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Current Affairs
(CONSOLIDATION)

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(PART – I)

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Polity and Governance

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GLAAS Report 2022

Why in News?

Recently, the Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) report was released by the **World Health Organization (WHO)** and UN-Water.

What is UN-Water?

➢ UN-Water coordinates the United Nations' work on water and sanitation. UN-Water is a 'coordination mechanism'.

➢ It is composed of United Nations entities (Members) and international organizations (Partners) working on water and sanitation issues.

➢ UN-Water's role is to **ensure that Members and Partners' deliver as one'** in response to water-related challenges.

What is the GLAAS Report?

➢ The UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) 2022 report **compiles new data on drinking-Water, Sanitation and Hygiene (WASH)** from 121 countries and territories and 23 External Support Agencies (ESAs).

➢ It serves as a **global reference to inform commitments, priority-setting and actions during the second half of the 2030 Agenda for Sustainable Development** and for the 2023 Conference for the Midterm Comprehensive Review of Implementation of the **United Nations Decade for Action on Water and Sanitation (2018–2028) (UN 2023 Water Conference).**

➢ The report also **highlights opportunities to accelerate progress in key WASH areas** that positively affect the quality and sustainability of WASH services and delivery, pandemic preparedness and resilience to **climate change.**

What are the Highlights of the Report?

➢ **Human Resource:**
  ○ **Less than one-third of countries reported maintaining enough human resources** to manage essential Water, Sanitation and Hygiene (WASH) tasks.

➢ **National Coverage Targets:**
  ○ 45% of countries are on track to meet their drinking-water coverage targets, but only 25% are meeting their sanitation targets.

- More acceleration is needed to achieve national targets.

➢ **Finance:**
- ○ While WASH budgets in some countries have increased, **a significant portion — more than 75% of them — reported having inadequate resources** to carry out their WASH plans and objectives.

➢ **Climate Resilience of WASH Systems:**
- ○ Most WASH policies and plans **do not consider climate change threats to WASH services,** nor do they take the climate resilience of WASH technology and management systems into account
- ○ The **increasing frequency and intensity of extreme weather events caused by climate change continue to hamper the delivery of safe** WASH services, thus affecting the health of users.

➢ **External Support:**
- ○ **Aid for water and sanitation decreased by 5.6% between 2017 and 2020**, and the geographical targeting of the aid shifted.
- ○ In sub-Saharan Africa, the **proportion of WASH aid dropped from 32% to 23%**, while in Central and Southern Asia, it increased from 12% to 20%, and in Eastern and South-Eastern Asia, it increased from 11% to 20%.

What is WASH?

➢ WASH is an **acronym that stands for the interrelated areas of Water, Sanitation and Hygiene.**

➢ The **World Health Organisation (WHO) WASH Strategy** has been developed in response to Member State Resolution (WHA 64.4) and the 2030 Agenda for **Sustainable Development** (SDG 3: Good Health and Well Being, SDG 6: Clean Water And Sanitation).

➢ It is a **component of WHO's 13th General Programme of Work 2019–2023** which aims to contribute to the health of three billion through multisectoral actions like better emergency preparedness and response; and one billion with **Universal Health Coverage (UHC).**

➢ It also **takes on board the need for progressive realization of the human rights** to safe drinking-water and sanitation, adopted by the **UN General Assembly** in July 2010.

National Energy Conservation Day 2022

Why in News?

National Energy Conservation Day is **celebrated every year on 14th December 2022.**

Why do we celebrate Energy Conservation Day?

➢ **Background:**
- ○ The Ministry of Power, Government of India, **launched the National Energy Conservation Awards in 1991 to recognise the contribution of industries** and establishments in reducing energy consumption while maintaining their production through awards.
  - The Bureau of Energy Efficiency (BEE) spearheads the celebrations every year.
- ○ The first time the awards were given away was on **14th December, 1991.**
  - Since then, the day has been declared as National Energy Conservation Day. These awards are given away by eminent dignitaries at a function organised every year on the same day.

➢ **Objective:**
- ○ The day focuses on making people aware of **global warming and climate change** and promotes efforts towards saving energy resources. It also **highlights the achievements of the country in the fields of energy efficiency and conservation.**

➢ **Main attractions of India's Celebration:**
- ○ **National Energy Efficiency Innovation Awards (NEEIA) 2022:**
  - To recognize outstanding work and innovative minds of India in the area of Energy Efficiency, NEEIA awards were started in the year 2021.
  - The awards are evaluated based on Replicability, Affordability, Reliability, Impact on Energy Savings and Impact on Environment & Sustainability.
- ○ **Launch of 'EV-Yatra portal' and Mobile App:**
  - The Bureau of Energy Efficiency has developed a mobile application titled "EV Yatra" that has been designed and developed to facilitate in-vehicle navigation to the nearest public EV charger and

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Note:

a web-portal to enable Charging Point Operators (CPOs) to register their charging details securely into the National Online Database.

What is Bureau of Energy Efficiency (BEE)?

➢ The BEE is a **statutory body established through the** Energy Conservation Act, 2001 under the Union Ministry of Power.

➢ It **assists in developing policies and strategies** with the primary objective of reducing the energy intensity of the Indian economy.

➢ BEE coordinates with designated consumers, designated agencies, and other organizations to identify and utilize the existing resources and infrastructure, in performing its functions.

What is Energy Conservation?

➢ It refers to the **efforts made to ensure that energy is used efficiently by either using less energy** for a particular constant purpose – like switching off lights and fans when not being used – or reducing the use of a particular service that uses energy – like driving less and using public transport instead.

➢ Energy conservation is a **conscious, individual effort, and at a macro level, it leads to energy efficiency.**

➢ The **end goal of energy conservation is to reach sustainable energy.**

➢ It is different from the term 'energy efficiency', which is using technology that requires less energy to perform the same function.

What is the Scenario of the Power Sector of India?

➢ **Overall Capacity:** India is the **third-largest producer and consumer of electricity worldwide,** with an installed power capacity of 408.71 GW as of October 2022.

○ Thermal, nuclear, and renewable energy systems are the major sources for generating India's electricity.

➢ **Renewable Energy Sector:** The renewable energy sector in India is the fourth most attractive renewable energy market globally.

○ In terms of wind energy installation capacity, India was ranked fourth, while it was placed fifth in solar energy installation capacity.

● India has achieved 165.94GW of renewable energy capacity till October, 2022 as against the target of 175GW by 2022.

● In line with the Prime Minister's announcement at **COP26**, the Ministry of New and Renewable Energy is working towards achieving 500 GW of installed electricity capacity from non-fossil sources by 2030.

What are the Initiatives related to Energy Conservation?

➢ **National:**

○ **Perform Achieve and Trade Scheme (PAT):** It is a market-based mechanism to enhance the cost-effectiveness in improving Energy Efficiency in Energy Intensive industries through certification of energy saving which can be traded.

○ **Standards and Labeling:** The scheme was launched in 2006 and is currently invoked for equipment/appliances.

○ **Energy Conservation Building Code (ECBC):** It was developed for new commercial buildings in 2007.

○ **Demand Side Management:** It is the selection, planning, and implementation of measures intended to have an influence on the demand or customer-side of the electric meter.

➢ **Global Efforts:**

○ **International Energy Agency (IEA):** It works with countries around the world to shape energy policies for a secure and sustainable future.

● India is not a member country but an **association country.** However **IEA has invited India to be a full time member.**

○ **Sustainable Energy for All (SEforALL):**

● It is an international organization that works in partnership with the **United Nations** and leaders in government, the private sector, financial institutions and civil society to drive faster action towards the achievement of **Sustainable Development Goal 7 (SDG7)** – access to affordable, reliable, sustainable and modern energy for all by 2030 – in line with the Paris Agreement on climate.

○ **Paris Agreement:**

● It is a **legally binding international treaty** on climate change. Its goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

○ **Mission Innovation (MI):**

Note:

- It is a global initiative of 24 countries and the European Commission (on behalf of the **European Union**) to accelerate clean energy innovation.
- India is one of the member countries.

Pradhan Mantri National Apprenticeship Mela

Why in News?

Recently, the Ministry of Skill Development and Entrepreneurship (MSDE) has held **Pradhan Mantri National Apprenticeship Mela (PMNAM)** under Skill India Mission.

➤ The event witnessed the participation of various companies from different sectors and had the chance **to meet potential apprentices on a single platform and choose applicants** on the spot and provide them with an opportunity to be a part of their organization.

What are the Key Points of PMNAM?

➤ **Under NSDM,** apprenticeship melas are hosted every month, wherein **selected individuals receive a monthly stipend in accordance with government criteria** for gaining new skills.

➤ **PMNAM** is being used as a platform to increase the participation of establishments and students. It is also **providing awareness to the youth on various opportunitie**s existing across the participating companies.

➤ The major purpose of this programme is **to encourage companies to hire more apprentices**, while also assisting employers in discovering the right talent and developing their potential via training and practical experience.

➤ It aims to raise apprenticeship opportunities in India to 10 lakhs by the end of 2022, and to 60 lakhs by 2026.

➤ The government is striving to **train 1 million youth per annum through apprenticeship training and to fulfil this mission.**

What is Skill India Mission?

➤ Skill India Mission was launched on 15th July, 2015 by the Ministry of Skill Development and Entrepreneurship.

➤ The initiatives include **National Skill Development Mission**, National Policy for Skill Development and Entrepreneurship, **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme** and the **Skill Loan scheme.**

○ **PMKVY** incentivises skill training by providing financial rewards to candidates who successfully complete approved skill training programmes.

○ Under the **Skill Loan scheme**, loans ranging from RS 5,000-1.5 lakh is made available to youths seeking to attend skill development programmes.

➤ It was launched in order to provide a **strong institutional framework to implement and scale up skill development efforts** across the country.

What are the Various Initiatives taken for Skill Development?

➤ **SANKALP and STRIVE:** The **SANKALP programme** which focuses on the district-level skilling ecosystem and th**e** **STRIVE project** which aims to improve the performance of ITIs (Industrial Training Institute) 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 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 (Corporate Social Responsibility) 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:** TEJAS (Training for Emirates Jobs and Skills), a Skill India International Project to train overseas Indias 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.

National Policy of Rare Diseases

Why in News?

Recently, a Rajya Sabha Member of Parliament (MP) raised **concerns over National Policy of Rare Diseases (NPRD)** as it did not reach any patient with rare diseases even after several months since its introduction.

What is NPRD?

➢ **About:**
  ○ **Ministry of Health and Family Welfare** formulated launched NPRD in 2021 for the **treatment of rare disease patients.**

➢ **Aim:**
  ○ To increase **focus on indigenous research and local production of medicines.**
  ○ To **lower the cost of treatment** of rare diseases.
  ○ To **screen and detect rare diseases early at early stages**, which will in turn help in their prevention.

➢ **Key Provisions of the Policy:**
  ○ **Categorization:**
    • **Group 1:** Disorders amenable to **one-time curative** treatment.
    • **Group 2:** Those requiring **long term** or **lifelong treatment.**
    • **Group 3:** Diseases for which definitive treatment is available but challenges are to make optimal patient selection for benefit, very high cost and lifelong therapy.
  ○ **Financial Support:**
    • Those who are suffering from rare diseases listed under Group 1 will have the financial support of up to Rs. 20 lakh under the umbrella scheme of **Rashtriya Arogya Nidhi.**
      ■ Rashtriya Arogya Nidhi provides for **financial assistance to patients, living Below Poverty Line (BPL)** and who are suffering from major life-threatening diseases, **to receive medical treatment at any of the super specialty Government hospitals / institutes.**
        ◆ Beneficiaries for such financial assistance would not be limited to BPL families, but extended to about 40% of the population, who are eligible as per norms of **Pradhan Mantri Jan Arogya Yojana**, for their treatment in Government tertiary hospitals only.

  ○ **Alternate Funding:**
    • This includes voluntary crowdfunding treatment by setting up a digital platform for voluntary individual contribution and corporate donors to voluntarily contribute to the treatment cost of patients of rare diseases.
  ○ **Centres of Excellence:**
    • The policy aims to strengthen tertiary health care facilities for prevention and treatment of rare diseases through designating eight health facilities as 'Centres of Excellence' and these will also be provided one-time financial support of up to Rs. 5 crore for upgradation of diagnostics facilities.
  ○ **National Registry:**
    • A national hospital-based registry of rare diseases will be created to ensure adequate data and comprehensive definitions of such diseases are available for those interested in research and development.

What are Rare Diseases?

➢ There are **6,000-8,000 classified rare diseases,** but less than 5% have therapies available to treat them.

➢ Example: **Lysosomal Storage Disorders (LSD), Pompe disease, cystic fibrosis, muscular dystrophy, spina bifida, haemophilia** etc.

➢ **About 95% rare diseases have no approved treatment** and less than 1 in 10 patients receive disease-specific treatment.

➢ 80% of these diseases have **genetic origins.**

➢ These diseases have differing definitions in various countries and range from those that are **prevalent in 1 in 10,000 of the population to 6 per 10,000.**

➢ However broadly, **a 'rare disease' is defined as a health condition of low prevalence that affects a small number of people** when compared with other prevalent diseases in the general population. Many cases of rare diseases may be **serious, chronic and life-threatening.**

➢ India has close to 50-100 million people affected by rare diseases or disorders, the policy report said almost **80% of these rare condition patients are children** and a leading cause for most of them not reaching adulthood is due to the high morbidity and mortality rates of these life-threatening diseases.

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Chairperson of Rajya Sabha

Why in News?

Recently, **Rajya Sabha (RS)** welcomed its new Chairman, Jagdeep Dhankhar.

What are the Key Points Related to RS Chairman?

➢ **About:**
 ○ The **Vice-President** is the **ex-officio chairman of the Rajya Sabha.**
 ○ The Vice-President as Chairman of the Rajya Sabha is the **unchallenged guardian of the eminence and dignity** of the House.

➢ **Constitutional Provisions:**
 ○ **Article 64:** The Vice-President shall be ex officio Chairman of the Council of States and shall not hold any other office of profit.
 ○ **Article 89** of the Constitution provides provision for the **Chairman (Vice-President of India) and the Deputy Chairman of the Rajya Sabha.**

➢ **Power and Functions:**
 ○ The Chairman of the Rajya Sabha is **empowered to adjourn the House or to suspend** its sitting in the event of the absence of quorum.
 ○ The 10th Schedule of the Constitution empowers the **Chairman to determines the question** as to disqualification of a member of the Rajya Sabha on the ground of defection;
 ○ The Chairman's consent **is needed to raise a question of breach of privilege in the House.**
 ○ Parliamentary Committees, regardless of whether set up by the Chairman or by the House, work under the direction of the Chairman.
 ○ He nominates **members to different Standing Committees** and the Department-related Parliamentary Committees. He is the Chairman of the Business Advisory Committee, the Rules Committee and the General Purposes Committee.
 ○ It is the duty of the Chairman t**o interpret the Constitution and rules so far as matters** in or relating to the House are concerned, and no one can enter into any argument or controversy with the Chairman over such interpretation.

➢ **Removal of Chairperson:**
 ○ He can only be removed as the chairman of Rajya Sabha **when he is removed from the office of Vice-President of India.**
 ○ While the resolution is in effect for the removal of Vice-President, he cannot preside **over the house as chairman,** although he can be part of the house.

What are the Provisions Related to the Vice-President?

➢ **Vice President:**
 ○ The Vice President is the **second highest constitutional office in India.** He/She **serves for a five-year term,** but can continue to be in office. irrespective of the expiry of the term, until the successor assumes office.
 ○ The Vice President **may resign his office by submitting his resignation to the President of India.** The resignation becomes effective from the day it is accepted.
 ○ The Vice President can be removed from office by a resolution of the Council of States **(Rajya Sabha),** passed by a majority of its members at that time and agreed to by the House of the People **(Lok Sabha).** A resolution for this purpose may be moved only after a notice of at least a minimum of 14 days has been given of such an intention.

➢ **Eligibility:**
 ○ Should be a citizen of India.
 ○ Should have completed 35 years of age.
 ○ Should be qualified for election as a member of the Rajya Sabha.
 ○ Should not hold any office of profit under the Union government or any state government or any local authority or any other public authority.

➢ **Electoral College:**
 ○ As per Article 66 of the Constitution of India, the Vice-President is elected by the members of the Electoral College.
 ○ Electoral College consists of:
  • Elected members of Rajya Sabha.
  • Nominated members of Rajya Sabha.
  • Elected members of Lok Sabha.
  • **Election Procedure:**
 ○ As per **Article 68 of the Constitution**, the election to fill the vacancy caused by the **expiration of the term of office of the outgoing vice-president** is

Note:

required to be completed before the expiration of the term.

○ **Article 324** of the Constitution read with the Presidential and Vice-Presidential Elections Act, 1952 and the Presidential and Vice-Presidential Elections Rules, 1974, vests the superintendence, direction and control of the conduct of election to the office of the Vice-President of India in the Election Commission of India.

- The notification for election shall be issued on or after the sixtieth day before the expiration of the term of office of the outgoing Vice-President.

○ Since all the electors are members of both Houses of Parliament, **the value of the vote of each Member of Parliament would be the same i.e.,1 (one).**

○ The Election Commission, **in consultation with the Central Government, appoints the Secretary-General of Lok Sabha** and Rajya Sabha, by rotation, as the Returning Officer.

- Accordingly, the Secretary-General, Lok Sabha will be appointed as the Returning Officer for the present election to the Office of the Vice-President of India.

○ The Commission also **decides to appoint Assistant Returning Officers** in Parliament House (Lok Sabha) to assist Returning Officers.

○ As per **Rule 8 of the Presidential and Vice-Presidential Elections Rules, 1974**, polls for the election are taken in the Parliament House.

Upgrade in Land Records

Why in News?

Recently, the Union Government has written a letter to states across the country, directing them to record **Settlement Rights** in **Revenue and Forest Records** within a period of three months.

➢ The letter stated that the **revenue and forest departments** should prepare a **final map of the forest land** that was vested to communities under the **The Forest Rights Act (FRA), 2006**.

What are the Key Points of the Notification?

➢ **About:**

○ **Digital information** on the **record of rights (RoR)** (a legal document that gives details about the land

and who owns it) under **The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** or Forest Right Act (FRA) will also be integrated in the **PARIVESH portal** and other web **Geographic Information System (GIS) platforms** of central and state government departments.

- It would be done after completion of the process of settlement of rights and issuance of titles. The map should then be incorporated in the land records under relevant state laws.

○ The ministry has also directed states to undertake **geographic information system (GIS) surveys** of each land patch and maintain geo-referenced digital vector boundaries of the polygons.

➢ **Benefits:**

○ Land records with data of FRA titles **eliminates the conflict between tribals and officials.**

- Sometimes, a piece of land that has been allotted under FRA, is also diverted for afforestation and this creates a lot of problems for both parties.

○ Geo-referencing of RoR under FRA will be beneficial for the people of the states as the forest and tribal welfare departments will be **able to initiate specific projects and schemes for improving the livelihoods of the FRA title holders**.

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 (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:**

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- ❍ **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.

What are India's Initiatives for Digital Land Records?

- ➢ **SVAMITVA:**
  - ❍ **SVAMITVA** is a scheme for **mapping the land parcels in rural inhabited areas** using **drone technology** and **Continuously Operating Reference Station (CORS)**.
  - ❍ The mapping will be done across the country in a phase-wise manner over a period of four years - from 2020 to 2024.
- ➢ **PARIVESH Portal:**
  - ❍ **PARIVESH** is a web-based application which has been developed for **online submission and monitoring** of the proposals submitted by the proponents for seeking **Environment, Forest, Wildlife and Coastal Regulation Zones (CRZ)** Clearances from Central, State and district level authorities.
- ➢ **Bhumi Samvaad:**
  - ❍ **Bhumi Samvaad** is a **National Workshop on Digital India Land Record Modernisation Programme (DILRMP)**.
  - ❍ It attempts to build upon the commonalities that exist in the arena of land records in various States to develop an appropriate **Integrated Land Information Management System (ILIMS)** across the country, on which different States can also add

State-specific needs as they may deem relevant and appropriate.

- ➢ **National Generic Document Registration System:**
  - ❍ It is a major shift from the **existing manual registration system to online registration** of all transactions in sale-purchase and transfer of land.
  - ❍ It is a big step towards National Integration and a leap towards '**One Nation One Software**'.
- ➢ **Unique Land Parcel Identification Number:**
  - ❍ Being described as "the **Aadhaar** for land", **Unique Land Parcel Identification Number** is a number that would uniquely identify every surveyed parcel of land and prevent land fraud, especially in the hinterlands of rural India, where land records are outdated and often disputed.

What is the Geographic Information System (GIS)?
- ➢ A GIS is a computer system for **capturing, storing, checking, and displaying data** related to positions on Earth's surface.
- ➢ By relating seemingly unrelated data, GIS can **help individuals and organizations better understand spatial patterns and relationships.**
- ➢ GIS can use any information that **includes location.**
  - ❍ The location can be expressed in many different ways, such as **latitude** and **longitude**, **address**, or **ZIP code**.
- ➢ GIS can include data about people, such as **population, income, or education level.**
  - ❍ It can also include information about the sites of factories, farms, and schools, or storm drains, roads, and electric power lines etc.

