widely in Use?

- Even having an improved network of land-based meteorological observations, ocean **observations still remain limited**.
- There are many regions across the four oceans that have not been **fully examined with meteorological instruments**.
- Ocean observations are **mostly taken by deploying buoys or dedicated ships**, but the number of observations from the sea is **still not sufficient across the world**.
- That is why meteorologists have had to **depend more on satellite-based imageries, and combine it with the available ocean-data** at the time of forecasting the intensity and wind speed of the tropical cyclones.
- The **Dvorak technique has undergone several advancements** since its inception. Even in the present day, when forecasters have access to several state-of-the-art tools like model guidance, animations, artificial intelligence, machine learning and satellite technology, it is the advanced versions of the Dvorak technique that continues to be widely used.

Note:



International Day of Peace 2022

Why in News?

Each year the International Day of Peace is observed around the world on **21st September**.

- **Theme for 2022: End racism. Build peace.**

What are the Key highlights Related to the International Day of Peace?

- **About:**
 - The **United Nations (UN) General Assembly** has declared this as a day devoted to strengthening the ideals of peace, through observing **24 hours of non-violence and cease-fire**.
- **Background:** The International Day of Peace was established in 1981 by the **United Nations General Assembly**.
 - In 2001, the General Assembly unanimously voted to designate the Day as a **period of non-violence and cease-fire**.
- **Symbol of International Peace Day:**
 - The United Nations Association of Japan donated **the Peace Bell in 1954**. It has become customary to ring the bell twice a year: on the first day of spring, at the Vernal Equinox, and on September 21st, International Day of Peace.

International Day of Non-Violence

- The International Day of Non-Violence is observed on 2nd October, the birthday of **Mahatma Gandhi**.
- It was established by the UNGA in 2007 to “disseminate the message of non-violence, including through education and public awareness”.

What are the Various Challenges to Global Peace?

- **Rise in Racism:** Black Americans earn 25% less than their white counterparts.
 - Black Americans are twice as likely to be jobless than white Americans.
 - Black women are three to four times more likely to suffer pregnancy-related deaths than white women at similar levels of income and education.
- **Global Unrests:** According to the **World Population Review**, 8 countries including Afghanistan, Yemen, Syria, Turkey, Somalia, Iraq, Mexico and Libya suffered at least 1,000 deaths each (mainly civilians) through militarised attacks and battles in 2019.

- **Russia-Ukraine War:** The war in Ukraine has led to a cost-of-living crisis. An estimated **1.6 billion people** are exposed to at least one dimension of the crisis—food, energy and finance.
- **Refugee Crisis:** According to the **UN Refugee Agency**, 79.5 million were displaced at the end of 2019, due to armed conflicts, persecution and other reasons.
- **Role of Global Powers:** The USA, Russia and China are required to uphold peace and international harmony being the permanent members of the UN Security Council. However, on the contrary, they have been found to fuel instability in order to achieve geopolitical hegemony. **Examples:**
 - The **tragedy in Yemen**, which the UN has declared as the world’s worst humanitarian disaster, is the outcome of indiscriminate attacks by the U.S.-backed coalition of Saudi Arabia and the UAE, whose geopolitical goal is to counterbalance Iran.
 - **Libya’s descent into chaos** is the product of the active involvement of mercenaries and weapons pumped in by Russia and the USA-allied Gulf Arab monarchies to push back Turkey’s influence.
 - **China’s hegemonic expansionism** against its neighbours and its ‘new Cold War’ with the U.S. have significantly raised risks of military clashes in Asia.
- **New Power Tussle:** The conflict and competition between the powerful countries, like the **USA-China New Cold War** is also going on, risking global peace.
- **Pandemic and Climate Crisis:** With the rise of extreme climate events around the globe and spread of pandemics such as **Covid-19** have posed a new concern that may directly and indirectly affect global peace through lack of access to resources, health and education, displacement etc.

World Rabies

Day Why in News?

World Rabies Day is observed every year on **28th September** to raise awareness about the **world’s deadliest infectious disease** and **bring together partners** to enhance prevention and control efforts worldwide.

- 2022 marks the **16th World Rabies Day**.

What do we need to know about World Rabies Day?

- **About:**

Note:

- 28th September marks the anniversary of **Louis Pasteur's** death, the French chemist and microbiologist, **who developed the first rabies vaccine.**
- In 2007, the **first World Rabies Day (WRD)** was organised by the two founding partners namely:
 - **Alliance for Rabies Control (ARC)**
 - **Centre for Disease Control and Prevention, Atlanta (CDC)**

➤ **Theme 2022:**



- The theme of World Rabies Day 2022 is: **“One Health, Zero Death”.**
- The theme will highlight the connection of the environment with both people and animals.