Section 10A of the Divorce Act, 1869

Why In News?

Recently, the **Kerala High Court** stated that the stipulation of the period of one year or more for filing a divorce petition by mutual consent under **Section 10 A** of the **Divorce Act, 1869** violates **fundamental rights** and is unconstitutional.

- ➢ The court suggested to the **Union government** that there should be a **uniform marriage code** in India to promote the **common welfare** and **good of spouses** in **matrimonial disputes.**

Note:

Why did the Court Strike Down Section 10A of the Indian Divorce Act, 1869?

➢ The **Section 10A** is discriminatory because of the reason that **different communities** in **equal circumstances** are given **different treatment.**

➢ The **legislature** cannot take away **liberty** without adequately safeguarding the interest of the individuals whose interests to seek remedy are affected even if such legislation intends to achieve laudable objectives.

➢ The **right to a judicial remedy** curtailed by **statutory provisions,** which is a **violative of a fundamental right.**
  ○ The right to life encompasses **judicial remedy** as well.

What is the Source of Section 10A of the Indian Divorce Act,1869?

➢ The **one-year** period is stipulated in **Section 28(1)** of the **Special Marriage Act,** **Section 13B (1)** of the **Hindu Marriage Act and Section 32B (1)** of the **Parsi Marriage and Divorce Act.**

➢ Earlier **the Section 10A of the Indian Divorce Act** mandated a **2-years** waiting period for the application of divorce.

➢ The **Kerala High Court itself,** in *Saumya Ann Thomas v. The Union of India & Ors. (2010)* held that the stipulation of a period of two years as the minimum mandatory period under **Section 10A** was arbitrary and oppressive and the period of two years has to be read as one year.

➢ **Article 8** of the **Universal Declaration of Human Rights** declares that everyone has the right to an **effective remedy** by the **competent national Tribunals** for acts violating **fundamental rights** granted by the **constitution** or by **law.**

What is the Universal Declaration of Human Rights?

➢ The **Universal Declaration of Human Rights (UDHR)** is a **milestone** in the history of **human rights.**

➢ The Declaration was proclaimed by the **United Nations General Assembly** in **Paris, December 1948** on **Human Right Day.**

➢ Every year **Human Rights Day** is celebrated on **10th December** all around the world.

➢ It sets out, for the **first time, fundamental human rights** to be universally protected.

➢ Everyone is entitled to all the **rights and freedoms** set forth in this Declaration, without distinction of any kind, such as **race, colour, sex, language, religion, political** or **other opinion, national** or **social origin, property, birth** or **other status.**

➢ All human beings are born **free and equal in dignity and rights.** They are endowed with **reason and conscience** and should act towards one another in a **spirit of brotherhood.**

National Overseas Scholarship Scheme

Why in News?

Recently, Indians who have been sent abroad to study through the **National Overseas Scholarship Scheme** have sent their gratitude towards the Indian Government for the scholarship programme.

What is the National Overseas Scholarship Scheme?

➢ **About:**
  ○ **National Overseas Scholarship Scheme** is a **Central Sector Scheme** to facilitate the **low income students** belonging to the **Scheduled Castes, Denotified Nomadic and Semi-Nomadic Tribes,** Landless Agricultural Labourers and Traditional Artisans category to obtain higher education by studying abroad.
  ○ The Scheme provides **financial assistance to the selected candidates** for pursuing **Masters level courses** and Ph.D. courses abroad in the Institutions/ Universities accredited by the Government/an authorized body of that country in any fields of study.
  ○ In each Selection Year, **125 fresh awards,** subject to availability of funds, will be given under the Scheme.

➢ **Implementing Agency:**
  ○ **Department of Empowerment of Persons with Disabilities,** under the Ministry of Social Justice & Empowerment.

➢ **Reservation:**
  ○ 30% of the awards for each year are **earmarked for women candidates.**

➢ **Eligibility:**
  ❍ At least **60% of marks or equivalent grade** in the qualifying examination.

Private Member's Bill on Election Commission

Why in News?

Recently, a **private member's Bill** was introduced in Lok Sabha seeking to make **Election Commission (EC) of India** responsible for regulating and monitoring the internal operations of political parties in the country.

➢ The bill comes at a time when the **Supreme Court** is hearing petitions on the need for reforms in the appointment of Chief Election Commissioner (CEC) and the Election Commissioners (ECs).

➢ It was argued that the **internal functioning and structures of a large number of political parties have become very "opaque and ossified"** and there is a need to make their functioning transparent, accountable and rule based.

> **What is a Private Member's Bill?**
>
> ➢ Any **Member of Parliament (MP) who is not a minister** is referred to as a private member. A Private Member issues a Private Member's Bill.
>
> ➢ The purpose of the private member's bill is to **draw the government's attention to what individual MPs see as issues** and gaps in the existing legal framework, which require legislative intervention.
>   ❍ Thus, it **reflects the stand of the opposition** party on public matters.
>
> ➢ Its introduction in the House requires one month's notice and **can be introduced and discussed only on Fridays.**
>   ❍ Its rejection by the House has no implication on the parliamentary confidence in the government or its resignation.
>
> ➢ The last time a private member's bill was passed by both Houses was in 1970.
>   ❍ It was the Supreme Court (Enlargement of Criminal Appellate Jurisdiction) Bill, 1968.

What are the Highlights of the Bill?

➢ **On Appointment of CEC:**
  ❍ It also seeks the members of the EC, including the Chief Election Commissioners, to be appointed by a panel consisting of the Prime Minister, Union Home Minister, Leader of Opposition or floor leader in Lok Sabha, Leader of Opposition or floor leader in Rajya Sabha, the Chief Justice of India and two seniors most judges of the Supreme Court.

➢ **Tenure for CEC:**
  ❍ The Bill envisages a **fixed tenure of six years for the CEC and EC** and three years from the date of appointment for the Regional Commissioners.

➢ **Removal Procedure for CEC:**
  ❍ They should not be removed from office except **in accordance with the procedure laid down for the removal of a SC Judge.**
  ❍ Also, **after retirement, they should not be eligible for any reappointment** to any office under the Government of India, State Governments and the Constitution.

➢ **Procedure in Case of Non-Compliance:**
  ❍ If any registered political party fails to comply with the advisories, duration and instructions issued by the ECI with regard to their internal functions, the **recognition of such political party as a State or National may be withdrawn** including any other action as the Election Commission deems fit under section 16A of the **Election Symbols (Reservation and Allotment) Order 1968.**

What is the Structure of the ECI?

➢ 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 CEC and two ECs.
  ❍ The President of India appoints CEC and ECs. They have a fixed tenure of 6 years, or up to the age of 65 years, whichever is earlier.
  ❍ They also enjoy the same status and receive salary and perks as available to Judges of the SC.

What are the Powers and Responsibilities of the ECI?

➢ Determining the **Electoral Constituencies' territorial areas** throughout the country.

➢ Preparing and periodically **revising electoral rolls** and **registering all eligible voters.**

➢ **Notifying the schedules and dates of elections** and scrutinising nomination papers.

➤ Granting recognition to the various political parties and **allocating them election symbols.**

➤ The Commission also has a**dvisory jurisdiction in the matter of post-election disqualification** of sitting members of Parliament and State Legislatures.

➤ It is also responsible for **conducting bye-elections** in any constituency whenever the need arises.

➤ It issues the **Model Code of Conduct (MCC)** in elections for political parties and candidates to avoid indulgence in unfair practice or arbitrary abuse of powers by those in power.

What are the Recent Issues Related to the Election Commission?

➤ **Truncated Tenure of CEC:** The SC has recently pointed out that **"No Chief Election Commissioner has completed a six-year tenure since 2004"**, and because of the truncated tenure, the CEC is unable to do anything substantial.

  ❍ **Article 324** of the Indian Constitution talks about the appointment of ECs, however, it only envisages the enactment of a law to this effect and **does not lay down any procedure for these appointments.**

➤ **Executive Influence in Appointment:** The ECs are appointed by the current government and are therefore potentially obligated to the government or may feel that they are held to a specific level of loyalty.

➤ **Dependence on Centre for Finance:** Despite several provisions designed to make the ECI an independent body, the Union Government still controls its finances. The expenses of EC are **not charged on the Consolidated Fund of India.**

➤ **Lack of Independent Staff:** Because ECI does not have its own staff, it has to rely on staff from Central and State Governments whenever elections are held.

➤ **Limited Power to Regulate Inner-Party Democracy:** The ECI is limited to advising parties on internal elections and has **no authority to enforce inner-party democracy** or regulate party finances.

National and State Parties

Why in News?

Recently, the Aam Aadmi Party became the **9th National Party of India** after the result of Gujarat elections where it gained almost 13% of the vote share.

➤ At the time of the **first General Elections (1952)**, there were **14 national parties in India.**

Note:

➤ The **Election Commission of India (ECI)** registers political parties for the purpose of elections and grants them **recognition as national or state parties** on the basis of their poll performance.

➤ The other parties are simply declared as **registered-unrecognised parties.**

  ❍ As per the **Representation of People Act 1951**, Registered political parties, in course of time, can get recognition as 'State Party' or National Party'.

Election Commission of India (ECI)

About
● **Autonomous Constitutional Authority -** Administers Union/state election
  ◦ LS, RS, State LA, the offices of the President and VP
● Estd - **25th Jan1950** (National Voters' Day)

Constitutional Provisions
Part XV - Article 324 to 329

Structure
● 1 Chief Election Commissioner and 2 Election Commissioners **appointed by President**
● **Tenure- 6 years, or up to the age of 65 years,** whichever is earlier
● Retiring ECs – **eligible for further appointment by the govt.**
● **Removal of CEC-** Resolution on the **ground of proven misbehaviour or incapacity,** with majority of 2/3rd members present and voting, supported by more than 50% of the total strength of the house

Major Roles and Responsibilities
● Determining Electoral Constituencies
● Preparing/Revising electoral rolls
● Notifying the schedules and dates of elections
● **Registering political parties and granting them the status of national or state parties**
● Issuing the Model Code of Conduct (MCC) for political parties
● Advising the President on **matters concerning the disqualification of MPs**

Challenges
● Truncated Tenure of CEC
● Executive Influence in Appointments
● Dependence on Centre for Finance
● Lack of Independent Staff

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What is a National Party?

➤ **About:** As the name suggests, it has a **nationwide presence** as opposed to a regional party that is restricted to only a particular state or region.

○ A certain stature is sometimes associated with being a national party, but this **does not necessarily translate into having a lot of national political influence.**

➤ **Conditions for Declaring a Party 'National':**

○ As per the ECI's **Political Parties and Election Symbols, 2019 handbook**, a political party would be considered a national party if:

● It is 'recognised' in four or more states; or

● If its candidates have secured at least 6% of total valid votes in at least 4 states (in latest Lok Sabha or Assembly elections) and the party has at least 4 MPs in the last LS polls; or

● If it has won at least 2% of the total seats in the LS from at least 3 states.

How is a Party Declared a State Party?

➤ A party is recognised as a state party in a state **if any of the following conditions is fulfilled:**

○ If it **secures 6% of the valid votes** polled in the state at a general election to the respective state legislative assembly (state LA) and **also, it wins 2 seats in the same state LA.**

○ If it **secures 6% of the total valid votes in the state** at a general election to the LS; and **also**, it wins **1 seat in the LS from the same state.**

○ If it wins **3% of seats in the LA** at a general election to the legislative assembly of the state concerned **or 3 seats in the assembly (whichever is more).**

○ If it wins **1 seat in the LS for every 25 seats** or any fraction thereof allotted to the state at a general election to the LS from the state concerned.

○ If it secures **8% of the total valid votes** polled in the state at a General **Election to the LS from the state or to the State LA.**

What is the Significance of Being Declared a National/State Party?

➤ A recognised party (national or state) has the **right to certain privileges like allocation of the party symbols,** provision of time for **political broadcasts on the state-owned television** and radio stations and **access to electoral rolls.**

➤ These parties are allowed to have **40 "star campaigners"** during the time of elections (the **registered-unrecognised parties** are allowed to have 20 "star campaigners").

➤ Every **national party is allotted a symbol exclusively reserved** for its use throughout the country. **Even in the states where it is not contesting elections.**

○ For a state party, the allotted symbol is exclusively reserved for its use in the state/s in which it is so recognised.

Bills to Modify the Scheduled Tribes (ST) List

Why in News?

Recently, **four Bills, seeking to modify the Scheduled Tribes (ST) list** in 4 States - Tamil Nadu, Karnataka, Himachal Pradesh and Chhattisgarh, were introduced in **Lok Sabha** via amendments proposed in the **Constitution (STs) Order, 1950**.

What are the Proposed Changes?

➤ **The Bill Seeks To:**

○ Add the **Narikoravan and Kuruvikkaran hill tribes** to the ST list of Tamil Nadu.

● The **Lokur Committee (1965)**, in its report, also recommended their inclusion in the list.

○ **Introduce Betta-Kuruba as a synonym for the already categorised Kadu kuruba in the ST list of Karnataka.**

○ **Add a number of synonyms in Devanagri script for the already categorised Bhariya Bhumia tribe** in the ST list of Chhattisgarh.

● As per the Ministry of Tribal Affairs, they are all part of the same tribe but had been kept out of the list just because they are pronounced and spelled their names differently.

○ Add **Hattee community** of Trans-Giri region in Sirmaur district **to the ST list of Himachal Pradesh** (after almost five decades).

What is the Process of Inclusion in the ST List?

➤ **Recommendation from State:**

○ The process to include tribes in the ST list begins with **recommendations from the respective State**

Note:

governments, which are then **sent to the Tribal Affairs Ministry**, which reviews and sends them to the **Registrar General of India for approval**.

➤ **Approval from NCST:** This is followed by the **National Commission for Scheduled Tribes (NCST)** approval **before the list is sent to the Cabinet for a final decision**.

➤ **President's Assent:** The **final decision rests with the President (under Articles 342).**

○ The **inclusion of any community in the STs comes into effect only after the President assents to a Bill** amending the Constitution (Scheduled Tribes) Order, 1950.

What are the Provisions Related to STs in India?

➤ **Definition:**

○ The **Constitution of India does not define** the criteria for recognition of STs. As per **Census-1931,** STs are termed as **"backward tribes"** living in the **"Excluded"** and **"Partially Excluded" areas**.

○ The **Government of India Act of 1935** called for the first time for **representatives of "backward tribes" in provincial assemblies**.

➤ **Constitutional Provisions:**

○ **Article 366(25):** It only **provides a process to define STs**: "STs means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are **deemed under Article 342** to be Scheduled Tribes for the purposes of this Constitution."

○ **Article 342(1):** The President with respect to any State/UT (after consultation with the **Governor** in case of state) may **specify the tribes/tribal communities/part of or groups within tribes/tribal communities as a Scheduled Tribe** in that State/UT.

○ **Fifth Schedule: It lays out provisions for the Administration and Control of Scheduled Areas and STs** in states other than 6th Schedule States.

○ **Sixth Schedule: Deals with the administration of the tribal areas** in Assam, Meghalaya, Tripura and Mizoram.

➤ **Statutory Provisions:**

○ Protection of Civil Rights Act, 1955 against Untouchability.

○ **Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.**

○ **Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996.**

○ **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.**

National Judicial Commission Bill, 2022

Why in News?

Recently, the **National Judicial Commission Bill, 2022** was introduced after the majority of voice votes were in its favour.

What are the Highlights of the Bill?

➤ **Regulates the Procedure of Appointment:**

○ The bill aims to **regulate the procedure to be followed by the National Judicial Commission for recommending people for appointment** as the **Chief Justice of India** and other judges of the **Supreme Court** and Chief Justices and other judges of High Courts.

➤ **Regulate the Transfers:**

○ It also aims to **regulate their transfers and to lay down judicial standards and provide for accountability of judges**, and establish credible and expedient mechanism for investigating into individual complaints for misbehaviour or incapacity of a judge of the apex court or of a high court and to regulate the procedure for such investigation.

➤ **Removal of a Judges:**

○ It also **proposes for the presentation of an address by parliament** to the president in relation to proceeding for removal of a judge and for matters connected therewith or incidental thereto.

What was the National Judicial Appointments Commission (NJAC)?

➤ **About:**

○ In August 2014, Parliament passed the **Constitution (99th Amendment) Act, 2014** along with the NJAC Act, 2014, providing for the creation of an independent commission to appoint judges to the Supreme Court and high courts to replace the collegium system.

Note:

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○ In 2015, the Supreme Court declared both the 99th Constitutional Amendment, 2014 and the NJAC Act, 2014 as unconstitutional and null and void.

➢ **Composition of NJAC:**

○ The **Chief Justice of India** as the ex officio Chairperson

○ Two senior-most Supreme Court Judges as ex officio members

○ The Union Minister of Law and Justice as ex officio member

○ Two eminent persons from civil society (to be nominated by a committee consisting of the Chief Justice of India, Prime Minister of India and the Leader of Opposition in the Lok Sabha; one of the eminent persons to be nominated from SC/ST/OBC/minorities or women)

➢ **Difference between Collegium System and NJAC (Appointment):**

○ **NJAC:**

● The Chief Justice of India and Chief Justices of the high courts were to be recommended by the NJAC based on seniority while SC and HC judges were to be recommended on the basis of ability, merit, and "other criteria specified in the regulations".

● The Act empowered any two members of the NJAC to veto a recommendation if they did not agree with it.

○ **Collegium System:**

● In the **collegium system,** a group of the senior-most judges makes appointments to the higher judiciary and this system has been operational for nearly three decades.

What is the Collegium System?

➢ The Supreme Court Collegium is a **five-member body**, which is headed by the incumbent **Chief Justice of India (CJI)** and comprises the four other senior most judges of the court at that time.

○ A High Court collegium is led by the incumbent Chief Justice and two other senior most judges of that court.

➢ The government can also raise objections and seek clarifications regarding the collegium's choices, but if the collegium reiterates the same names, the government is bound to appoint them as judges.

What are Constitutional Provisions related to the Appointment of Judges?

➢ **Articles 124(2) and 217 of the Constitution** deal with the appointment of judges to the Supreme Court and High Courts.

○ The appointments are made by the President, who is required to hold consultations with "such of the judges of the Supreme Court and of the High Courts" as he may think is needed.

➢ But the Constitution does not lay down any process for making these appointments.

Why was the NJAC Challenged in Court?

➢ In early 2015, the **Supreme Court Advocates-on-Record Association (SCAORA) filed a plea challenging the provisions** of what were now laws.

➢ SCAORA contended that both the **Acts were "unconstitutional" and "invalid"**.

○ It argued that the 99th Amendment which provided for the creation of the NJAC **took away the "primacy of the collective opinion of the Chief Justice of India and the two senior-most Judges of the Supreme Court of India"** as their collective recommendation could be vetoed or "suspended by majority of three non-Judge members".

○ It stated that the **Amendment "severely" damaged the basic structure of the Constitution**, of which the independence of the judiciary in appointing judges of the higher judiciary was an integral part.

➢ It also contended that the **NJAC Act was itself "void" and "ultra vires" the Constitution as it was passed in both Houses of the parliament** when Articles 124(2) and 217(1) as originally enacted were in force, and the 99th Amendment had not received Presidential assent.

Tribal Development Report 2022

Why in News?

Recently, the Tribal Development Report 2022 was launched by the Bharat Rural Livelihood Foundation (BRLF), which claims to be the **first of its kind since 1947.**

➢ The BRLF was set up by the Union Cabinet in 2013 as an independent society under the **Union Ministry of Rural Development** to scale up civil society action in partnership with central and state governments.

Note:

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What are the Findings of the Report?

➢ **Tribal Population:**

  ○ India's tribal communities **form 8.6% of the country's population** according to the 2011 Census. But **they are at the bottom of the country's development pyramid** even after 75 years of independence.

  ○ Central India is home to **80% of the tribal communities** in the country.

  ○ Of the **257 Scheduled Tribe districts**, 230 (90%) are either forested or hilly or dry. But they account for 80 % of India's tribal population.

➢ **Tribals are most Deprived:**

  ○ Be it sanitation, education, nutrition, access to drinking water and education, despite 70 years of independence, **Adivasis are the most deprived.**

➢ **Disturbances and Conflict in Tribal Regions:**

  ○ Tribal areas are also areas that have faced a lot of disturbance and conflict. This is one of the reasons why many government welfare schemes and policies are unable to take off in these areas. Distress in the area affects both sides.

➢ **Pushed into Harshest Ecological Regions:**

  ○ The report stated that indigenous communities of India have been pushed farther away from alluvial plains and fertile river basins into the harshest ecological regions of the country like hills, forests, and drylands.

➢ **Forest Conservation Act in 1980:**

  ○ After the enactment of the Forest Conservation Act in 1980, the conflict came to be seen as between environmental protection and the needs of local Adivasi communities, driving a wedge between people and forests.

  ○ It was in the **National Forest Policy of 1988** that domestic **requirements of local people were explicitly recognised** for the very first time.

    ● The Policy emphasised safeguarding their customary rights and closely associating Adivasis in the protection of forests. But the movement towards a people-oriented perspective has not been matched by reality on the ground.

➢ **Suggestions:**

  ○ It is important to understand the **special characteristics of tribal communities to frame policies f**or them.

○ There are many tribal communities that prefer isolation and silence. They are shy and are not going to reach out to the outside world on their own. **Policy makers and leaders of the country need to understand this trai**t and then work towards the welfare of Adivasis so that they connect with them in a better way.

What are the Government Initiatives Related to Tribes?

➢ **Eklavya Model Residential Schools**

➢ **TRIFED**

➢ **Digital Transformation of Tribal Schools**

➢ **Development of Particularly Vulnerable Tribal Groups**

➢ **Pradhan Mantri Van Dhan Yojana**

Amalgamation of ODOP with DEH Initiative

Why in News?

Recently, **One District One Product (ODOP)** approach has been operationally **merged with 'Districts as Export Hub (DEH)' initiative.**

What is the ODOP Approach?

➢ **About:**

  ○ ODOP is an approach adopted under the **Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme.**

  ○ It will **provide for the framework for value chain development and alignment of support infrastructure of the PMFME scheme.** There may be more than one cluster of ODOP products in one district.

  ○ There **may be a cluster of ODOP products consisting of more than one adjacent district in a State.**

  ○ The States would **identify food products for districts** keeping in view the existing clusters and availability of raw material.

  ○ The **ODOP could be a perishable produce** based or cereal based or a food item widely produced in an area. E.g., mango, potato, pickle, millet-based products, fisheries, poultry, etc.

Note:

○ Certain other **traditional and innovative products** including waste to wealth products could be supported under the Scheme.

○ For example, **honey, minor forest products in tribal areas, traditional Indian herbal edible items like turmeric, amla, haldi,** etc.

➢ **Significance:**

○ **Adopting a cluster approach** will help in the development of specific agriproducts in districts having a comparative advantage.

○ It would lead to easing in providing **common facilities and other support services.**

What are the Achievements of ODOP?

➢ The **ODOP Government e-Marketplace (GeM) Bazaar** was launched in August 2022 with over **200 product categories to promote sales and procurement of ODOP products** across the country.

➢ ODOP products were **showcased in various International forums** such as **World Economic Forum's Davos Summit**, **International Yoga day (IYD),** etc.

➢ The ODOP initiative was identified for the **prestigious Prime Minister's Award for Excellence in Public Administration in Holistic Development.**

➢ **Related to DEH:**

○ **State Export Promotion Committee (SEPC) and District Export Promotion Committee (DEPC) have been constituted** in all States/Union Territories (UTs).

○ **Products/services with export potential have been identified** in 734 Districts across the country.

○ **State Export Strategy** has been prepared in 28 States/UTs

○ **Draft District Export Action Plan (DEAP)** has been prepared for 570 Districts

○ **A web portal to monitor the progress of DEAP** in all the Districts has been developed by the **Director General of Foreign Trade (DGFT).**

What is 'Districts as Export Hub' Initiative?

➢ DEH aims to **convert each district into an export hub** for which Department of Commerce, Ministry of Commerce & Industry through DGFT is engaging with State / UT Governments.

➢ As part of this initiative, **an institutional mechanism is being set up in each District in the form of DEPCs** that may be headed by the District Magistrate/ Collector/Deputy Collector/District Development Officer of the District and various other stakeholders as its members.

➢ The primary function of the DEPC will be **to prepare and act on DEAP in collaboration with all the relevant stakeholders** from the center, State and the District level.

➢ DEAP will include **clear identification of products (goods and services) with export potential in the District.** It may include:

○ **Institutional/other responsibilities**

○ **Specifics of policy,** regulatory and operational reform, and infrastructure/utilities/logistics interventions

○ **Import export formalities**

○ **Identification of bottlenecks/Issues** in **Geographical Identification (GI) production, registration, marketing** and **its exports.**

Need to Restructure the District Collector's Role

Why in News?

Recently, the **Vidhi Centre for Legal Policy** (Delhi based independent think-tank) in its book **"From Rule by law to the Rule of Law"** suggested reforms regarding role of the **District Collector/ District Magistrate (DC/ DM).**

What is the Jurisdiction of the DM/DC?

➢ Head of **land and revenue** administration.

➢ District head of the executive magistracy and overall supervision of **law and order, security and police matters, licensing and Regulatory Authority (such as Arms Act), conduct of elections, disaster management, public service delivery, and Chief Information** and **Grievance Redressal Officer.**

➢ **District Magistrate** can deploy and trigger the movement of armed forces in the district in times of **emergency** and **crisis** is done under his guidance.

Note:

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➢ He is the authority that issues various kinds of licenses in the district related to **Arms, Explosives, Cinematography Acts etc**.

➢ In many states, it is the **collector** who is the overall supervisory authority responsible for the proper management of **jails** and **remand/juvenile homes** in the district.

➢ He is also the authority empowered to issue detention orders/custody warrants under **special security/anti-crime laws.**

What is the Need to Restructure the District Collector's Role?

➢ The Indian legal system still has remnants of colonial authority despite having a modern **Constitution.**

➢ The name of the positions of the **District Collector** varies from place to place in the country which creates confusion related its role and responsibilities.

  ○ Post of **District Collector** comes in ambit of All India Services so the name should be homogeneous in entire India.

➢ Different nomenclatures represent diverse administrative developments in various regions of **British-administered India.**

➢ The lack of devolution of powers and responsibilities to local governing bodies is an indication of the vested interest in mystifying governance.

➢ Article 50 of the **Constitution** states that **"The State shall take steps to separate the judiciary from the executive in the public services of the State."**

Conclusion

➢ District administration was covered in the **15th report** of the Second Administrative Reforms Commission (ARC). It is now vital to reevaluate and redefine the district administration's function after the constitutionally mandated establishment of **Panchayati Raj Institutions (PRI)** and municipal bodies.

  ○ Although it has been asserted that the introduction of PRIs in several states has restricted the role of district collectors to that of offering guidance and assistance. This arrangement has been pressed by the **15th ARC report** to remove any obstacles in the way of the devolution of decision-making to local levls.

  ○ All of this requires an entire restructuring of the administrative machinery at the district level.

Collegium System

Collegium System

○ System of appointment and transfer of judges
○ Evolved through judgments of the Supreme Court, and not by an Act of Parliament

Constitutional Provisions Related to Appointment of Judges

- Articles **124 (2)** and **217** - Appointment of judges to the Supreme Court and High Courts
  - President makes appointments after consulting with "such judges of the Supreme Court and of the High Courts" as she may deem necessary.
- But the Constitution does not lay down any process for making these appointments.

Evolution of the System

First Judges Case (1981)
- SC held that in the appointment of a judge of the SC or the HC, the word "consultation" in Article **124 (2)** and in Article **217** of the Constitution does not mean "concurrence".
- Gave the executive primacy over the judiciary in judicial appointments

Second Judges Case (1993)
- SC overruled the First Judges Case
- Gave birth to the Collegium System (Primacy to the Judiciary)
- Collegium included the Chief Justice of India and the **2** most senior judges of the SC

Third Judges Case (1998)
- SC expanded the Collegium to include the CJI and the **4** most-senior judges of the court after the CJI

Current Structure
- Supreme Court Collegium: CJI and the **4** senior-most judges of the SC
- High Court Collegium: CJI and **2** senior most judges of the SC

Criticism
- Opaqueness
- Scope for Nepotism
- Exclusion of Executive
- No Predetermined Procedure of Appointment

National Judicial Appointments Commission (NJAC)
- It was an attempt to replace the Collegium System. It prescribed the procedure to be followed by the Commission to appoint judges
- NJAC was established by the **99th** Constitutional Amendment Act, **2014**
- But the NJAC Act was termed unconstitutional and was struck down, citing it as having affected the independence of the judiciary

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Note:

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Vice –President of India

Pradhan Mantri Adi Adarsh Gram Yojana

Vice-President of India
Occupies the second highest office in the country after President

Origin
Modelled on the lines of the American Vice-President

Const. Provisions
Article 63-71

Election
Indirectly elected by an electoral college

This electoral college consists of the elected members of LS and RS + nominated members of RS but not the members of State LAs (unlike electoral college for Presidential election)

The power of conducting elections to the office of VP rests with the ECI (Article 324)

Qualification
Citizen of India - at least 35 years of age

First VP and Current VP
Dr. S. Radhakrishnan
Jagdeep Dhankhar

Term of Office
5 years; eligible for re-election

Removal from Office
- VP may resign
- Removal by a effective majority of RS (all the then members) and LS agreeing to it (simple majority)
  - Resolution for removal is introduced only in RS
- Constitution mentions no ground for removal

Powers
- Ex-officio Chairman of RS - Powers and functions similar to the LS Speaker
- Acts as President (max 6 months) - when a vacancy occurs in his office

This is different from the office of American VP who succeeds to the Presidency when the office falls vacant

When acting as the President, VP does not perform the functions of the Chairman of RS

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Why in News?

The Union Ministry of Tribal Affairs is now working to **develop 36,428 villages with at least 50% tribal population and 500 Scheduled Tribes** across the country into **'model tribal' villages.**

➢ These efforts were part of the **existing Special Central Assistance to Tribal SubScheme (SCA to TSS),** which has now been renamed to the **Pradhan Mantri Adi Adarsh Gram Yojna (PMAAGY)**, for implementation from 2021-22 to 2025-26.

What is Pradhan Mantri Adi Adarsh Gram Yojana?

➢ **About:**
  ○ It supplements the **efforts of State Governments for development and welfare of tribal people** by extending **Special Central Assistance** as an additive to the State Tribal Sub-Plan (TSP).
  ○ It aims at **mitigating gaps and providing basic infrastructure in villages** with significant tribal population in convergence with funds available under different schemes in Central Scheduled Tribe Component.
  ○ The Scheme is a **centrally sponsored scheme** with 100% grant from government of India.

➢ **Objectives:**
  ○ Preparing Village Development Plan based on the needs, potential, and aspirations.

Note:

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○ Maximizing the coverage of individual/family benefit schemes of the Central / State Governments.

○ Improving the infrastructure in vital sectors like health, education, **connectivity** and livelihood.

○ The scheme envisions to mitigate gaps in prominent 8 sectors of development:

- **Road connectivity** (Internal and Inter village /block)
- **Telecom connectivity** (Mobile /internet)
- **School**
- **Anganwadi Centres**
- **Health Sub-Centre**
- **Drinking water facility**
- **Drainage**
- **Solid waste management**

India Internet Governance Forum 2022

Why in News?

Recently, the Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship addressed the India Internet Governance Forum (IIGF) 2022.

➢ **Theme for 2022:** 'Leveraging Techade for Empowering Bharat'.

➢ The event's goal is to **discuss the roadmap to digitization and to reaffirm India's place on the global stage** by emphasising its role and importance in international policy development on internet governance.

What is IIGF?

➢ It is an **initiative associated with the UN Internet Governance Forum (UN-IGF).**

○ UN-IGF is a multi-stakeholder platform bringing together representatives from various groups, considering all to be at par to discuss public policy issues related to the Internet.

○ The IGF is an **outcome of the Tunis Agenda of the World Summit** on the Information Society that took place in 2005.

○ Since its first meeting, in 2006, the **IGF has been convened annually by the United Nations Secretary-General**, in accordance with the mandate set out in the Tunis Agenda for the Information Society.

What is the State of India's Internet Connectivity?

➢ **India is the largest Connected Nation:**

○ India is the **largest 'connected' nation in the world with 800 million Indian users.**

○ **5G** and the largest rural broadband connectivity network project at **BharatNet** will have 1.2 billion Indian users constituting the single largest presence of the global internet.

○ India also has **improved accessibility to the internet to countries in the Global South** which have not been able to step up and create the same sort of pace of digitization of the economy as internetization of their economies.

➢ **Benefits of Internet:**

○ These benefits include **increased productivity, financial independence, and greater access to information**.

What is Internet Governance?

➢ **About:**

○ Internet Governance, broadly defined, is the **development and application by Governments, the private sector and civil society,** in their respective roles, of shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet.

○ It covers **activities such as development and coordination of technical standards,** operation of critical infrastructure and public policy issues.

○ Internet Governance involves Internet Protocol Addressing (IP Addressing), Domain Name System (DNS), Routing, Technical Innovations, Standardization, Security, Public Policy, Privacy, Legal Issues, Cyber Norms, Intellectual Property and taxation.

➢ **Layers of internet Governance:**

○ Physical Infrastructure layer

○ Code or Logical layer

○ Content layer

○ Security

➢ **India's Approach:**

○ India supports a **multi-stakeholder approach in matters on Internet Governance.**

Note:

- ○ On matters relating to national security, the **Government will continue to have supreme right and control.**
- ○ India's strength in the sector is its industry and human resource which can be leveraged in a multi-stakeholder approach.
- ➢ **Challenges:**
  - ○ Continuously evolving nature of the internet, concentration of digital power in a few companies and countries, decision making skewed to the supply side rather than to the demand side etc.

Family Pehchan Patra for J&K Residents

Why in News?

The Government of India has recently decided to introduce a **Family Pehchan Patra (FPP)** for residents of the Union Territory of **Jammu & Kashmir.**

What is the Proposed Family Pehchan Patra?

- ➢ **About:**
  - ○ The FPP will be an **identity card with a unique 8-digit alphanumeric number** (like in a PAN Card) to identify each family and its members **through the head of the family.**
  - ○ It will be a **single identifier** for every family and individual in the UT unlike the **Aadhar card** which contains information about an individual only.
- ➢ **Details and Linking:**
  - ○ The card will contain details of all members of the family, including their names, ages, qualifications, employment status, etc. and will be **linked with the Aadhaar and bank account number of the head** of the family.
- ➢ **Significance:**
  - ○ **Better Delivery of Welfare Schemes:** The FPP aims to create an authentic, verified, and reliable database of families in J&K to **ensure speedy and transparent doorstep delivery** of welfare schemes to **eligible beneficiaries.**
  - ○ **Smoother Direct Benefit Transfers:** Such a system would facilitate direct transfer of benefits to their bank accounts with **minimum human interference.**

- ○ **Eliminating Duplicacy:** The database will also help in identifying and weeding out **duplicate ration cards and Aadhaar** and will help the government **identify families that have a number of educated youth, but without jobs.**
- ○ **Automatic Updation of Data:** The information in the database (births, deaths, and marriages) will be **continuously and automatically updated** and people will **no longer have to visit local officials** for such purposes.
  - ● It will also help the government plan policy based on authentic, updated population data.
- ➢ **Non-Consent regarding FPP:**
  - ○ As per the Government, the database will be **created only with the consent of the family.** However, the **families that do not consent** to having a family card will **likely face practical difficulties in availing benefits** of the welfare schemes.
  - ○ Subsidised rations through the **Targeted Public Distribution System (PDS)** under the **National Food Security Act**, free medical treatment, old age/ widow/family pensions, help to victims of militancy, scholarships, etc. will **all be linked with the family ID card.**
- ➢ **Arguments against FPP:**
  - ○ The opposition parties have criticised the idea of a FPP describing it as a **'surveillance tool' to keep a watch on Kashmiris.**
    - ● They claim the "unique family IDs" as a symbol of widening trust deficit on the people of J&K.
  - ○ The proposed unique IDs were criticised as a **waste of time and resources and** were not needed as a **similar system - Aadhar - already exists.**
  - ○ There are also concerns regarding the **ability of the government in protecting the personal data of the residents** in the wake of recent cyber and ransomware attacks by Chinese entities.

Which Other States have Similar Family Databases?

- ➢ Several other states have proposed or created similar databases; **Haryana was the first** state to introduce the concept of the **family pehchan patra.**
- ➢ **Punjab introduced such a system in 2021** for direct transfer of benefits to families who are eligible for various social service schemes of the government.

Note:

- ➢ More recently, in **November 2022**, the Uttar Pradesh government decided to launch a **UP Parivar Kalyan Card** for similar purposes.
- ➢ The state of **Rajasthan has also introduced "Jan Aadhaar Yojana"** which aims to be the **single identifier of a family** (and an individual) and the **sole vehicle in the state** on which delivery of all kinds of cash as well non-cash benefits takes place.

Personality Rights

Why in News?

Recently, the Delhi High Court recently passed an interim order **to prevent the unlawful use of a Bollywood star's name, image and voice.**

- ➢ The court, through its order, restrained persons at large from infringing the **personality rights of the actor.**

What are Personality Rights?

- ➢ Personality rights refer to the **right of a person to protect his/her personality** under the right to privacy or property.
- ➢ These rights are **important to celebrities as their names, photographs or even voices can easily be misused** in various advertisements by different companies to boost their sales.
- ➢ Therefore, it is **necessary for renowned personalities/ celebrities to register their names to save their personality rights.**
- ➢ A large list of unique personal attributes contribute to the making of a celebrity. All of these attributes need to be protected, such as name, nickname, stage name, picture, likeness, image and any identifiable personal property, such as a distinctive race car.

What is the Difference between Publicity Rights and Personality Rights?

- ➢ Personality rights **consist of two types of rights:**
  - ○ **First:** The right of publicity, or the right to keep one's image and likeness from being commercially exploited without permission or contractual compensation, which is similar (but not identical) to the use of a trademark.
  - ○ **Second:** The right to privacy or the right to not have one's personality represented publicly without permission.

- ➢ However, under common law jurisdictions, **publicity rights fall into the realm of the 'tort of passing off'.**
  - ○ **Passing off takes place when someone intentionally or unintentionally passes off their goods or services** as those belonging to another party.
  - ○ Often, this **type of misrepresentation damages the goodwill of a person or business,** resulting in financial or reputational damage.

What about the Personality Rights in India?

- ➢ The closest statute to protect personality rights is **Article 21 of the Constitution of India under rights to privacy and publicity.**
- ➢ Other statutory provisions protecting personality rights include the **Copyright Act, 1957.**
  - ○ According to the Act, **moral rights are only granted to authors and performers,** including actors, singers, musicians, and dancers.
  - ○ The provisions of the Act mandate that the Authors or the Performers have the right to be given credit or claim authorship of their work and also have a right to restrain others from causing any kind of damage to their work.
- ➢ **The Indian Trademarks Act, 1999** also protects personal rights under Section 14, which restricts the use of personal names and representations.
- ➢ Further, the Delhi High Court in its judgment in ***Arun Jaitley vs Network Solutions Private Limited and Ors Case (2011)*** observed that the popularity or fame of an individual will be no different on the internet than in reality.
  - ○ The court had also **stated that the name also falls in the category** wherein besides it being a personal name it has also attained distinctive indicia of its own.

What about Consumer Rights?

- ➢ It has been documented that celebrities' names and personalities are protected from commercial misuse, but **false advertisements and endorsements by celebrities can also mislead consumers.**
- ➢ Due to such cases, the **Ministry of Consumer Affairs has made a notification in 2022** to **keep a check on misleading adverts and endorsements of consumer products by imposing a penalty on the endorser.**

Note:

DigiYatra

Why in News?

Recently, the government has **introduced paperless entry at select airports to make air travel hassle-free.**

➢ In the first phase, the **initiative will be launched at seven airports**, starting with three — Delhi, Bengaluru, and Varanasi, followed by four airports namely Hyderabad, Kolkata, Pune, and Vijayawada by March 2023.

➢ Subsequently, the technology will be implemented across the country.

What is DigiYatra?

➢ **About:**
  ○ DigiYatra envisages that **travellers pass through various checkpoints at the airport through paperless and contactless processing**, using facial features to establish their identity, which would be linked to the boarding pass.
  ○ With this technology, the **entry of passengers would be automatically processed based on the facial recognition system** at all checkpoints – including entry into the airport, security check areas, aircraft boarding, etc.

➢ **Implementation:**
  ○ The project is being implemented by the **DigiYatra Foundation** under the Ministry of Civil Aviation.
    ● DigiYatra Foundation is a **joint-venture company whose shareholders are the Airports Authority of India** and Bengaluru Airport, Delhi Airport, Hyderabad Airport, Mumbai Airport and Cochin International Airport.

➢ **Significance:**
  ○ Facial recognition technology is **beneficial as it makes flying more convenient and reduces congestion at airports.**
    ● The facial recognition system at various airports across the globe, including Dubai, Singapore, Atlanta and Narita (Japan), have helped bring in efficiency.
  ○ Result in **lower cost operations.**
  ○ Digitize current manual processes and to bring **better efficiencies.**
  ○ Enhance security standards and **improve current system performance.**

○ With Digi Yatra, India is setting a new global benchmark for a seamless, **hassle free and health risk free process** at airports.

The Future of Food and Agriculture: FAO

Why in News?

According to the **Food and Agriculture Organization's (FAO)** new report, **The Future of Food and Agriculture — Drivers and triggers for transformation,** the world will witness persistent **food insecurity** if agrifood systems remain the same.

➢ This report aims at **inspiring strategic thinking and actions to transform agrifood systems** towards a sustainable, resilient and inclusive future.

What are the Findings of the Report?