What do we know about Rabies?

➤ **About:**

- Rabies is a vaccine-preventable, zoonotic, viral disease.
- It is caused by a **Ribonucleic Acid (RNA)** virus that is **present in the saliva** of a rabid animal (dog, cat, monkey, etc).
- It is **invariably transmitted** following a **bite of an infected animal** that leads to **deposition of the saliva and the virus in the wound.**
- Once clinical symptoms appear, rabies is virtually 100% fatal. The death invariably **occurs in four days to two weeks** due to **cardio-respiratory failure.**
 - In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans.
- The incubation period varies from 2–3 months but may vary from 1 week to 1 year, or rarely even more.

➤ **Treatment:**

- It is **important to remove the virus from the wound** as early as possible by **immediately washing the wound with water and soap** followed by application of **antiseptics that reduce/eliminate chances of nerve infection.**
- Rabies can be prevented by **vaccinating pets, staying away from wildlife,** and **seeking medical care** after potential exposures before symptoms start.

➤ **Symptoms:**

- The **first symptoms of rabies may be similar to flu** and may last for a few days, which includes:
 - Fever, Headache, Nausea, Vomiting, Anxiety, Confusion, Hyperactivity, Difficulty swallowing, Excessive salivation, Hallucinations, Insomnia.

➤ **India's Initiatives for Cure Against Rabies:**

- **National Action Plan for Dog Mediated Rabies Elimination by 2030:**
 - It is a multi-pronged strategy based on **One Health Approach.**
 - The concept of One Health recognizes that the health of people is **closely related** with the health of animals, plants and their shared environment.
 - In One Health approach, **multiple sectors communicate and work together** at the local, regional, national, and global levels with the goal of achieving optimal health outcomes.
 - **Mission:** To **achieve zero human deaths** due to dog-mediated Rabies by 2030.
 - **Principles:**
 - **Prevention:** Introduce **cost-effective public health intervention techniques** to improve accessibility, affordability, and availability of post-exposure prophylaxis to all people in need.
 - **Promotion:** Improve **understanding of rabies** through advocacy, awareness, education and operational research.
 - **Partnership:** Provide **coordinated support for the anti-rabies drive** with the involvement of community, urban and rural civil society, government, private sectors and international partners

World Tourism Day

Why in News?

World Tourism Day is celebrated yearly on **27th September** around the world, and this year it will be held in Bali, Indonesia.

- **Theme 2022:** Rethinking Tourism.

What are the Key Points?

➤ **About:**

- 27th September has been celebrated as World Tourism Day since 1980. This date was chosen to coincide with an important milestone in world

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tourism: the anniversary of the adoption of the **United Nations World Tourism Organization (UNWTO) Statutes** in 1970.

- The UNWTO is the **United Nations** specialised agency responsible for the promotion of responsible, sustainable and universally accessible tourism.

➤ Objectives:

- The purpose of this day is to increase awareness and motivate people to travel. Since it believes that tourism helps people all across the world become even more unified and connected

➤ Significance:

- The World Tourism Day highlights the **unique role of the tourism sector in preserving cultural and natural heritage** all around the world. It acts as an auxiliary in safeguarding habitat and endangered species.
- It addresses the **importance of the tourism sector in providing jobs** and opportunities, mostly for women and youth, in rural as well as big cities.

What is the Scenario of Tourism in India?

➤ About:

- India attracted a lot of travellers in the past due to its fabled wealth. **Visit of Hieun-tsang**, a devout Chinese Buddhist is an example of this.
- Pilgrim Travel got a boost when **Emperors like Ashoka and Harsha started** building rest houses for pilgrims.
- Arthashastra' pointing out the importance of the travel infrastructure for the state, which played an important role in the past.
- Post-Independence, Tourism continuously remained part of the **Five Year Plans (FYP)**.
 - Different forms of Tourism like Business Tourism, Health Tourism, and Wildlife Tourism etc. were introduced in India after seventh FYP.

➤ Status:

- India's tourism sector ranked 6th in its contribution to World **Gross Domestic Production (GDP)** contributing USD 178.0 billion in World Travel and Tourism Council's report in 2021.
- In terms of foreign exchange, India's tourism sector earned USD 6.96 billion in 2020. This is expected to increase further after the pandemic.
- **In FY20**, the tourism sector in **India accounted for 39 million jobs**, which was 8.0% of the total

employment in the country. **By 2029**, it is expected to account for about 53 million jobs.