➢ **Drivers of Agrifood System:**
  ○ There are 18 **interconnected socio-economic and environmental forces**, called drivers, which interacted and shaped the **various activities occurring within agrifood systems,** including farming, food processing, and food consumption.
  ○ Poverty and inequalities, geopolitical instability, scarcity and the degradation of resources, and climate change are some of the key drivers and how they are and their management will determine **what the future of food looks like.**

➢ **Concerns over Food Insecurity:**
  ○ The world will witness **persistent food insecurity**, degrading resources and unsustainable economic growth in the future if agrifood systems remain the same.
  ○ The world is **"tremendously off track" to meet the Sustainable Development Goals (SDG)**, including agrifood targets.
    ● Many of the SDGs are not on track and will only be achieved **if agrifood systems are transformed properly to withstand ongoing global adversity** that undermines food security and nutrition due to **growing structural inequalities and also regional inequalities**.
  ○ By 2050, there will be **10 billion people in the world to feed and this will be an unprecedented**

Note:

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challenge if significant attempts are not made to reverse current trends.

➢ **Future Scenarios:**
  ❍ There will be **four future scenarios** for agrifood systems that bring diverse outcomes in terms of food security, nutrition and overall sustainability.
    ● **More of the same,** that envisages continuing muddling through by reacting to events and crises.
    ● **Adjusted future,** where some moves towards sustainable agrifood systems occur at a slow, uncertain pace.
    ● **Race to the bottom,** that portrays a **world in disarray in the worst version of itself.**
    ● **Trading off for sustainability,** where short-term Gross Domestic Product (GDP) growth is traded **off for inclusiveness,** resilience and sustainability of agrifood, socioeconomic and environmental systems.

What are the Suggestions?

➢ Decision makers need to think **beyond short-term needs.** A lack of vision, piecemeal approaches and quick fixes **will come at a high cost for everyone**

➢ There is an urgent need to **change course so that a more sustainable and resilient future for agrifood systems is created.**

➢ There is a need to work on Key **'triggers of transformation':**
  ❍ Improved governance.
  ❍ Critical and informed consumers.
  ❍ Better income and wealth distribution.
  ❍ Innovative technologies and approaches.

➢ A comprehensive transformation, however, will come at a cost and **will require trade-off of contrasting objectives that governments,** policy makers and consumers will have to address and balance, while tackling resistance to the paradigm shift.

What is the Food and Agriculture Organization?
➢ **About:**
  ❍ FAO is a specialised agency of the **United Nations** that leads international efforts to defeat hunger.
  ❍ **World Food Day** is celebrated every year around the world on 16th October. The day is celebrated to mark the anniversary of the founding of the FAO in 1945.

  ❍ It is one of the UN food aid organisations based in Rome (Italy). Its sister bodies are the **World Food Programme** and the International Fund for Agricultural Development (IFAD).

➢ **Initiatives Taken:**
  ❍ **Globally Important Agricultural Heritage Systems (GIAHS).**
  ❍ Monitors the **Desert Locust** situation throughout the world.
  ❍ The **Codex Alimentarius Commission or CAC** is the body responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme.
  ❍ The **International Treaty on Plant Genetic Resources for Food and Agriculture** was adopted by the Thirty-First Session of the Conference of the FAO in 2001.

➢ **Flagship Publications:**
  ❍ The State of World Fisheries and Aquaculture (SOFIA).
  ❍ The State of the World's Forests (SOFO).
  ❍ **The State of Food Security and Nutrition in the World (SOFI).**
  ❍ The State of Food and Agriculture (SOFA).
  ❍ The State of Agricultural Commodity Markets (SOCO).

National Bamboo Mission

Why in News?

Recently, the Ministry of Agriculture has formed an Advisory Group for **streamlining the development of the Bamboo sector** under the restructured **National Bamboo Mission (NBM).**

What is the National Bamboo Mission?

➢ **About:**
  ❍ The restructured National Bamboo Mission (NBM) was launched during 2018-19 as a **Centrally Sponsored Scheme (CSS).**
  ❍ NBM mainly focuses **on the development of the complete value chain of Bamboo sector** to link growers with consumers starting from planting material, plantation, creation of facilities for collection, aggregation, processing, marketing,

micro, small & medium enterprises, skilled manpower and brand building initiative in a cluster approach mode.

➤ **Objective:**
  ○ To **increase the area under bamboo plantation** in non-forest Government and private lands to supplement farm income and contribute towards resilience to climate change.
  ○ Connecting farmers to markets **so as to enable farmer producers to get a ready market for the bamboo grown** and to increase the supply of appropriate raw material to the domestic industry.
  ○ It also endeavours **to upgrade skills of traditional bamboo craftsmen** as per the requirement of contemporary markets with a tie-up with enterprises and premier institutes.

➤ **Nodal Ministry:**
  ○ The Ministry of Agriculture & Farmers Welfare.

What is the Potential of Bamboo?

➤ **Significance**:
  ○ The **bamboo industry is witnessing a phase change by the opening of multiple avenues** of resource utilization.
  ○ Bamboo is **a versatile group of plants which is capable of providing ecological, economic and livelihood security** to the people
  ○ Recently, the Prime Minister inaugurated the new terminal of the Bengaluru (Kempagowda) Airport in which the versatility of bamboo as an architectural and structural material has been proved and the destiny of this green resource defined as the **'green steel'**.
  ○ Apart from using in the construction sector as design and structural element, the potential of bamboo is multifaceted.
  ○ Ecofriendly **mouldable granules from bamboo can replace the use of plastic. Bamboo is a reliable source for the ethanol and bio-energy production** due to its fast rate of growth and abundance.
  ○ The market of Bamboo based lifestyle products, cutleries, home decors, handicrafts and **cosmetics also is in a growth path**.

➤ **Status of Bamboo Production in India:**
  ○ India has the **highest area (13.96 million ha) under bamboo** and is the **second richest country, after**

China, in terms of bamboo diversity with **136 species (125 indigenous and 11 exotic).**

What are the Initiatives to Promote Bamboo?

➤ **Bamboo Clusters:** The Union Minister for Agriculture and Farmers' Welfare has virtually inaugurated **22 bamboo clusters** in 9 states viz. Gujarat, Madhya Pradesh, Maharashtra, Odisha, Assam, Nagaland, Tripura, Uttarakhand and Karnataka.

➤ **MSP Hike:** Recently, the Central government has revised the **Minimum Support Price (MSP) for Minor Forest Produce (MFP).**
  ○ MFP includes all non-timber forest produce of plant origin and includes bamboo, canes, fodder, leaves, waxes, resins and many forms of food including nuts, wild fruits, lac, tusser etc.

➤ **Removal of Bamboo from 'Tree' Category:** The **Indian Forest Act 1927** was amended in 2017 to remove bamboo for the category of trees.
  ○ As a result, anyone can undertake cultivation and business in bamboo and its products without the need of a felling and transit permission.

➤ **Farmer Producer Organisations (FPOs):** 10,000 new **FPOs** will be formed in 5 years.
  ○ FPOs engage in providing a range of assistance to farmers like imparting better farm practices, collectivisation of input purchases, transportation, linkage with markets, and better price realisation as they do away with the intermediaries.

Calling Name Presentation

Why in News?

Recently, the **Telecom Regulatory Authority of India (TRAI)** has proposed the introduction of **Calling Name Presentation (CNAP).**

What is Calling Name Presentation?

➤ The feature would provide the called individual with information about the calling party (similar to 'Truecaller' and 'Bharat Caller ID & Anti-Spam').

➤ The idea is to **ensure that telephone subscribers are able to make an informed choice about incoming calls and curb harassmen**t by unknown or spam callers.

Note:

What is its Purpose?

➢ Existing technologies present the number of the calling entity on the potential receiver's handset.

➢ Since subscribers are not given the name and identity of the caller, they sometimes choose not to answer them believing it could be unsolicited commercial communication from unregistered telemarketers. This could lead to even genuine calls being unanswered.

  ❍ **Truecaller's '2021 Global Spam and Scam Report'** revealed that the average number of spam calls per user each month in India, stood at 16.8 while total spam volumes received by its users were in excess of 3.8 billion calls in October 2022 alone.

What are the Challenges?

➢ **Latency:**

  ❍ There is a likelihood of **a slight increase in the time taken to set up a call.**

  ❍ The responsiveness might also **suffer when moving from a faster wireless network (4G or 5G) to a comparatively slower one (2G or 3G),** or vice-versa.

➢ **Privacy:**

  ❍ It is not particularly clear how the (CNAP) mechanism would balance the **caller's right to remain anonymous,** an essential component of the right to privacy.

  ❍ To put it into perspective, an individual **may opt to remain anonymous for multiple reasons,** for example, whistle-blowers or employees being harassed.

  ❍ It would be ideal that a framework is developed along those lines rather than asking a centralized database operated by a third party to host and share data.

Scheme for Providing Quality Education to Madrasas/Minorities

Why in News?

Recently, the **Parliamentary Standing Committee on Social Justice and Empowerment** has enquired with the Union Government for the **delay in approving the continuation** of the **Scheme for Providing Education to Madrasas/Minorities (SPEMM)**.

➢ SPEMM seeks to provide financial assistance to madrasas and minority institutes.

What is SPEMM?

➢ **Implementing Agency:**

  ❍ **The Department of School Education and Literacy** under the Ministry of Education.

➢ **Sub-Schemes:**

  ❍ **Scheme for Providing Quality Education in Madrasas (SPQEM):** It seeks to bring about **qualitative improvement in Madrasas** to enable Muslim children attain **standards of the National education system** in formal education subjects.

  ❍ **Infrastructure Development of Minority Institutes (IDMI):** It has been operationalised to **augment Infrastructure in Private Aided/Unaided Minority Schools/Institutions** in order to enhance the quality of education to minority children.

➢ **Features:**

  ❍ **SPQEM:**

    ● To provide financial assistance to traditional institutions to encourage them to introduce Science, Mathematics, Social Studies, Hindi and English in their curriculum to attain proficiency.

    ● To strengthen State Madrasa Boards opting for assistance by enabling them to monitor the Madrasa modernization programme.

    ● To provide quality components in Madrasas such as remedial teaching, assessment and enhancement of learning outcomes, Rashtriya Avishkar Abhiyan etc.

  ❍ **IDMI:**

    ● To encourage educational facilities for girls, children with special needs and those who are most deprived educationally amongst the minorities.

Note:

➢ Under **Article 30** of the **Constitution of India**, all minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.

➢ The protection under Article 30 is confined only to minorities (religious or linguistic) and does not extend to any section of citizens (as under Article 29).

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What are Parliamentary Committees?

- **About:**
  - ○ A Parliamentary Committee is a **panel of Members of Parliament** that is appointed or elected by the House or nominated by the Speaker/Chairman.
  - ○ The committee works under the **direction of the Speaker/Chairman** and it presents its report to the **House or to the Speaker/Chairman.**
  - ○ Parliamentary Committees have **their origins in the British Parliament.**
  - ○ They draw their authority from **Article 105** and **Article 118**.
    - Article 105 deals with the privileges of MPs.
    - Article 118 gives Parliament authority to make rules to regulate its procedure and conduct of business.
- **Types:**
  - ○ **Standing Committees:**
    - The Standing Committees are permanent (constituted every year or periodically) and work on a continuous basis.
    - Standing Committees can be classified into the following six categories:
      - ▪ Financial Committees, Departmental Standing Committees, Committees to Inquire, Committees to Scrutinise and Control, Committees Relating to the Day-to-Day Business of the House, House-Keeping Committees or Service Committees.
  - ○ **Ad Hoc Committees:**
    - The Ad Hoc Committees are temporary and cease to exist on completion of the task assigned to them.
    - They are further subdivided into Inquiry Committees and Advisory Committees.
    - The principal Ad hoc Committees are the Select and Joint Committees on Bills.

Poor State of Undertrials

Why in News?

Recently, the **Indian President** has raised the issue of the **plight of a large number of undertrials holed up in the prisons**.

What are the Undertrials?

- An undertrial is a person **who is currently on trial or who is imprisoned on remand** whilst awaiting trial or **a person who is on a trial in a court of law.**
- The 78th Report of **Law Commission** also includes **a person who is in judicial custody on remand during investigation** in the definition of an **'undertrial'.**

What is the Status of Undertrials in India?

- As per **NCRB (National Crime Report Bureau)**, over the last 10 years, the number of undertrials in **jails has risen constantly and peaked in 2021.**
- In 2020, about 76% of all **prison inmates in the country were undertrials**, of which about 68% were **either illiterate or school dropouts**.
- Delhi and **Jammu and Kashmir (J&K) were found to have the highest ratio of undertrials** in jails at 91%, followed by Bihar and Punjab at 85%, and Odisha at 83%.
- About 27% of all undertrials were found to be illiterate, and 41% had dropped out before Class X.

What are the Concerns?

- **Resourceless Prisoners:**
  - ○ There are many **poor and resourceless undertrials who continue to be disproportionately arrested**, routinely remanded to judicial custody in prisons.
  - ○ They are unable to seek and secure bail either because of **lack of economic resources or because of fear of the social stigma outside**.
- **Violence and Abuses in jail:**
  - ○ Prisons are often dangerous places for those they hold. **Group violence is also endemic and riots** are common.
  - ○ Physical mishandling and extra-judicial torture by jail **officials are ussually seen in** India.
  - ○ No conduct of the prison authority is **criminalized, making authority** act in negligence **which could and do result in the death of inmates.**
- **Health problems:**
  - ○ Most of the prisons face problems of overcrowding and shortage of adequate space to lodge prisoners in **safe and healthy conditions.**
  - ○ People are cramped in with each other in **unhealthy conditions, infectious and communicable diseases** spread easily. Example: Spread of **Tuberculosis (TB)**.

Note:

➢ **Suffering of the Families and Social Stigma:**
  ○ Many a time the family of the prisoner is forced into poverty with children going astray.
  ○ The family also faces **social stigma and social exclusion,** leading to circumstances propelling family towards **delinquency and exploitation by others.**
  ○ The privileged class often take advantage of this situation **to exploit the remaining family members to the fullest** possible extent. This can take the form of rape or forced prostitution.

What is the Constitutional protection for Undertrials?

➢ **State Subject:**
  ○ **'Prisons/persons detained therein' is a State subject** under Entry 4 of List II of the **Seventh Schedule** to the Constitution of India.
  ○ Administration and management of prisons is the responsibility of respective State Governments.
  ○ However, the Ministry of Home Affairs provides **regular guidance and advice to States and UTs on various issues** concerning prisons and prison inmates.

➢ **Article 39A:**
  ○ Article 39A of the Constitution **directs the State to ensure that the operation of the legal system promotes justice on a basis of equal opportunity** and shall, in particular, provide free legal aid by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities.
  ○ **Right to free legal aid or free legal service is an essential** fundamental right guaranteed by the Constitution.

➢ **Article 21:**
  ○ It forms the basis of reasonable, fair and just **liberty under Article 21 of the Constitution of India,** which says, "No person shall be deprived of his life or personal liberty except according to procedure established by law".

What are the Recommendations of Prison Reforms?

➢ The Supreme Court appointed **Justice Amitava Roy**

(retd.) Committee, which has given the following recommendations to **reform prisons.**

  ○ **For Overcrowding:**
    ● Speedy Trial: Speedy trial remains one of the best ways to remedy the unwarranted phenomenon of overcrowding.
    ● Lawyer to Prisoner Ratio: There should be at least one lawyer for every 30 prisoners, which is not the case at present.
    ● Special Courts: Special fast-track courts should be set up to deal exclusively with petty offences which have been pending for more than five years.
      ■ Further, accused persons who are charged with petty offences and those granted bail, but who are unable to arrange surety should be released on a Personal Recognizance (PR) Bond.
    ● Avoid Adjournment: An adjournment should not be granted in cases where witnesses are present and the concept of plea bargaining, in which the accused admits guilt for a lesser sentence, should be promoted.

  ○ **For Prisoners:**
    ● Accommodative Transition: Every new prisoner should be allowed a free phone call a day to his family members to see him through his first week in jail.
    ● Legal Aid: Providing effective legal aid to prisoners and taking steps to provide vocational skills and education to prisoners.
    ● Use of ICT: Use of video-conferencing for trial.
    ● Alternatives: The courts may be asked to use their "discretionary powers" and award sentences like "fine and admonition" if possible, instead of sending the offenders to jails.
      ■ Further, courts may be encouraged to release offenders on probation at pre-trial stage or after trial in deserving cases.

➢ In 2017, the **Law Commission of India** had recommended that undertrials who have completed **a third of their maximum sentence for offences attracting up to seven years of imprisonment be released on bail.**

■■■

Economic Scenario

Highlights

- System for Pension Administration Raksha
- Status of Solar Power Projects
- Horticulture Cluster Development Programme
- Rabi Crops
- RBI's Monetary Policy Review
- GDP and GVA
- Impact of Global Layoffs
- Fertiliser Subsidy
- RBI to Launch Retail Digital Rupee
- India Development Report: WB
- Vizhinjam Port Project
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System for Pension Administration Raksha

Why in News?

Recently, the Ministry of Defense has urged the stakeholders of System for Pension Administration Raksha (SPARSH) to make it **more user friendly.**

➢ **One Rank One Pension (OROP) scheme** also provides the payment of the same pension to military officers for the same rank for the same length of service, irrespective of the date of retirement.

What is SPARSH?

➢ **About:**
  ○ It is an **integrated system for automation of sanction and disbursement** of defence pension.
  ○ This web-based system **processes pension claims and credits pension directly into the bank accounts** of defence pensioners without relying on any external intermediary.
  ○ A Pensioner Portal is available for pensioners to view their pension related information, access services and register complaints, if any.

➢ **Objectives:**
  ○ SPARSH envisages **the establishment of Service Centres to provide last-mile connectivity to pensioners** who may be unable to directly access the SPARSH portal.
  ○ SPARSH has been designed **keeping defence pensioners at the centre, who will be given a** **completely transparent view of their pension account**, through an online portal.
  ○ It aims address the **current challenges in the pension sanctioning and disbursement process** such as
    - Decentralised solution existing in silos
    - Manual intervention in processing
    - Lack of Centralised information for addressing pensioner queries etc.

➢ **Benefits:**
  ○ It provides the **option to the pensioner to use enabled services for quicker processing of his requests** and signing of declarations, making his experience a truly paperless and hassle free one.
  ○ It captures and maintains a complete history of events and entitlements of the pensioner – **right from the date of commencement of pension to the date of cessation of pension due to the last eligible beneficiary.**

Status of Solar Power Projects

Why in News?

Recently, the **Ministry for New and Renewable Energy** has reported that the government has so far sanctioned the development of **solar projects** with a capacity of nearly 39,000 MW but **only 25% have actually been commissioned so far**.

➢ These solar projects were sanctioned under the 'Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects'.

What is the Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects?

➢ **About:**
  ○ The scheme was rolled out by the **Ministry of New & Renewable Energy** in 2014.
  ○ Under this scheme, it was proposed to set up **at least 25 Solar Parks and Ultra Mega Solar Power Projects** targeting over 20,000 MW of solar power installed capacity within a span of 5 years starting from 2014-15.
    ● The capacity of the Scheme was enhanced from 20,000 MW to 40,000 MW. These parks are proposed to be set up by 2021-22.

➢ **Implementing Agency:**
  ○ The implementing agency is termed as **Solar Power Park Developer (SPPD)**.

➢ **Features:**
  ○ The scheme envisages **supporting the States/UTs in setting up solar parks** at various locations in the country with a **view to create required infrastructure** for setting up of **solar power projects**.
  ○ The solar parks are developed in collaboration with the State Governments and their agencies, Central Public Sector Undertakings, and private entrepreneurs.

What are the Challenges in Solar Projects Commissioning?

➢ Hurdles in **acquisition of land** with clear title.

➢ A "mismatch" in the **time taken to set up a project** and the **infrastructure to route the power** produced to the grid.

➢ Environmental issues and the halt in economic activity due to **COVID-19**.
  ○ In recent years, the habitat of the **Great Indian Bustard**, a critically endangered species numbering less than 200 in Rajasthan, has been **encroached upon by solar power projects particularly by transmission lines** that endanger the bird.
  ○ The **Supreme Court** in April 2022, had directed that power companies lay **underground cables in solar parks in Rajasthan**, though few companies have actually complied. The government had told the Supreme Court that laying underground cables **would greatly raise the cost of solar power.**

What is the Overall Status of Solar Energy in India?

➢ As of October 2022, 61GW of solar power had been installed so far, according to numbers presented in Parliament.

➢ Further, India has set an **ambitious target to achieve a capacity of 175 GW worth of renewable energy** by the end of 2022 (100 GW was to be solar power), which expands to 500 GW by 2030. This is the world's largest expansion plan for renewable energy.

➢ India was the **second-largest market in Asia** for **new solar PV capacity** and third globally. It ranked **fourth for total installations (60.4 GW)**, overtaking Germany (59.2 GW) for the first time.

➢ As of June 2022, **Rajasthan and Gujarat** were the top states for large-scale solar, accounting for 53% and 14% of installations, respectively, followed by Maharashtra with 9%.

What Initiatives has India Taken for Solar Energy?

➢ **Solar Park Scheme:**
  ○ The **Solar Park Scheme** plans to build a number of solar parks, each with a capacity of nearly 500 MW, across several states.

➢ **Rooftop Solar Scheme:**
  ○ The **Rooftop Solar Scheme** aims to harness solar power by installing solar panels on the roof of houses.

➢ **Atal Jyoti Yojana (AJAY):**
  ○ The AJAY scheme was launched in September 2016 for the installation of solar street lighting (SSL) systems in states with less than 50% of households covered with grid power (as per **Census 2011**).

➢ **National Solar Mission:**
  ○ It is a major initiative of the Government of India and State Governments to promote ecologically sustainable growth while addressing India's energy security challenge.

➢ **SRISTI Scheme:**
  ○ Sustainable rooftop implementation of Solar transfiguration of India (SRISTI) scheme to promote rooftop solar power projects in India.

➢ **International Solar Alliance (ISA):**
  ○ The **ISA** was conceived as a joint effort by **India and France** to mobilize efforts against climate change through the deployment of solar energy solutions.

Note:

Horticulture Cluster Development Programme

Why in News?

Recently, a meeting was held by the Union Ministry of Agriculture and Farmers Welfare for the **Horticulture Cluster Development Programme (CDP)**.

➢ Overall **development of horticulture in the country** would be focused with the help of the implementation of the CDP.

➢ Horticulture is the branch of plant agriculture dealing with garden crops, generally fruits, vegetables, and ornamental plants.

What is the Horticulture Cluster Development Programme?

➢ **About:**
   ○ It is a **central sector programme** aimed at growing and developing identified horticulture clusters to make them globally competitive.
   ○ Horticulture cluster is a **regional/geographical concentration** of targeted horticulture crops.

➢ **Implementation:**
   ○ It is implemented by the **National Horticulture Board (NHB)** of the **Ministry of Agriculture and Farmers' Welfare**.
   ○ The states of Arunachal Pradesh, Assam, West Bengal, Manipur, Mizoram, Jharkhand, Uttarakhand etc. will also be included in the list of 55 clusters, identified with their focus/main crops.
      ● Earlier, in pilot phase, it was implemented in 12 clusters covering 11 States/UTs.

➢ **Objectives:**
   ○ The CDP aims to **improve exports of targeted crops by about 20%** and create **cluster-specific brands** to enhance the competitiveness of cluster crops.
   ○ To **address all major issues** related to the Indian horticulture sector including pre-production, production, post-harvest management, logistics, marketing and branding.
   ○ To **leverage geographical specialisation** and promote integrated and market-led development of horticulture clusters.

   ○ To **converge with other initiatives of the Government** such as the **Agriculture Infrastructure Fund**.
   ○ A lot of investment will also **come in the horticulture sector through CDP**.

➢ **Significance:**
   ○ Cluster Development Programme has a **great potential to transform the entire horticulture ecosystem** by creating **last-mile connectivity** with the use of **multimodal transport for efficient and timely evacuation** and transportation of horticulture produce.

What is the Status of the Horticulture Sector in India?

➢ **Status:**
   ○ India is the **second-largest producer of horticulture crops** globally.
      ● India is a leader in producing fruits like Mango, Banana, Pomegranate, Sapota, Acid Lime and Aonla.
   ○ In 2021-22, Uttar Pradesh followed by Madhya Pradesh and West Bengal were the top states in horticulture production.
      ● West Bengal, Uttar Pradesh and Madhya Pradesh were the top States in vegetable production.
      ● Maharashtra followed by Andhra Pradesh and Uttar Pradesh were the top states in fruit production.
   ○ The area under horticulture crops increased to **27.74 million hectares in 2021-22**, and produced around 341.63 million tonnes.

➢ **Initiatives for Horticulture:**
   ○ **Mission for Integrated Development of Horticulture:**
      ● **MIDH** is a **Centrally Sponsored Scheme** for the holistic growth of the horticulture sector covering fruits, vegetables and other areas.
      ● Under MIDH, **Government of India contributes 60% of the total outlay** for developmental programmes in all the states **(except North Eastern and Himalayan states where GOI contributes 90%**) & 40% is contributed by State governments.
      ● **It has five major schemes on horticulture:**
         ■ National Horticulture Mission (NHM)
         ■ Horticulture Mission for North East and Himalayan States (HMNEH)

Note:

- National Horticulture Board (NHB)
- Coconut Development Board (CDB) &
- Central Institute of Horticulture (CIH), Nagaland

Rabi Crops

Why in News?

Rabi crops are at risk **due to an abnormal lack of western disturbances over northwest and central India.**

➢ The **region doesn't have enough rainfall and moisture**, which is crucial for growing wheat during the winter.

What are the Other Contributing Factors?

➢ Incessant rainfall in the region in the first two weeks of October, 2022 due to several active weather systems caused this paradox.

➢ **A possible impact of the continuing La Niña phenomenon** in the equatorial Pacific Ocean and a warming Arctic region might also have contributed.

  ○ One of the **weather systems that brought extreme rainfall at the beginning of October was a western disturbance** — extratropical storm systems that bring winter rainfall to northwest and some parts of central India from the Arctic, Mediterranean and West Asian regions.

➢ A lack of western disturbances in November, 2022, and the complete absence of them in December, 2022, is primarily responsible for the lack of rain since early October, 2022.

What are Rabi Crops?

➢ These crops are **sown around the Retreating Monsoon and Northeast monsoon season**, which begins in October and are called rabi or winter crops.

➢ The harvest for these crops happens **typically during April and May, during the summer season.**

➢ These **crops are not much affected by the rainfall.**

➢ **Major Rabi crops are** wheat, gram, peas, barley etc.

➢ A **warm climate is required for seed germination** and cold climate for the growth of crops.

What are the Other Types of Crops grown in India?

➢ **Kharif Crops:**

  ○ Crops that are **sown during the southwest monsoon season** are called kharif or **monsoon crops.**

  ○ These crops are **sown at** the beginning of the season around **end May to early June** and are harvested post the monsoon rains beginning October.

  ○ These crops depend on the rainfall patterns.

  ○ **Rice, maize, pulses such as urad, moong dal and millets** are among the key kharif crops.

  ○ It requires a lot of water and hot weather to grow**.**

➢ **Zaid Crops:**

  ○ **Sown and harvested:** March-July (between Rabi and Kharif)

  ○ Important zaid crops include seasonal fruits, vegetables, fodder crops etc.

RBI's Monetary Policy Review

Why in News?

Recently, the **Monetary Policy Committee (MPC) of** the **Reserve Bank of India (RBI)** unveiled its latest review of the **Monetary Policy**.

➢ RBI said "growth prospects across the world are dampening. Financial markets remain nervous and are characterised by high volatility and price swings."

What are the Highlights of the Review?

➢ **GDP Growth Forecast:**

  ○ The MPC slashed its **Gross Domestic Product (GDP)** growth estimate to **6.8% for the fiscal year 2022-23**, from 7% earlier.

    ● This comes a day after the **World Bank** raised its growth forecast to **6.9% for financial year 2022-23** from a revised 6.5% accounted in October 2022.

  ○ **Real GDP growth** is projected at 7.1% for Q1:2023-24 and at 5.9% for Q2.

  ○ As the data shows, in September 2022, it cut the GDP forecast for the full year but raised the quarterly GDP forecast.

➢ **Inflation & Interest Rates:**

  ○ The MPC has **maintained the forecast for headline inflation** (the total inflation in an economy) in the financial year 2022-23 at **6.7%.**

  ○ RBI expects headline inflation to stay above the 6% mark for 15 straight months. Even after that, hitting the 4% level will likely take time.

Note:

- ➢ **Repo Rate:**
  - ○ The MPC **increased the repo rate by 35 basis points (bps) to 6.25%**, and the **Standing Deposit Facility** stands raised to 6%.

What is Monetary Policy Framework?

- ➢ **About:**
  - ○ In May 2016, the **RBI Act was amended** to provide a **legislative mandate to the central bank** to operate the country's monetary policy framework.
- ➢ **Objective:**
  - ○ The framework aims at **setting the policy (repo) rate** based on an assessment of the **current and evolving macroeconomic situation**, and modulation of liquidity conditions to anchor money market rates at or around the repo rate.
- ➢ **Reason for Repo Rate as Policy Rate:**
  - ○ **Repo rate** changes transmit through the **money market to the entire financial system**, which, in turn, **influences aggregate demand.**
- ➢ Thus, it is a key determinant of inflation and growth.

What is Monetary Policy Committee?

- ➢ **Origin:**
  - ○ Under **Section 45ZB of the amended (in 2016) RBI Act, 1934**, the central government is empowered to constitute a **six-member Monetary Policy Committee (MPC).**
- ➢ **Objective:**
  - ○ Further, Section 45ZB lays down that "the Monetary Policy Committee shall **determine the Policy Rate required to achieve the inflation target**".
  - ○ The decision of the Monetary Policy Committee shall be **binding on the Bank.**
- ➢ **Composition:**
  - ○ Section 45ZB says the MPC shall consist of 6 members:
    - RBI Governor as its ex officio chairperson,
    - Deputy Governor in charge of monetary policy,
    - An officer of the Bank to be nominated by the Central Board,
    - Three persons to be appointed by the central government.
      - ■ This category of appointments must be from "persons of ability, integrity and standing,

having knowledge and experience in the field of economics or banking or finance or monetary policy".

What are the Instruments of Monetary Policy?

- ➢ Repo Rate
- ➢ Standing Deposit Facility (SDF) Rate
- ➢ **Marginal Standing Facility (MSF) Rate**
- ➢ **Liquidity Adjustment Facility (LAF)**
- ➢ LAF Corridor
- ➢ **Main Liquidity Management Tool**
- ➢ Fine Tuning Operations
- ➢ **Reverse Repo Rate**
- ➢ Bank Rate
- ➢ **Cash Reserve Ratio (CRR)**
- ➢ **Statutory Liquidity Ratio (SLR)**
- ➢ **Open Market Operations (OMOs)**

GDP and GVA

Why in News?

Recently, the Ministry of Statistics and Programme Implementation (MoSPI) released **India's economic growth data for the second quarter** of the current financial year (2022-23 or FY23).

- ➢ India's Gross Domestic Product (GDP) grew by 6.3% in Q2 and Gross Value Added (or GVA) in Q2 grew by. 5.6% on a year-on-year basis.
- ➢ Notably, India remained the fastest-growing major economy as China registered an economic growth of 3.9% in July-September 2022.
- ➢ GDP and GVA are the **two main ways to ascertain the country's economic performance.**

What do GDP and GVA mean?

- ➢ **GDP:**
  - ○ The GDP measures the **monetary measure of all "final" goods and services**— those that are bought by the final user— produced in a country in a given period.
  - ○ **Four Key "Engines of GDP Growth":**
    - All the money Indians spent for their private consumption (that is, Private Final Consumption Expenditure or PFCE)

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- All the money the government spent on its current consumption, such as salaries [Government Final Consumption Expenditure or GFCE]
- All the money spent towards investments to boost the productive capacity of the economy. This includes business firms investing in factories or the governments building roads and bridges [Gross Fixed Capital Expenditure]
- The net effect of exports (what foreigners spent on our goods) and imports (what Indians spent on foreign goods) [Net Exports or NX].
  - **Calculation of GDP:**
    - GDP = private consumption + gross investment + government investment + government spending + (exports-imports)
- **GVA:**
  - The **GVA calculates the same national income from the supply side.**
  - It does so by adding up all the value added across different sectors.
  - According to the RBI, the **GVA of a sector is defined as the value of output minus the value of its intermediary inputs**. This "value added" is shared among the primary factors of production, labour and capital.
  - By looking at the GVA growth **one can understand which sector of the economy is robust and which is struggling.**

How are the two Related?

- The GDP is **derived by looking at the GVA data.**
- The GDP and GVA are related by the following equation: GDP = (GVA) + (Taxes earned by the government) — (Subsidies provided by the government)
- As such, **if the taxes earned by the government are more than the subsidies** it provides, the GDP will be higher than GVA.
- The GDP data is more useful when looking at annual economic growth and when one wants to compare the economic growth of a country either with its growth in the past or with another country.

Impact of Global Layoffs

Why in News?

Recently, many of U.S. multinational companies has announced massive layoffs, which already crossed **60,000 in September and October 2022.**

- A layoff is the **temporary or permanent termination of employment** by an employer for reasons unrelated to the employee's performance.

What are the Reasons for Layoffs?

- **Cost Cutting**:
  - With talks of global recession, technology companies, typically seen as big spenders, **are now resorting to cost-cutting.**
  - Cost-cutting is one of the main reasons for lay off because the companies are not making enough **profits to cover their expenses** or because they need **substantial extra cash to** address paying off debt.
    - Indian Startups have also faced this trouble with media reports saying that more than ten thousand employees have been laid off by startups in mainly edtech and ecommerce sectors in 2022.
- **Fear of Economic Recession:**
  - These companies are apprehensive of potential **economic recession**, with **inflation** soaring in most parts of the world.
  - The **International Monetary Fund (IMF)** has cited forecasts for global **GDP (Gross Domestic Product)** growth in both **2022 and 2023 as gloomy,** given the pandemic and ongoing **Russia-Ukraine Conflict.**
- **Decreasing Dependence on Online Platform:**
  - During the pandemic, there **was a surge in demand as people were in lockdown and they were spending** a lot of time on the internet. The overall consumption saw an upsurge following which the companies went to increase their output to meet the market requirements.
  - In order to meet the demands, many **tech companies went on a hiring spree anticipating the boom to continue** even after the pandemic.
  - However, as the curbs were eased and people started stepping out of their homes, consumption fell, resulting in heavy losses to these big tech companies. Some of these resources were hired at a higher cost because of the sudden upsurge in demand.

What is the Outlook for the Indian Companies?

- The Indian IT services firms are **among the largest employers in the organised sector** and any global

economic trend is bound to have **an impact on their growth projections.**

➤ Managements look at headcount numbers critically when they want to cut costs and protect profit margins as they are accountable to investors.

➤ Though there isn't a discernible trend yet, **there are a few signs which may signal what is to be expected in the next few months**.

  ○ All top companies except Wipro saw a rise in revenue and net profit. Wipro's net profit **slid 9% from a year earlier for the quarter ended September.**

➤ The attrition rates, or the number of employees per 100 quitting on their own, of the top two firms, TCS and Infosys, show that these rates are still high, which means that there is enough business for the sector for competitors to draw away employees with promise of higher salaries.

➤ News of layoffs in the **Indian start-up front is predominantly in EDtech, or the educational technology front.**

What can be the Impact of Layoffs?

➤ **Loss to the Workers:**

  ○ Layoffs can be damaging psychologically as well as financially to the affected workers as well as their families, communities, colleagues, and other businesses.

➤ **Loss of Prospects:**

  ○ Indian workers who have been laid-off have a big worry. If they are unable to find a new employer within 60 days, they are **faced with the prospect of leaving the U.S. and re-entering later.**

  ○ To make matters worse, the prospects of these Indian workers back home are also weak.

  ○ Most Indian IT companies have **frozen or slowed down hiring as recessionary fears** in the U.S. and high inflation in Europe have kept demand low.

➤ **Decreases Customer Prospect**

  ○ When a company lays off its employees it sends out a message to customers that it is undergoing some sort of crisis.

➤ **Emotional Distress:**

  ○ The person who is laid off suffers the most distress, but remaining employees suffer emotionally as well. The productivity level of employees who work in fear is likely to go down.

What happened in India during earlier Global Recessions?

➤ During earlier global recessions, while companies seldom publicly announced layoffs, they would all **look to ease out staff who were lower down the performance ladder.**

➤ Companies that were in a particularly bad patch cut bench strength. Then again, if a person was about a month old on the bench (i.e., without projects), he or she may have **been asked to sign up for some training courses** etc.

➤ If the professional spent more than three months on the bench and had not landed a project, the system **itself would ease him or her out.**

➤ What happened in the aftermath of the 2008 recession that stretched well beyond 2-3 years is that **companies would start slowing down headcount addition.**

➤ Planned additions from campus **would decline or offers would be made but absorption into the company could well take 9-12 months** from the time of offer.

Fertiliser Subsidy

Why in News?

High government subsidies are leading to **excessive use of two fertilisers - Urea and Di-Ammonium Phosphate (DAP).**

What is Fertiliser Subsidy?

➤ **About Fertiliser:**

  ○ **A fertiliser** is a natural or artificial substance **containing chemical elements (such as Nitrogen (N), Phosphorus (P) and Potassium (K))** that improve **growth and productiveness of plants.**

  ○ There are **3 basic fertilisers** in India - **Urea, DAP and Muriate of Potash (MOP).**

➤ **About Fertiliser Subsidy:**

  ○ The government **pays a subsidy to fertiliser producers** to allow **farmers to buy fertilisers at below-market rates**.

  ○ The difference between the cost of production/import of a fertiliser and the actual amount paid by farmers is the **subsidy portion borne by the government.**

➤ **Subsidy on Urea:**

Note:

- In India, **urea is the most produced, imported, consumed and physically regulated fertiliser** of all. It is subsidised only for agricultural uses
- The Centre **pays a 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).
    - The MRP of urea is currently fixed at Rs 5,628 per tonne.

➢ **Subsidy on Non-Urea Fertilisers:**
- The MRPs of **non-urea fertilisers are decontrolled or fixed by the companies.**
- But the government has, in **recent times,** and especially with the **global price surge post the Russia-Ukraine war, brought these fertilisers under the control regime.**
- All Non-Urea based fertilisers are regulated under **Nutrient Based Subsidy (NBS) Scheme.**
- **Examples of non-urea fertilisers -** DAP and MOP.
    - Companies do not sell DAP at more than Rs 27,000 per tonne.

What are the Related Initiatives for Fertilisers?

➢ **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).**

➢ **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.

➢ **Policy on Promotion of City Compost:**
- Approved a policy on promotion of City Compost, notified by the Department of Fertilisers (DoF) in 2016 granting Market Development Assistance of Rs. 1500/- for scaling up production and consumption of city compost.
- **To increase sales volumes, compost manufacturers** willing to market city compost were allowed to sell city compost in bulk directly to farmers.

- Fertilizer companies marketing city compost are covered under the **Direct Benefit Transfer (DBT)** for Fertilizers.

➢ **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 Survey of India (GSI) and the Atomic Mineral Directorate (AMD).

What are the Issues Related to Fertiliser Subsidy?

➢ **Imbalance in Price of Fertilisers:**
- The high subsidy on urea and DAP makes them much **cheaper for farmers relative to other fertilisers.**
- While **urea is retailing at a fourth of the price of packed common salt, DAP** has also become **far cheaper than other fertilizers.**
- The **prices of the other fertilizers which were decontrolled have gone up** which has led the farmers to **use more urea and DAP than before.**

➢ **Nutrient Imbalance:**
- The **use of N, P and K in the country** has over the last few years sharply **deviated from the ideal NPK use ratio of 4:2:1.**
- Urea and DAP contain **more than 30% of any single nutrient.**
    - Urea has 46% N, while DAP has 46% P and also 18% N.
- The resulting **nutrient imbalance** owing to their **use, disproportionate to other, more expensive fertilisers,** could have implications for **soil health, ultimately affecting crop yields.**

➢ **Damage to Fiscal Health:**
- Fertiliser subsidies are damaging the fiscal health of the economy.
- **Subsidized** urea is getting **diverted to bulk buyers/ traders** or even non-agricultural users such as plywood and animal feed makers.
    - It is being smuggled to neighbouring countries like Bangladesh and Nepal.

Note:

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RBI to Launch Retail Digital Rupee

Why in News?

The Reserve Bank announces the launch of the first pilot for **retail digital Rupee (e₹-R)** also called **Central Bank Digital Currency (CBDC).**

➢ On 1st November 2022, the RBI launched the **digital rupee for the wholesale segment** to settle secondary market transactions in government securities.

What are the Key Points about the Pilot Project?

➢ The first phase of a pilot project that will cover **select locations and banks in a closed user group (CUG)** comprising participating customers and merchants.

➢ The pilot will initially cover the four cities of **Mumbai, New Delhi, Bengaluru, and Bhubaneswar**, where customers and merchants will be able to use the digital rupee (e₹-R), or e-rupee.

➢ According to the central bank, **the pilot will test the robustness of the entire process of digital rupee creation, distribution and retail usage in real time.**

What is e-rupee?

➢ **Definition:**
  ○ RBI defines the **CBDC as the digital form of currency notes** issued by a central bank. It is a sovereign or entirely independent currency issued by the central bank (in this case, RBI), in accordance with the country's monetary policy.

➢ **Legal Tender:**
  ○ Once officially issued, **CBDC will be considered as a medium of payment and legal tender by all three parties** - **citizens, government bodies, and enterprises. Being government**-recognised, it can be freely converted to any commercial bank's money or notes.
  ○ RBI is not in favour of e-rupee with interest. Because people might withdraw money from banks and convert it to digital rupee - causing banks to fail.

➢ **Difference with Cryptocurrencies:**
  ○ The underlying technology of **cryptocurrency (distributed ledger) can underpin parts of the** **digital rupee system**, but the RBI has not decided on this, yet. However, cryptocurrencies like bitcoin or ethereum are 'private' in nature. Digital rupee on the other hand, will be issued and controlled by the RBI.

➢ **Global Scenario:**
  ○ As of July 2022, 105 countries were exploring CBDC. Ten countries have launched CBDC, the first of which was the Bahamian Sand Dollar in 2020 and the latest was Jamaica's JAM-DEX.