- India has 40 sites listed under '**World Heritage List**', 6th highest (32 cultural, 7 natural, and 1 mixed site) in the world.
 - **Dholavira and Ramappa Temple (Telangana)** are the latest ones.

What are the Initiatives Related to Tourism?

- **Swadesh Darshan Scheme**
- **National Mission on Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive**
- **Iconic Tourist Sites**
- **Buddhist Conclave**
- **Dekho Apna Desh Initiative**

Controversy Around Nepal's Citizenship Law

Why in News?

Recently, the president of Nepal sent back the **bill to amend the Citizenship Act, 2006** to the lower house of the **Nepal** Parliament for reconsideration.

What's the Issue About?

➤ About:

- After the fall of the monarchy and the transition of Nepal into democracy in 2006, there was the emergence of the **multiparty system** followed by the adoption of a constitution in 2015.
 - Due to this, all-Nepalese citizens **born before the adoption of constitution got naturalised citizenship**.
 - But their **children remained without citizenship as that was to be guided by a federal law that has not yet been framed**.
 - The recent amendment is expected to pave the way to citizenship for many stateless youths and their parents.

➤ Issues in the Act:

○ **Against Gender Justice:**

- It goes against established parameters of gender justice, according to a new amendment, a person born to a **father or a mother with Nepalese citizenship can get citizenship by descent**.
- Also, a person who is born to a **Nepalese mother** (who has lived in the country) and an

Note:

unidentified father will also get citizenship by descent.

- But this part seems humiliating to the mother because her husband has to declare his unknown in order for the child to apply for citizenship.
- Further, in the case of a Nepali father, no such declaration is required.
- **Contradictory in Nature:**
 - If a child born to a Nepalese mother and a father holding foreign citizenship can get naturalised citizenship.
 - This places a condition of permanent residency on the mother (and the child) which will determine the grant of citizenship for the child.
- **Flawed nature of Law:**
 - If a person who is born to a Nepalese mother and an unidentified father can be granted citizenship by descent, in case the unidentified father turns out to be a foreigner, the citizenship by descent would be converted to naturalised citizenship.

What was the Need to bring this Amendment?

- The Nepalese men, particularly from the Terai region, continue to marry women from northern India, so this could affect their Nepali Identity.
 - “Beti-Roti” (Nepalese men marrying Indian women) issue, many women could not become citizens of Nepal as they were subjected to the infamous seven-year cooling-off period before they could apply for citizenship in Nepal.
 - As such women were stateless, and children of such families were also often found to be without Nepalese citizenship.
 - That’s why the new amendments have done away with the cooling-off period for these stateless women.
 - This will benefit the children of such families where the mother and children remained stateless for years.

Dadasaheb Phalke Award

Why in News?

Recently, the Ministry of Information and Broadcasting has announced that the **Dadasaheb Phalke Award** for

the year 2020 will be accorded to legendary actress Ms Asha Parekh. The award will be presented at the 68th National Film Award ceremony in New Delhi.

- Previous recipients of the awards were Rajnikant (2019) and Amitabh Bachhan (2018).

What do we Know about Dadasaheb Phalke Award?

- **About:**
 - The Dadasaheb Phalke Award is part of the National Film Awards, a highly coveted collection of honours in the film industry. The Award is named after Dhundiraj Govind Phalke, the pioneering filmmaker who gave India its first film– ‘Raja Harishchandra’, in 1913.
 - The award is considered the highest honour in the Indian film fraternity. It is awarded for “its outstanding contribution to the growth and development of Indian cinema.
- **Overview:**
 - The award was instituted by the government in 1969, and consists of a ‘Swarna Kamal’, a cash prize of INR 10 lakh, a certificate, a silk roll, and a shawl.
 - The award is presented by the President of India in the presence of the Union Minister of Information and Broadcasting, the Chairpersons of the juries, the representatives of the Film Federation of India, and the Confederation of All India Cine Employees among senior officials.
 - The first recipient of the award was Devika Rani Roerich in 1969.

Who was Dhundiraj Govind ‘Dadasaheb’ Phalke?

- He was born in 1870 at Trimbak in Maharashtra. He studied engineering and sculpture and developed an interest in motion pictures after watching the 1906 silent film *The Life of Christ*.
- Before venturing into films, Phalke worked as a photographer, owned a printing press, and even worked with the famed painter Raja Ravi Varma.
- In 1913, Phalke wrote, produced, and directed India’s first feature film, the silent *Raja Harishchandra*. As a result of its commercial success, Phalke went on to make 95 more films and 26 short films in the next 19 years.
- He is known as “Father of Indian Cinema”.

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Key Points

Details

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Summary

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Key Points

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