What are the Types of e-Rupee?

➢ Based on the **usage and the functions performed by the digital rupee and considering the different levels of accessibility,** RBI has demarcated the digital rupee into two broad categories — **Retail and Wholesale.**

  ○ **Retail e-rupee is an electronic version** of cash primarily meant for retail transactions. It will be potentially available for **use by all — private sector, non-financial consumers and businesses** — and can provide access to safe money for payment and settlement as it is a direct liability of the central bank.

  ○ **Wholesale CBDC is designed for restricted access to select financial institutions. It has the potential to transform the settlement systems** for financial transactions undertaken by banks in the **government securities (G-Sec) segment**, inter-bank market and capital market more efficient and secure in terms of operational costs, use of collateral and liquidity management.

How will the Retail Digital Rupee Work?

➢ The e₹-R would be in the **form of a digital token that represents legal tender.** It will be issued in the same denominations as paper currency and coins, and will be distributed through intermediaries, i.e., banks.

➢ Users will be able **to transact with e₹-R through a digital wallet** offered by the participating banks and stored on mobile phones and devices, according to the RBI.

➢ Transactions can be **both person to person (P2P) and person to merchant (P2M).**

➢ Payments to merchants can be **made using QR codes displayed at merchant locations.**

➢ The e₹-R would offer **features of physical cash like trust, safety and settlement finality.**

○ As in the case of cash, it will **not earn any interest and can be converted to other forms of money**, like deposits with banks.

What are the Advantages of e-rupee?

➢ Reduction in operational **costs involved in physical cash management**, fostering financial inclusion, bringing resilience, efficiency and innovation in the payments system.

➢ Provide the public with **uses that any private virtual currencies can provide, without the associated risks.**

What are the issues related to CBDC in India?

➢ **Cyber Security:**
  ○ CBDC ecosystems may be at a similar risk of cyber-attacks that the current payment systems are exposed to.

➢ **Privacy issue:**
  ○ The CBDC is expected to generate huge sets of data in real time. Privacy of the Data, concerns related to its anonymity and its effective use will be a challenge.

➢ **Digital divide and financial illiteracy:**
  ○ The **NFHS-5** also provides data segregation based on the rural-urban divide. Only 48.7% of rural males and 24.6% of the rural females have ever used the internet. So, CBDC may wide gender-based hurdle in financial inclusion along with digital divide.

India Development Report: WB

Why in News?

The **World Bank (WB)** in its **India Development Report titled 'Navigating the Storm',** upgraded its growth forecast for **India's economy in 2022-23 to 6.9%.**

➢ In October 2022, the WB had cut India's **GDP (Gross Domestic Product)** growth forecast to 6.5 % from 7.5 % earlier.

What are the Key Highlights?

➢ **Growth Projection:**
  ○ The Bank expects the Indian economy to grow at a slightly slower **6.6% in 2023-24** as a **challenging external environment and faltering global growth** will affect its economic outlook through different channels.

➢ **Growth Drivers:**
  ○ India's resilience in economic activity **despite a deteriorating external environment.**
    ● India's economy has been remarkably resilient to the deteriorating external environment, and strong macroeconomic fundamentals have placed it in good stead compared to other emerging market economies.
  ○ Strong private consumption and **investment**.
  ○ The government's **focus on bolstering capital expenditure** also supported domestic demand in the first half of 2022-23.
  ○ India has **a large domestic market and is relatively less exposed** to international trade flows
  ○ Continued robust growth of domestic demand at the start of Q3 (October to December quarter), 2022-23.
  ○ A well-crafted and prudent policy response to global spillovers is helping India navigate **global and domestic challenges.**

➢ **Challenges:**
  ○ The impact of a tightening **global monetary policy cycle, slowing global growth and elevated commodity prices (inflation) and rising borrowing costs will affect domestic demand**, particularly private consumption in FY2023/24, while slowing global growth will inhibit growth in demand for India's exports. These factors mean that the Indian economy will experience lower growth in FY23 compared to FY22.

➢ **Suggestions:**
  ○ The renewable energy and green economy sectors can create a lot of jobs.
  ○ It cautions about trade-offs between trying to limit the adverse impact of global spillovers on growth and the available policy space.

What is the World Bank?

➢ **About:**
  ○ It was **created in 1944**, as the International Bank for Reconstruction and Development (IBRD) along with the **International Monetary Fund (IMF). The IBRD later became the World Bank.**

Note:

- ❍ The World Bank Group is a unique global partnership of five institutions working for sustainable solutions that reduce poverty and build shared prosperity in developing countries.
- ❍ The World Bank is one of the **United Nations'** specialized agencies.
- ➢ **Members:**
  - ❍ It has **189 member countrie**s.
  - ❍ **India is also** a member country.
- ➢ **Major Reports:**
  - ❍ **Ease of Doing Business (Stopped publishing).**
  - ❍ **Human Capital Index.**
  - ❍ **World Development Report.**
- ➢ **Its Five Development Institutions:**
  - ❍ International Bank for Reconstruction and Development (IBRD)
  - ❍ International Development Association (IDA)
  - ❍ International Finance Corporation (IFC).
  - ❍ Multilateral Guarantee Agency (MIGA)
  - ❍ International Centre for the Settlement of Investment Disputes (ICSID)
    - ● India is not a member of this.

Vizhinjam Port Project

Why in News?

Recently, Adani Group approached the Kerala High Court requesting the security cover of central forces in **its port construction site in Vizhinjam** which was marred by violent protests by the Fishermen.

What is the Vizhinjam Port Project?

- ➢ **About:**
  - ❍ It is a Rs 7,525 crore port, being built under a **Public Private Partnership (PPP) model** with Adani Ports Private Limited at Vizhinjam near Thiruvananthapuram, Kerala.
  - ❍ It was laid in December 2015 and has since missed its completion deadline.
  - ❍ The port is to have **30 berths, and will be able to handle giant "megamax" container ships.**
- ➢ **Significance:**
  - ❍ It is believed that the ultramodern port, located close to major international shipping routes, **will**

boost India's economy and its location is also of strategic importance.

- ❍ The port is expected to **compete with Colombo, Singapore, and Dubai** for a share of trans-shipment traffic.
- ❍ The port's advantages are "**availability of a 20m contour within one nautical mile from the coast;** minimal littoral drift along the coast, hardly any maintenance dredging required; links to national/regional road, rail network; and proximity to international shipping routes.

Why are Fishermen Protesting?

- ➢ Fisherfolk have been protesting against the project for the past four months, alleging that its construction is causing **massive sea erosion, taking away their livelihood and dwellings.**
- ➢ They want an impact study conducted and the project **to remain suspended until the study report comes out.**
- ➢ The fishing community has also put forward six **other demands:**
  - ❍ Rehabilitation **of families who lost their homes** to sea erosion
  - ❍ Effective steps t**o mitigate coastal erosion**
  - ❍ Financial **assistance to fisherfolk** on days weather warnings are issued
  - ❍ compensation **to families of those who lose their lives in fishing accidents**
  - ❍ **Subsidised** kerosene
  - ❍ A mechanism to **dredge the Muthalappozhi fishing harbour** in Anchuthengu in Thiruvananthapuram district.
- ➢ The kerosense subsidy has been demanded by claiming that because of the project, **fishermen have to venture deeper into the ocean for catch, increasing the fuel cost burden.**

Import & Smuggling of Gold

Why in News?

Recently, the **Finance Minister of India** has said that officials should find out whether there is a **correlation between higher gold imports and smuggling**, and whether a **pattern is emerging in the detection of smuggling**.

- ➢ It has been noted that **whenever there is a surge in gold imports**, gold smuggling also **typically goes up**.

Note:

How much Gold is Smuggled into India?

➢ **About:**
  ○ According to the Directorate of Revenue Intelligence's (DRI's) **Smuggling in India Report 2021-22**, a total **833 kg of smuggled gold**, worth around Rs 500 crore, was **confiscated in FY 2021-22.**
    ● 2020-21 had witnessed a decline in smuggling from the Gulf region because flights were cancelled due to the **Covid-19 pandemic**.
  ○ More than 11 tonnes of gold have been seized in 16,555 smuggling cases at airports across India in the five years ending August 2020.
  ○ The figures reported was of the gold that was seized, the smuggling that succeeded could be much more than what the agencies confiscated.
  ○ According to the **World Gold Council (WGC)**, smuggling could increase by 33% to touch 160 tonnes in 2022 compared to the pre-Covid period due to the increase in the import duty on gold to 12.5% from 7.5%.
  ○ In the last 10 years, Maharashtra has smuggled most of the Gold in India followed by Tamil Nadu and Kerala.

➢ **North East Smuggling Route:**
  ○ According to the DRI Report, 73% of the gold caught had been **brought through Myanmar and Bangladesh.**
    ● 37% of all the gold seized in FY22 was from Myanmar. 20% of it originated from West Asia.
  ○ Many international reports suggest that smuggled gold is brought into Myanmar from **China through the towns of Ruili and Muse** on the Chinese and Myanmarese sides of the border respectively.
    ● Muse is located in the **Shan State in Northeastern Myanmar** and Ruili is in the **Dehong Dai Prefecture of Yunnan Province, China**.

How much Gold does India Import?

➢ Gold imports through official channels, involving a major outflow of foreign exchange, have also been rising.
  ○ Imports worth **Rs 3.44 lakh crore** were reported in 2021-22, up from **Rs 2.54 lakh crore** in 2020-21.
➢ According to the **World Gold Council**, India, the world's second-biggest gold consumer after China, imports about **900 tonnes of gold a year**, consumption in India was 797.3 tonnes in 2021 (Highest in past 5 years).

➢ India imports **gold dore bar** as well as **refined gold**.
  ○ In the last five years, imports of gold dore bars made up **30% of the total official imports** of the yellow metal in India.

> **What is the Directorate of Revenue Intelligence?**
> ➢ It is India's chief **anti-smuggling intelligence, investigations and operations agency**.
> ➢ It works under the **Central Board of Indirect Taxes and Customs (CBIC)**, Ministry of Finance.
> ➢ It is headed by a **Director General** of the rank of **Special Secretary** to the Government of India.
> ➢ DRI works to **secure India's national and economic security** by preventing the outright smuggling of firearms, gold, narcotics, fake Indian Currency notes, antiques, wildlife and environmental products.
>   ○ Moreover, it also works to prevent the proliferation of black money, commercial frauds and trade-based money laundering.
> ➢ It is headquartered in **New Delhi.**

PM SVANidhi Scheme Extended

Why in News?

The **Prime Minister Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) Scheme** has been extended beyond March, 2022.

What are the Provisions for the Extended Scheme?

➢ **Extension of lending period** till December 2024.
➢ **Introduction of 3rd loan of up to ₹50,000** in addition to 1st & 2nd loans of ₹10,000 and ₹20,000 respectively.
➢ **Extension of 'SVANidhi Se Samriddhi' component** for all beneficiaries of PM SVANidhi scheme across the country.
  ○ 'SVANidhi Se Samriddhi' was launched in January 2021 to **map the socio-economic profile of the PM SVANidhi beneficiaries** and their families.

What is PM SVANidhi Scheme?

➢ **About:**
  ○ The scheme was announced as a **part of the Economic Stimulus-II under the Atmanirbhar Bharat Abhiyan**.

○ It has been **implemented since 1ˢᵗ June 2020, for providing affordable working capital loans to street vendors to resume their livelihoods** that have been adversely **affected due to Covid-19 lockdowns.**

- A total of 13,403 vending zones have been identified so far.

- 42 lakh street vendors are to be provided benefits under PM SVANidhi Scheme by December, 2024.

➢ **Funding:**

○ It is a **Central Sector Scheme** i.e., fully funded by **Ministry of Housing and Urban Affairs** with the following objectives:

- To facilitate working capital loan;

- To incentivize regular repayment; and

- To reward digital transactions

➢ **Significance:**

○ The scheme will open up **new opportunities for street vendors to move up the economic ladder.**

➢ **Eligibility:**

○ **States/Union Territories (UTs):**

- The Scheme is available for beneficiaries belonging to only those States/UTs which have notified Rules and Scheme under Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014.

- Beneficiaries from Meghalaya, which has its own State Street Vendors Act may, however, participate.

○ **Street Vendors:**

- The Scheme is available to all street vendors engaged in vending in urban areas.

  ■ Earlier the Scheme **was available to all street vendors engaged in vending** on or before March 24, 2020.

Note:

International Relations

Highlights

- NSA Meet with Central Asia
- Wassenaar Arrangement
- India as Voice of Global South
- Indian and Chinese Troops Clash in Arunachal Pradesh
- Presidency of India at the UNSC
- India's Import Dependence on China
- India Germany Relations
- SAARC Currency Swap Framework
- 17th Asia Pacific Regional Meeting

NSA Meet with Central Asia

Why in News?

The **National Security Advisor (NSA) of India**, for the first time, hosted a special meeting with his counterparts from Central Asian countries - **Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.**

➢ Earlier in January 2022, the Prime Minister of India hosted the **first India-Central Asia Summit** in virtual format.

What are the Key Highlights about the Meetings of NSAs?

➢ **30th Anniversary:** This was the **first time that NSAs of Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan were in Delhi** for a high-level security meeting.

  ○ The meeting **coincides with the 30th anniversary of the establishment of diplomatic ties** between India and the Central Asian countries.

➢ **Afghanistan the Centre of Talks:** The focus was mainly on the security **situation in Afghanistan** and the **threat of terrorism originating from the country** under the Taliban.

➢ **Deliberations over Chabahar:** The NSAs **supported India's proposal to include Chabahar port within the framework of the INSTC (International North-South Transport Corridor)** connecting Iran to Russia via Central Asia.

➢ **Other Deliberations:** Deliberations over the need for **collective and coordinated action** against the "**misuse of new and emerging technologies**, arms and drugs trafficking, **abuse of cyber space** to spread **disinformation** and **unmanned aerial systems**".

➢ **Institutionalisation of Mechanism:** During the summit, the leaders **agreed to institutionalise the Summit mechanism** by deciding to **hold it biannually.**

  ○ An **India-Central Asia Secretariat in New Delhi** would be set up to support the new mechanism.

Who is a National Security Advisor in India?

➢ The National Security Advisor (NSA) is the **primary advisor to the Prime Minister of India.** He also **presides over the National Security Council (NSC)**. The current NSA is **Ajit Doval.**

➢ The NSC of India is a three-tiered organisation that **oversees political, economic, energy and security issues of strategic concern.**

  ○ It was formed in 1998, where all aspects of national security are deliberated upon.

  ○ NSC **operates within the executive office of the PM**, liaising between the government's executive branch and the intelligence services.

  ○ The **Ministers of Home Affairs, Defence, External Affairs and Finance** are its **members**.

How are India's Relations with Central Asia?

➢ **Historic Ties:** Central Asia is undoubtedly a **zone of India's civilisational influence**; the **Ferghana Valley** was India's crossing-point of the **Great Silk Road.**

  ○ **Buddhism also found inroads in several Central Asian cities** in the form of Stupas and Monasteries.

  ○ **Men of prominence** such as **Amir Khusrau, Dehlawi, Al-Biruni** etc. having Central Asian roots came and made their name in India.

➢ **Diplomatic Ties:** India considers the Central Asian countries as the **"heart of Asia"** and they are also members of the **Shanghai Cooperation Organisation (SCO)**.

Note:

drishti

○ Central Asian countries are **"aware" of Pakistan's support to cross-border terrorism** and its links to various terror groups.

➤ **Like-Mindedness in Combatting Terrorism:** India and the Central Asian nations have **similarities in approach in countering terrorism** and the threat of radicalisation.

○ The latest meeting called for the early adoption of the UN Comprehensive Convention on International Terrorism, which India had first proposed in 1996, but has been held up for decades, **primarily over differences on the definition of terrorism.**

➤ **India's Role in Afghanistan Situation:** India and the Central Asian countries have shared concerns over terrorism emanating from Afghanistan and its implications for regional security. **India has been a strong proponent for re-establishing peace in Afghanistan.**

○ In November 2021, India had hosted a **regional dialogue on the situation in Afghanistan**, which was attended by NSAs of Russia, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

➤ **Stand on Chabahar Port:** India has registered significant progress recently through **renovation of Chabahar port**. It is also a member of the Ashgabat Agreement.

○ The port played an important role during the humanitarian crisis in Afghanistan by delivering humanitarian goods to the Afghan people by international organisations.

● Prior to the fall of Kabul to the Taliban, India delivered 100,000 tonnes of wheat and medicines to Afghanistan via the port's **Shahid Beheshti terminal developed by India.**

What are the Challenges in Robust India-Central Asia Ties?

➤ There are **obstructions of physical connectivity** due to Pakistan's hostility and Afghan instability.

➤ **Politically, Central Asian countries are highly fragile** and prone to threats like **terrorism & Islamic fundamentalism** making the region a volatile and unstable market.

➤ **Involvement of China** in the region by the Belt and Road Initiative has significantly undermined India's influence in the region.

➤ **Porous border and unbridled corruption** along with the proximity with regions of soaring opium production

(Golden Crescent and Golden Triangle) makes the region a **powerhouse for drug and money trafficking.**

Wassenaar Arrangement

Why in News?

Recently, on 26th annual plenary of the Wassenaar Arrangement in Vienna, Ireland handed over the chairmanship to India and India will officially assume the chairmanship from 1st January, 2023.

What is Wassenaar Arrangement?

➤ **About:**

○ The Wassenaar Arrangement is a voluntary export control regime. The Arrangement, **formally established in July 1996,** has 42 members who exchange information on transfers of conventional weapons and dual-use goods and technologies.

● **Dual-use** refers to the ability of a **good or technology to be used for multiple purposes** - usually peaceful and military.

○ Wassenaar Arrangement's **Secretariat is in Vienna, Austria.**

➤ **Members:**

○ It has 42 member states **comprising mostly NATO (North Atlantic Treaty Organization) and EU states.**

● Participating States are required to report their arms transfers and transfers/denials of certain dual-use goods and technologies to destinations outside the Arrangement on a six-monthly basis.

○ India became **a member of the Arrangement in 2017.**

➤ **Objectives:**

○ The group works by **regularly exchanging information in respect of technology**, both conventional and nuclear-capable, that is sold to, or denied to countries outside the grouping.

○ This is done through **maintenance and updating of detailed lists of chemicals,** technologies, processes and products that are considered militarily significant.

○ It aims at **controlling the movement of technology, material or components to countries or entities which undermine international security** and stability.

Note:

- ➢ **Wassenaar Arrangement Plenary:** It is the decision-making body of the Arrangement.
  - ❍ It is composed of **representatives of all Participating States** and normally meets once a year, usually in December.
  - ❍ The position of **Plenary Chair is subject to annual rotation** among Participating States.
  - ❍ In 2018 the Plenary Chair was held by the United Kingdom, and in 2019 the Chair is held by Greece.
  - ❍ All Plenary decisions are taken by consensus.

Why is the Chairmanship Significant for India?

- ➢ **Can Bolster Anti-Terrorism Efforts:**
  - ❍ The timing of India's WA chairmanship coincides with a **recent increase in country's anti-terrorism position** in international bodies.
  - ❍ India is also actively engaging **global stakeholders in curbing terrorist financing**.
    - ● Indian home minister is presently the chair of the **No Money for Terrorism (NMFT)** ministerial initiative.
- ➢ **Prevent Arms Diversion to Terrorists:**
  - ❍ As a chair of the plenary, India would be in a **position to steer discussions of the group to further strengthen the export controls** to prevent arms diversion to terrorists or to sovereign nations supporting terrorism.
- ➢ **Strong Anti-Proliferation Framework:**
  - ❍ The worsening economic crisis in India's western neighbour coupled with rapid radicalization of **historically moderate sects in communities in the country poses a peculiar set of challenges** to India.

- ❍ Strengthening the licensing and enforcement practices under the WA and adoption of new export controls in areas like **flight technology, interception technology and digital investigation tools will pave the way for the creation of a strong anti-proliferation framework** for South Asia.
- ➢ **Democratization of space and Defense Technologies:**
  - ❍ India can play a significant role in **democratising access to technologies and processes that can serve as crucial building blocks** for the newly emerging defence and space manufacturing sectors in India.
  - ❍ India is slowly emerging as a **low-cost producer of several items** in the WA's control lists.

Wassenaar Arrangement

For exchange of information on transfers of conventional weapons and dual-use goods and technologies

About
- Voluntary export control regime **formally estd. in 1996**
- Succeeded the Cold War-era **Coordinating Committee for Multilateral Export Controls**

Objective
- Controlling the movement of technology material or components to countries or entities which **undermine international security and stability**

Members
- **42** members (mostly NATO and EU states)
- The **P5** (except China) of UNSC are members

India's Membership of WA
- India joined as a **member in 2017** (latest entrant)
- India's membership implies that it is **recognised to have dual use technology**
- Being a non-signatory to the NPT, the WA membership is significant for India to **boost its credentials to enter the Nuclear Suppliers Group (NSG)**

Secretariat
- **Vienna**, Austria

WA Plenary
- Decision-making body with **representatives from all participating states**
- Plenary **chair rotates annually; India's** chairmanship begins from **1st Jan, 2023**

Drishti IAS
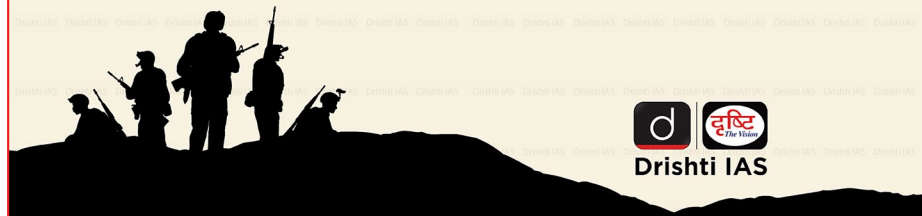
Note:

What are other Export Control Regimes?

➢ The **Nuclear Suppliers Group (NSG),** for the control of nuclear related technology.

➢ The **Australia Group (AG)** for control of chemical and biological technology that could be weaponized.

➢ The **Missile Technology Control Regime (MTCR)** for the control of rockets and other aerial vehicles capable of delivering weapons of mass destruction.

India as Voice of Global South

Why in News?

As India assumed the **G20 Presidency,** the External Affairs Minister of India iterated the country's **role as the "voice of the Global South",** that is otherwise **under-represented in global forums.**

What is Global North and Global South?

➢ **'Global North'** refers loosely to countries like the **US, Canada, Europe, Russia, Australia** and **New Zealand**, while **'Global South'** includes **countries in Asia, Africa and South America.**

  ❍ This classification is more accurate as the **countries share similarities in terms of wealth, indicators of education and healthcare, etc.**

➢ Some of the **South countries like India and China have emerged economically**, in the last few decades.

  ❍ The progress achieved by many Asian countries is also **seen as challenging the idea that the North is the ideal.**

What were the Earlier Used Classification Systems?

➢ **First World, Second World and Third World Countries:**

  ❍ First, Second and Third Worlds countries refer to countries **associated with the Cold war-era alliances of the US, the USSR, and non-aligned countries,** respectively.

➢ **World Systems Approach:**

  ❍ It emphasises an interconnected perspective of looking at world politics. There are **three major zones of production: core, peripheral and semi-peripheral.**

  ● The core zones reap profits, being the owners of cutting-edge technologies – countries like the US or Japan.

  ● Peripheral zones, on the other hand, engage in less sophisticated production that is more labour-intensive.

  ● Semi-peripheral zone is in the middle including countries like India and Brazil.

➢ **Eastern and Western Countries:**

  ❍ **Western** countries generally **signify greater levels of economic development and prosperity** among their people, and **Eastern** countries considered as **being in the process of that transition.**

What Led to the Emergence of Global North and South?

➢ **Non-Feasibility of Earlier Classification:**

  ❍ In the **post-Cold War world, the First World/Third World classification was no longer feasible**, because when the **Communist USSR disintegrated** in 1991, most countries had **no choice but to ally at some level with the capitalist US**, the only remaining global superpower.

  ❍ The East/West binary was also seen as often perpetuating stereotypical thinking about African and Asian countries.

  ● Categorising incredibly diverse countries into a monolith was felt to be too simplistic.

➢ **Commonalities in Global South Countries:**

  ❍ Most of the Global South countries **share a history of colonisation.** The region has mostly **remained under-represented in international forums** such as their **exclusion from the permanent membership of the UNSC.**

  ● This exclusion is seen as something that contributes towards the slower growth of global south.

What are the Initiatives for South-South Cooperation?

➢ **Global:**

  ❍ **Brazil, Russia, India, China and South Africa (BRICS) Forum**

  ❍ **India, Brazil and South Africa (IBSA) Forum**

- International Day for South-South Cooperation:
  - Originally observed on December 19, the date for the United Nations Day for South-South Cooperation was moved to September 12 in 2011.
  - It commemorates the date when the United Nations General Assembly (UNGA) adopted a plan of action in 1978 to promote and implement technical cooperation among developing countries.
- Indian:
  - Proposal on TRIPS Waiver:
    - Trade-Related Aspects of Intellectual Property Rights (TRIPS) waiver, first proposed by the India and South Africa in 2020, would involve a temporary global easing of intellectual property rights (IPRs) on COVID-19 vaccines and treatments to enable them to be produced on a far larger scale, to support global health and a way out of the pandemic. agreement on Covid-19 vaccines, drugs, therapeutics, and related technologies.
  - Vaccine Maitri Campaign:
    - In 2021, India began its historic campaign called the "Vaccine Maitri" initiative which is in accordance with the 'Neighbourhood First' Policy.

What are the Roadblocks to the Development of Global South?

- Issue of Green Energy Fund:
  - Despite Global North countries' higher contribution towards global emissions, they are neglecting to pay for funding green energy, for which the ultimate sufferers are the least emitters – the lesser developed countries.
- Impact of Russia-Ukraine War:
  - The Russia-Ukraine war severely affected the least developed countries (LDCs) aggravating the concerns related to food, energy and finance, thereby, threatening the development prospects of LDCs.
- China's Interference:
  - China is increasingly making inroads in the Global South through the Belt and Road Initiative (BRI) for developing infrastructure.

- However, it is still questionable that whether BRI will be a win-win situation for both parties or it will focus only on China's Profit.
- US Hegemony:
  - The world is now considered to be multipolar by many but still, it is the US alone who dominates international affairs.
- Inadequate Access to Resources:
  - Global North-South divergences have been historically characterised by major gaps in the access to resources required for crucial developmental outcomes.
    - Industrialisation, for example, has been skewed in the favour of advanced economies since the early 1960s, and no major evidence of global convergence was found in this regard.
- Impact of Covid-19:
  - Covid-19 pandemic has exacerbated the already existing divides.
    - Not only have the countries faced different challenges in dealing with the initial phases of the pandemic, but the social and macroeconomic implications being faced today have been far worse for the global South.
  - The vulnerability of the domestic economies is far more apparent now in countries ranging from Argentina and Egypt to Pakistan and Sri Lanka.

How can India be the Voice of Global South?

- Championing the Global South today would demand more active Indian engagement with the messy regional politics within the developing world.
- India must also come to terms with the fact that the Global South is not a coherent group and does not have a single shared agenda. There is much differentiation within the South today in terms of wealth and power, needs and capabilities.
  - This demands a tailored Indian policy to different regions and groups of the developing world.
- India is eager to become a bridge between the North and the South by focusing on practical outcomes rather than returning to old ideological battles. If India can translate this ambition into effective policy, there will be no contradiction between the simultaneous pursuit of universal and particular goals.

Note:

G-20 (The Group of Twenty)

About

- In 1999, following the **Asian Financial Crisis** of the **1990s**, G20 was established as a Forum for **Finance Ministers and Central Bank Governors**.
- Raised to the **Summit level in 2008** to address the global financial and economic crisis of 2008.

Aims

- Secure global financial stability by involving world's largest advanced and emerging economies.

Structure and Functioning of G20

- The **G20** Presidency rotates annually
- No permanent **Secretariat** or **Headquarters**
- **19 countries** are divided into **5 groups**
- The presidency rotates between each group

Troika

- It is a working association between the **current presidency**, **past presidency** and **next presidency**.

Challenges

- No Enforcement mechanism
- No legal binding
- Polarization of Interests:
  - Russia Ukraine Conflict
  - China's strategic rise
  - NATO's expansion

G20 India 2023

- India assumed the **18th G20 Presidency from December 1, 2022** for a **one-year period**.
- **Theme:**
  - **"Vasudhaiva Kutumbakam"** a Sanskrit word which Stands for **"One Earth · One Family. One Future"**.
  - This is taken from the ancient Sanskrit text of the **'Maha Upanishad'**.

G20 COUNTRIES

Argentina   Australia   Brazil   Canada   China   European Union   France

Germany   India   Indonesia   Italy   Japan   Mexico   Russia

Saudi Arabia   South Africa   South Korea   Turkey   United Kingdom   United States

Indian and Chinese Troops Clash in Arunachal Pradesh

Why in News?

Recently, India and China troops clashed along the Yangste river in Tawang sector in Arunachal Pradesh.

➢ This was the **first such incident involving the Indian soldiers and Chinese PLA troops** since the **Galwan Valley incident** in 2020.

➢ Both sides patrol areas up to their claim lines and this has been a trend since 2006.
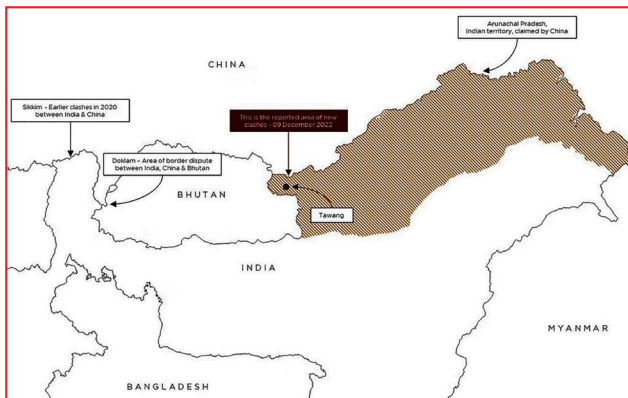
What is the Background?

➢ According to the India Army, there are certain areas along the **Line of Actual Control (LAC)** in the **Tawang Sector** that are areas of differing perception.

  ❍ The LAC is divided into western (Ladakh), middle (Himachal Pradesh and Uttarakhand), Sikkim, and eastern (Arunachal Pradesh) sectors.

➢ The incident came days after China expressed objection to **Operation Yudhabhyas**, an India-US joint military exercise at Auli in the Uttarakhand hills, claiming it was a violation of **1993 and 1996 border agreements**.

What is the Importance of Arunachal Pradesh from an Indian/Chinese Perspective?

➢ **Strategic Significance:**

  ❍ Arunachal Pradesh, known as the **Northeast Frontier Agency (NEFA) until 1972,** is the largest state in the northeast and shares international borders with Tibet to the north and northwest, Bhutan towards the west and Myanmar to the east.

  ❍ The state is like a **protective shield to the northeast.**

  ❍ However, China claims Arunachal Pradesh as a part of southern Tibet.

  ❍ And while **China may lay claim to the entire state, its main interest lies in the district of Tawang**, which is in the north-western region of Arunachal and borders Bhutan and Tibet.

➢ **Bhutan Factor:**

  ❍ Taking control of Arunachal would mean that **Bhutan would have Chinese neighbours on both its western and eastern borders** if Beijing gained control.

  ● On the western side of Bhutan, China has already begun building motorable roads linking strategic points.

➢ **Waterpower:**

  ❍ Since, **China has control over India's water supply to the northeastern region.** It has constructed several dams and can use water as a geo-strategic weapon against India by causing flooding or drought in the region.

  ❍ The **Tsangpo river**, which originates in Tibet, flows into India and is called **Siang in Arunachal Pradesh** before it becomes the Brahmaputra.

  ❍ In 2000, **a dam breach in Tibet caused floods** that wreaked havoc in northeast India claiming 30 lives and leaving more than 100 missing.

Why is China Interested in the Tawang Sector?

➢ **Strategic Importance:**

  ❍ China's interest in **Tawang could be for tactical reasons as it provides a strategic entry into India's northeastern region.**

  ● Tawang is a critical point in the corridor between Tibet and Brahmaputra Valley.

➢ **Tawang Monastery:**

  ❍ Tawang, which also borders Bhutan, **hosts the Galden Namgey Lhatse**, the world's second-largest monastery of Tibetan Buddhism, the largest being the Potala Palace in Lhasa.

  ● The monastery was founded by Merag Lodroe Gyamtso in the year 1680-81 to honour the wishes of the fifth **Dalai Lama**.

  ● China claims that the monastery is evidence that the district once belonged to Tibet. They cite historical ties between the Tawang monastery and the Lhasa monastery in Tibet to support their claim over Arunachal.

Note:

➤ **Cultural Connections and China's Anxieties:**
  ○ Tawang is an **important center of Tibetan Buddhism** and there are some tribes in the upper Arunachal region which have cultural connections to the people of Tibet.
    ● The Monpa tribal population practices Tibetan Buddhism and are also found in some areas of Tibet.
  ○ According to some experts, China fears that the presence of these ethnic groups in Arunachal could at some stage give rise to a pro-democracy Tibetan movement against Beijing.

➤ **Political Significance:**
  ○ When the Dalai Lama escaped Tibet in 1959 amid China crackdown, he entered India through Tawang and stayed in the Tawang monastery for some time.

Presidency of India at the UNSC

Why in News?

On 1st December, **India assumed the monthly rotating presidency of the UN Security Council (UNSC)** for the second time in its two-year tenure as an elected member of the Council in 2021-22.

➤ India had earlier assumed UNSC presidency in August 2021.

What are the Events ahead under India's Presidency?

➤ **Reformed Multilateralism:**
  ○ India will hold a "high-level open debate" on "**Maintenance of International Peace and Security: New Orientation for Reformed Multilateralism (NORMS)**" at the Security Council.
    ● The NORMS envisages reforms in the current multilateral architecture, with the UN at its centre, to make it more representative and fit for purpose.

➤ **Counter-Terrorism:**
  ○ The other signature event planned is the high-level briefing on the **theme "Threats to International Peace and Security Caused by Terrorist Acts: Global Approach to Counter Terrorism — Challenges and Way Forward".**

● This briefing intends to underscore the necessity of collective and coordinated efforts to combat the menace of terrorism.

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.
    ● 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.
  ○ The **Secretary-General** is appointed by the General Assembly, on the recommendation of the **Security Council**.
  ○ The UNSC and UNGA jointly elect judges to the **International Court of Justice.**

➤ **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.

Note:

○ A "No" vote from one of the five permanent members blocks the passage of the resolution.

➢ **Responsibilities:**

○ The **UNSC brokers peace by helping parties reach an agreement** through mediation, appointing special envoys, dispatching a UN Mission or requesting the UN Secretary-General to settle the dispute. It can also **vote to extend, amend or end mission mandates.**

○ The Security Council oversees the work of UN peace operations through periodic reports from the Secretary-General and council sessions. It alone can make decisions regarding these operations, which Member States are obligated to enforce.

What are the Issues with UNSC?

➢ **The Loss of Relevance:**

○ The council has been **criticised for losing relevance and credibility.**

● According to India's External Affairs Minister, the UNSC has narrow leadership and a need for a new approach, hence a call to push for the "refresh button".

➢ **Lack of Multilateralism:**

○ The **council's lack of multilateralism** has also been criticised in the wake of the **Syrian war crisis** and the ongoing **Covid-19 pandemic**.

UN Security Council (UNSC)

The UN Charter vests the primary responsibility for maintaining international peace and security to the UNSC

About
One of the **6 principal organs** of UN; established in **1945** by **UN Charter**

Headquarters
New York City

First Session
17 January 1946 at Church House, Westminster, **London**

Membership
- 15 members - 5 Permanent Members (**P5**), 10 **Non-Permanent Members** elected for **two-year terms** (5 elected each year)
- P5 - the US, the UK, Russia, France and China

Presidency
- **Rotates every month** among the 15 members
- **India's** Presidency for year **2022** - December

Voting Powers
- 1 member = 1 vote
- P5 have **veto power**
- Members of UN sans membership of UNSC **participate without vote**

UNSC Committees/Resolutions
Terrorism
- **Resolution 1373** (Counter Terrorism Committee)
- **Resolution 1267** (Da'esh and Al Qaeda Committee)

Non-Proliferation Committee
- **Resolution 1540** (against nuclear, chemical and biological weapons)

India and UNSC
- Served **7 times** as non-permanent member; elected for the **8th time** for 2021-22; advocates for a permanent seat
- Arguments for a permanent seat:
  - **43 peacekeeping missions**
  - Active participation in **formulating Human Rights Declaration (UDHR)**
  - India's **population, territorial size, GDP, economic potential, cultural diversity, political system** etc.

G4
Group of 4 countries (Brazil, Germany, India and Japan) which advocate each other's bids for permanent seats in the UNSC

Uniting for Consensus (UfC) Movement
- Informally known as the **Coffee Club**
- Countries **oppose the expansion Permanent Seats** of UNSC
- **Prime movers of the club** - Italy, Spain, Australia, Canada, South Korea, Argentina and Pakistan
- Italy and Spain are opposed to Germany's bid; Pakistan - India's bid; Argentina - Brazil's bid and Australia - Japan's bid

Major Challenges in UNSC
- Usual UN rules don't apply to UNSC deliberations; **no records of meetings kept**
- Powerplay in UNSC; **anachronistic veto powers** of P5
- **Deep polarisation** among P5; frequent divisions end up blocking key decisions
- **Inadequate representation** of many regions among of the world

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Note:

➢ **Less Representative:**
  ○ It was argued by several speakers that the UN Security Council is less effective because it is less representative, the most pertinent **absence being that of Africa,** a continent of 54 countries.

➢ **Misuse of Veto Power:**
  ○ Veto power has been **always criticised by many experts as well as by most States calling it a "self-chosen club of the privileged"** and non-democratic and not allowing the Council to make necessary decisions whenever it displeases any one of the P-5.
    ● Taking the current world order as an example, the P5 members: United States, Russia, and China are three poles on the periphery of the globe having several geopolitical issues revolving around them (Taiwan Issue and Russia-Ukraine War).

India's Import Dependence on China

Why in News?

The recent **Tawang skirmish** has led to rising demands for severing trade ties with China. However, contrary to the demands, India's imports from China have seen a sharp increase post the **Galwan Valley clash in 2020.**

How are India's Trade Relations with China?

➢ **One of the Biggest Partners:** China is India's **second biggest trading partner after the US.**
  ○ In 2021-22, Indo-China bilateral trade was USD 115.83 billion - 11.2% of India's total merchandise trade of USD 1,035 billion (Indo-US trade - 11.54%).
  ○ China as a trading partner stood at 10th position about 2 decades ago; this **upward trend has begun since 2002-03.**
  ○ **China was India's top trading partner** in 2011-12, from 2013-14 to 2017-18 and in 2020-21.

Note:
➢ Apart from the US and China, the other 8 countries and regions among **India's top-10 trading partners** during 2021-22 were **UAE, Saudi Arabia, Iraq, Singapore, Hong Kong, Indonesia, South Korea, and Australia.**

➢ **Difference in Trade with China and US:**
  ○ The major difference in India's trade with the US and China is that while **India enjoys a trade surplus with the US** (USD 32.85 bn - 2021-22), **with China India has a trade deficit** of USD 73.31 bn (2021-22), the **highest for any country.**
  ○ While **India's imports from China** (between 2001-02 and 2021-2020) have increased from **USD 2 bn to USD 94.57 bn,** (in the same period) **India's exports to China** have increased from about **USD 1 bn to only USD 21 bn.**

➢ **Major Imports:**
  ○ The **top commodities** that India buys from China include:
    ● Electrical machinery and equipment and parts thereof
    ● Television image and sound recorders and reproducers and parts
    ● Nuclear reactors, boilers, machinery and mechanical appliances and parts of thereof
    ● Organic chemicals
    ● Plastic and plastic articles
    ● Fertilisers
  ○ The **most valued** Chinese imports are:
    ● Personal computer (laptop, palmtop etc.) > monolithic integrated circuits-digital > lithium-ion > solar cells > urea

➢ **Major Exports:**
  ○ In 2021-22, India's exports to China were **5% of its total shipments.** The **top exported commodities** included:
    ● Ores, slag and ash
    ● Organic chemicals, mineral fuels/oils and products of their distillation, bituminous substances, mineral waxes;
    ● Iron and steel
    ● Aluminum and articles
    ● Cotton
    ● Among single items, light Naphtha was India's most valued export

What does Heavy Import Reliance on China Imply?

➢ From the perspective of the government, the **political and security challenges are deepened** when the state is dependent on importing products and services from an unfriendly country.

Note:

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➢ India **imports most of the Active Pharmaceutical Ingredients (APIs)** it uses in its pharmaceutical industry from China. The cost of Chinese APIs is cheaper than the Indian ones even on the Indian market.

○ The depth of the problem was revealed during the Covid-19 pandemic when due to travel restrictions, **exports of Chinese APIs to India were temporarily restricted and consequently India had to cut its exports of APIs too.**

➢ Approximately **24% of coal energy generated in India** may be coming from plants that are **using critical equipment imported from China.** This, therefore, may not necessarily be considered a strategic dependence, **but is certainly a form of a security challenge.**

○ While there are demands to limit or even block such imports from China, this would simply mean **forcing private Indian power companies to suffer higher costs.**

What has India done to Counter Over-Reliance on China?

➢ **Ban on Chinese apps**

➢ Scrutinising Chinese investments - keeping Chinese companies out of **5G trials**

➢ Curbing opportunistic takeover of domestic firms - **FDI restriction on China**

➢ Cutting import dependency for APIs - **Promotion of Bulk Drug Parks and PLI Scheme**

➢ De facto ban on the **import of Chinese power equipments**

➢ Imposed **anti-dumping duties** - On certain aluminium goods and chemicals, **for 5 years to protect local manufacturers**

➢ Identification of 12 sectors to **make India a global supplier and cut import bills**

○ These sectors are food processing, organic farming, iron, aluminium and copper, agro-chemicals, electronics, industrial machinery, furniture, leather and shoes, auto parts, textiles, and coveralls, masks, sanitisers and ventilators.

India Germany Relations

Why in News?

Recently, the **External Affairs Minister of India** met with the **Foreign Minister of Germany** in New Delhi.

➢ Germany's minister's visit coincided with the launch of an "**oil price cap**" plan by the **G7** and **European Union** countries to withdraw shipping and insurance services to countries that buy Russian oil above the price of USD 60 a barrel.

What are the Key Highlights of the Meeting?

➢ India and Germany signed a **Comprehensive Partnership on Migration and Mobility** meant to **ease travel for research, study and work** for people in both countries.

○ It would be the "**basis for a more contemporary partnership**" to relations.

➢ The two sides **held talks on bilateral issues**, including Germany's assistance to India on **renewable energy** and energy transitions, as well as international issues such as their IndoPacific strategy, and spoke about China, Afghanistan and Pakistan.

What is the Oil Price Cap by the G7?

➢ **About:**

○ It is a plan by the **G7 with the European Union and Australia** to **impose the price cap on Russian crude oil** shipments, pegged at **USD 60 to a barrel for now.**

○ The price cap is essentially **aimed at preventing firms in signatory nations** from **extending shipping, insurance, brokering and other services to Russian crude oil shipments** that are sold at any value above the designated per-barrel price i.e., USD 60 per barrel.

Note:

- ➤ Since it came into effect on 5th December 2022, the cap will only apply to shipments that are "loaded" onto vessels after the date and not apply to shipments in transit.
- ➤ **India's Stand:**
  - ❍ Despite the **United States-led sanctions on Russia** post its **invasion of Ukraine**, India has decided to not just continue with, but also **double its trade with Moscow in the "near foreseeable future".**
    - ● India's consumption of Russian oil was just one-sixth of European consumption and should not be compared unfavourably, defending the government's decision to increase its intake of Russian oil since the war in Ukraine.

How has the India Germany Relations been?

- ➤ **India-German Ties:**
  - ❍ The bilateral relations between India and Germany are founded on **common democratic principles**. India was amongst the **first countries to establish diplomatic ties with the Federal Republic of Germany** after the **Second World War.**
  - ❍ Germany cooperates with India to the tune of **1.3 billion Euros a year in development projects**, 90% of which serves the purpose of fighting **climate change**, saving natural resources as well as **promoting clean and green energy.**
    - ● Germany has also been supporting the construction of **a huge solar plant in Maharashtra** with a capacity of 125 Megawatt which generates annual CO_2 savings of 155,000 tons.
  - ❍ After the appointment of new Chancellor of Germany in December 2021, India and Germany agreed that as major democracies and strategic partners, they will **step up their cooperation to tackle common challenges**, with climate change on top of the agenda.
- ➤ **Economic Cooperation - A Challenge:**
  - ❍ There is a problem of the **lack of a separate bilateral investment treaty** between the two countries. Germany has a **Bilateral Trade and Investment Agreement (BTIA)** with India via EU, it does not have the competence to negotiate it separately.
  - ❍ Also, Germany is particularly sceptical about India's trade liberalization measures, it bats for more liberal labour regulations.
- ➤ **Indo-Pacific Region - Significance:**
  - ❍ **The Indo-Pacific**, with India as its centrepiece, looms large in **Germany's and the European Union's foreign policy.**

- ❍ The Indo-Pacific region is **home to around 65%** of the global population and **20 of the world's 33 megacities.**
- ❍ The region accounts for 62% of global **Gross Domestic Product (GDP)** and 46% of the world's merchandise trade.
- ❍ It is also the source of more than **half of all global carbon emissions** which makes the region's countries key partners in tackling global challenges such as climate change and sustainable energy production and consumption.
- ➤ **Germany and Indo-Pacific:**
  - ❍ Germany is determined to contribute to **buttressing the rules-based international order.**
  - ❍ Within the **German Indo-Pacific guidelines**, India is mentioned for the enhancement of engagement and fulfilment of objectives. India should now be an important node while discussing issues relating to international security.
  - ❍ India is a maritime powerhouse and a strong advocate for free and inclusive trade — and, therefore, a primary partner for Germany (eventually the EU) on this mission.

What should be the Approach Moving Forward?

- ➤ **Strengthening Indo-German Relations:**
  - ❍ Germany views India as an **important partner for resolving global issu**es, including **climate change, food security, energy** and **international peace and security.**
  - ❍ Also, the new coalition government formed in Germany offers an opportunity for India to strengthen the strategic partnership between the two.
  - ❍ Germany is keen to **implement connectivity projects**, through the European Union, **to counter China**. The coalition sees the conclusion of an **India-EU BTIA** as an important aspect that will help develop relations.
- ➤ **Scope of Economic Cooperation:**
  - ❍ India and Germany must realise the cooperative goals of the **Intellectual Property** guidelines and must involve businesses.
  - ❍ German companies must be encouraged to use the **liberalised Performance Linked Incentive scheme to establish manufacturing hubs in India.**

Note:

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❍ Germany has committed 250 million euro in loans to Africa for a vaccine production facility, if implemented with India such a facility can be established in the underserved East African region.

➢ **Sharing Responsibilities in the Indo-Pacific Region:**

❍ As much as India, Germany is a trading nation. More than **20% of German trade is conducted in the Indo-Pacific neighbourhood**.

● This is why Germany and India share a responsibility to maintain and support stability, prosperity and freedom in this part of the world. Both India and Europe's key interests are at stake when championing a free and open Indo-Pacific.

SAARC Currency Swap Framework

Why in News?

Recently, the **Reserve Bank of India (RBI)** has signed an agreement to extend up to a USD 200 million currency swap facility to Maldives Monetary Authority (MMA) under the SAARC Currency Swap Framework.

What is the Currency Swap Arrangement?

➢ The word **swap means exchange**. A currency swap between two countries is **an agreement or contract to exchange currencies** with predetermined terms and conditions.

➢ In the present context, the **facility is to provide swap support as an alternative source of funding for short-term foreign exchange** liquidity requirements.

❍ In 2020, the RBI **signed a currency swap agreement for extending up to a USD 400 million to Sri Lanka**.

➢ Central banks and Governments engage in currency swaps with foreign counterparts to meet short-term foreign exchange liquidity requirements or t**o ensure adequate foreign currency to avoid the Balance of Payments (BOP)** crisis till longer arrangements can be made.

➢ These swap operations **carry no exchange rate or other market risks as transaction terms are set in advance**.

❍ Exchange rate risk, also known as **currency risk**, is the financial risk arising from fluctuations in the value of a base currency against a foreign currency in which a company or individual has assets or obligations.

What is the RBI's Framework for Swap Facilities for SAARC?

➢ The **SAARC currency swap facility** came into operation on **15th November, 2012**.

➢ The RBI can offer a swap arrangement **within the overall corpus of USD 2 billion**.

➢ The swap drawals can be made in **US dollar, euro or Indian rupee**. The framework provides certain concessions for swap drawals in Indian rupee.

➢ The facility will be **available to all SAARC member countries**, subject to their signing the bilateral swap agreements.

What is South Asian Association for Regional Cooperation (SAARC)?

➢ **Establishment:** SAARC was established with the signing of the SAARC Charter in Dhaka (Bangladesh) on 8th December 1985.

➢ **Member States:** Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

➢ **Secretariat:** Kathmandu (Nepal)

➢ **Objective:** To promote the welfare of the people of South Asia and to improve their quality of life, and accelerate economic growth, among other things.

17th Asia Pacific Regional Meeting

Why in News?

Recently, the **17th Asia Pacific Regional Meeting (APRM)** of the **International Labour Organization (ILO)** was held in Singapore.

What are the Key Highlights of the Meeting?

➢ It brings together **representatives of governments, employers' and workers' organizations from Asia, the Pacific and the Arab states.**

➢ The **four key thematic areas** of the 17th APRM included:

❍ **Integrated policy agenda for a human-centred recovery** that is inclusive, sustainable and resilient

❍ **Institutional framework to support transitions** towards formality and decent work

❍ Strong foundations for **social and employment protection and resilience**

❍ **Revitalizing productivity growth and skills** for more and better jobs

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➤ The meeting concluded with the launch of **'Singapore Statement'.**

 ❍ The statement **represents a shared vision of the region's priorities for national action among the ILO constituents** and with ILO support in the coming years.

 ❍ The statement highlights the **need to ratify ILO fundamental conventions and further strengthen the capacities of government,** employer and worker representatives to carry out effective social dialogue.

 ❍ It calls for action to **close gender gaps and encourages ILO member countries to consider the ratification** and effective implementation of related international labour standards, accelerate the transition from the informal to formal economy as well as strengthen governance frameworks to protect the rights of migrant workers.

 ❍ The Statement furthermore confirms the commitment of governments and social partners across the regions to engage in consultations towards the development of a **Global Social Justice Coalition.**

 ❍ It also calls for a just transition that helps build **environmentally sustainable economies and societies** in the face of climate change.

What are the Points of Criticism for India?

➤ **Regrading Labour Policy:**

 ❍ India's **new labour codes violate the tripartite agreements between workers, employers and the government** and give a free hand to employers as the **power of inspection has been left with employers through the new codes.**

➤ **Other Concerns:**

 ❍ **Declining productivity growth** has a **negative impact on workers, on the sustainability of enterprises** particularly **Micro, Small and Medium-sized Enterprises (MSMEs), on economies, and on communities.**

 ❍ India has the **largest youth population in the world and the country is observing a technological and entrepreneurial boom** with start-ups and small businesses mushrooming across the country. However, **90% of the workforce belongs to the unorganised sector** and there are persistent challenges of low-paid jobs and poor working conditions.

What are the Suggestions for India?

➤ **New Social Contract:**

 ❍ A contract with governments and employers and particularly **at the national level.**

 ❍ It should be **based on the availability of decent jobs for all; respect of rights for all; fair wages** including minimum wage; **adequate and easily available social protection; respect for equality; inclusiveness** and **no forms of any discrimination.**

➤ **Enhancement of Productivity:**

 ❍ Enhancing productivity will be critical to economic growth, full and productive employment and decent work.

 ❍ **Recognising persisting skills challenges and that effective and demand-driven skills development** and lifelong learning benefit governments, employers and workers by advancing and promoting employability, sustainable development, productivity growth and economic prosperity.

  ● Digital skills, core skills, entrepreneurial skills and soft skills should be better harnessed.

➤ **Identification of Workers in Unorganised Sector:**

 ❍ For ensuring the development of all, measures, like identifying workers in the unorganised sector and prioritising their needs **through platforms like the E-Shram portal and extending health coverage through Employees' State Insurance Scheme (ESIC),** are measures to extend universal social security that is leading to reduction in inequality.

  ● About 29 crore unorganised sector workers have been registered on the E-Shram portal in the country, till date.

What is the International Labour Organization?

➤ Established in 1919 by the **Treaty of Versailles** as an affiliated agency of the League of Nations.

➤ ILO is the **only tripartite U.N. agency** with government, employer, and worker representatives.

➤ It brings together governments, employers and workers of **187 member States,** to set labour standards, develop policies and devise programmes promoting decent work for all women and men.

➤ **Headquarters:** Geneva, Switzerland.

➤ **Reports:**

 ❍ Global Wage Report

 ❍ World Employment and Social Outlook

 ❍ World Social Protection Report

 ❍ Social Dialogue Report

Note:

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Social Issues

Highlights

- *Global Report on Health Equity for Disables*
- *Raising Minimum Marriageable Age for Muslim Women*
- *Women in Judiciary*
- *Manual Scavenging*
- *Entry of Women in Masjids*
- *Report on Forced Displacement: UNDP*
- *World Malaria Report 2022 59*
- *India's Progress in Tackling IMR, MMR and Malnutrition*

Global Report on Health Equity for Disables

Why in News?

Ahead of the **International Day of Persons with Disabilities** (3rd **December),** the **World Health Organization (WHO)** has released a report titled- **Global report on health equity for persons with disabilities.**

What are the Findings of the Report?

➢ **Statistics related to Disabilities:**
  ○ Currently, **some 1.3 billion people, or one in six, worldwide suffer from major disabilities.**
  ○ Because of the **systemic and persistent health inequities**, many persons with disabilities face the risk of dying much earlier—**even up to 20 years earlier—than persons without disabilities.**
  ○ An estimated 80 % of people with disabilities reside in **low- and middle-income countries** with limited resources, making it difficult to address these inequities.

➢ **Risk of Disabilities:**
  ○ They are at a **two-fold risk of contracting chronic illnesses** like asthma, depression, diabetes, obesity, dental disorders and stroke.
  ○ Many of the discrepancies in health outcomes cannot be attributed to underlying health conditions but rather to preventable, unfair and unjust circumstances.

➢ **Some Factors for Inequity in Healthcare:**
  ○ Hostile attitudes of healthcare providers
  ○ Non-comprehensible health information formats
  ○ Physical barriers, lack of transportation, or financial constraints that prevent access to a health center.

What are the Recommendations?

➢ It is crucial to ensure that **people with disabilities participate fully and effectively in all facets of society** and to instil inclusion, accessibility and non-discrimination in the medical field.

➢ Health systems should be alleviating the challenges that people with disabilities face, not adding to them.

➢ Ensuring health equity for persons with disabilities will also have wider benefits and can advance global health priorities in 3 ways:
  ○ **Health equity for all is critical** towards achieving universal health coverage;
  ○ Inclusive public health interventions that are administered equitably across different sectors can contribute to healthier populations; and
  ○ Advancing health equity for persons with disabilities is a central component in all efforts to protect everyone in health emergencies.

➢ Governments, health partners and civil society should ensure a**ll health sector actions are inclusive of persons with disabilities** so that they can enjoy their right to the highest standard of health.

What are the Initiatives to Empowerment of Disables?

➢ **India:**
  ○ **Right of Persons with Disabilities Act 2016**
  ○ **Unique Disability Identification Portal**
  ○ **Accessible India Campaign**
  ○ **DeenDayal Disabled Rehabilitation Scheme**
  ○ **Assistance to Disabled Persons for Purchase/ fitting of Aids and Appliances**
  ○ **National Fellowship for Students with Disabilities**

Note:

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> **Global:**
>   ○ Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific.
>   ○ United Nations Convention on Rights of Persons with Disability.
>   ○ **International Day of Persons with Disabilities**
>   ○ **UN Principles for People with Disabilities**

Raising Minimum Marriageable Age for Muslim Women

Why in News?

Recently, the **Supreme Court** asked the government to respond to a plea filed by the **National Commission for Women (NCW)** to raise the minimum age of marriage for Muslim women to be on par with persons belonging to other faiths.

What is the Legal Framework of Minimum Age for Marriage?

> **Background:**
>   ○ In India, the **minimum age of marriage was prescribed for the first time by the law known as the Sarda Act, 1929.** It was later renamed as the **Child Marriage Restraint Act (CMRA), 1929.**
>   ○ In 1978, the CMRA was amended to raise the minimum age of marriage to 18 years for girls and 21 years for boys.
>   ○ This position remains the same even in the new law called the **Prohibition of Child Marriages Act (PCMA), 2006**, which replaced the CMRA ,1929.
> **Current:**
>   ○ For Hindus, **the Hindu Marriage Act, 1955 sets 18 years as the minimum age** 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 and the Prohibition of Child Marriage Act, 2006** also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men, respectively.
>   ○ For the new age of marriage to be implemented, these laws are expected to be amended.

● In 2021, the Union Cabinet proposed to raise the legal age of marriage for women from 18 to 21 years.

What are the Issues with Underage Marriages of Women?

> **Human Rights Violation:** Child marriage **violates girls' human rights** and makes them almost invisible to policy.
>   ○ Some of the basic rights that they get devoid of, include the **Right to Education**, Right to Rest and Leisure, Right to Protection from Mental or Physical Abuse including Rape and Sexual Exploitation.
> **Disempowerment of Women:** Since child brides are not able to complete their education, they **remain dependent and underpowered** which acts as a big hurdle towards achieving gender equality.
> **Associated Health Issues:** The costs of child marriage include **teenage pregnancy and child stunting**, population growth, poor learning outcomes for children and the loss of **women's participation in the workforce.**
>   ○ The low domestic status of teenage wives typically condemns them to long hours of domestic labour, poor nutrition and **anaemia**, social isolation, **domestic violence** and lesser decision-making powers within the home.
>   ○ Poor education, **malnutrition**, and early pregnancy also lead to low birth weight of babies, perpetuating the intergenerational cycle of malnutrition.

Women in Judiciary

Why in News?

Recently, the **Supreme Court** has recently appointed a female all-woman bench for the third time in its history.

> The first time the Supreme Court had an all-woman bench was in 2013, and the second occasion came in 2018.

What is the State of Women in Judiciary?

> During the last 70 years, **no significant attempt has been made to provide adequate representation for women** in the High Courts or Supreme Court.
> There have been only **11 women judges on the Supreme Court** since its inception, and no women **Chief Justices.**

Note:

➢ Just 83 of the 680 judges in the high courts are women.

➢ Only 30% of subordinate judges are female.

What are the
Reasons for Low Women Representatives?

➢ **Patriarchy in Society:** The primary reason for underrepresentation of women in judiciary is deeply ingrained patriarchy in society.

- ○ Women often have to face hostile atmospheres within courtrooms. Harassment, lack of respect from members of the bar and bench, the silencing of their opinions, are some of the other traumatic experiences often recounted by many women lawyers.

➢ **Opaque Collegium System Functioning:** More women tend to enter the lower judiciary at the entry level because of the method of recruitment through an entrance examination.

- ○ However, the higher judiciary has a collegium system, which has tended to be more opaque and, therefore, more likely to reflect bias.

➢ **No Women Reservation:** Many states have a reservation policy for women in the lower judiciary, which is missing in the High Courts and Supreme Court.

- ○ States such as Assam, Andhra Pradesh, Telangana, Odisha and Rajasthan have benefited from such reservation as they now have 40-50% women judicial officers.

➢ **Familial Responsibilities:** Factors of age and family responsibilities also affect the elevation of women judges from the subordinate judicial services to the higher courts.

➢ **Not Enough Women in Litigation:** Since lawyers elevated from the bar to the bench form a significant proportion of judges in the high courts and Supreme Court, it is worth noting that the number of women advocates is still low, reducing the pool from which women judges can be selected.

➢ **Judicial Infrastructure:** Judicial infrastructure, or the lack of it, is another barrier to women in the profession.

- ○ Small courtrooms which are crowded and cramped, absence of restrooms, and childcare facilities are all barriers.

Why is High
Women's Representation Important?

➢ The presence of women as judges and lawyers, **will substantially improve the justice delivery system.**

➢ Women **bring to the law a different perspective**, one that is built upon their experience.

➢ They also have a **more nuanced understanding of the differing impacts** that certain laws may have on men and women.

➢ Women judges enhance the legitimacy of courts, sending a powerful signal that they are open and accessible to those who seek recourse to justice.

➢ The judiciary must be better represented by women in order to take a balanced and empathic approach to cases surrounding sexual violence.

Manual Scavenging

Why in News?

Recently, the Ministry of Social Justice and Empowerment (MoSJ&E) told **Lok Sabha** that no person had died from Manual Scavenging in the last three years (2019 to 2022).

➢ A total of 233 people had died **"due to accidents while undertaking hazardous cleaning of sewer and septic tanks'** in this time period.

What is Manual Scavenging?

➢ Manual scavenging is defined as **"the removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers"**.

➢ India banned the practice under the **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR).**

- ○ The Act bans the use of any individual manually cleaning, carrying, disposing of or otherwise handling in any manner human excreta till its disposal.

- ○ The Act recognizes **manual scavenging as a "dehumanizing practice".**

What are the Reasons
for the Prevalence of Manual Scavenging?

➢ **Indifferent Attitude:**

- ○ A number of **independent surveys have talked about the continued reluctance on the part of state** governments to admit that the practice prevails under their watch.

➢ **Issues due to Outsourcing:**

Note:

○ Many times, local bodies **outsource sewer cleaning tasks to private contractors.** However, many of them fly-by-night operators, do not maintain proper rolls of sanitation workers.

○ In case after case of workers being asphyxiated to death, these contractors have denied any association with the deceased.

➤ **Social Issue:**

○ The practice is **driven by caste, class and income divides.**

○ It is linked to India's caste system where so-called lower castes are expected to perform this job.

○ In 1993, **India banned the employment of people as manual scavengers** (The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993), however, the stigma and discrimination associated with it still linger on.

  ● This makes it difficult for liberated manual scavengers to secure alternative livelihoods.

What are the Steps taken to tackle the Menace of Manual Scavenging?

➤ **The Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020:**

○ It proposes to completely mechanise sewer cleaning, introduce ways for **'on-site' protection and provide compensation to manual scavengers** in case of sewer deaths.

○ It will be an amendment to The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.

○ It is still awaiting cabinet approval.

➤ **The Building and Maintenance of Insanitary Latrines Act of 2013:**

○ It outlaws construction or maintenance of unsanitary toilets, and the hiring of anybody for their manual scavenging, as well as of hazardous cleaning of sewers and septic tanks.

○ It also provides a **constitutional responsibility to provide alternative jobs and other assistance to manual scavenging communities**, as reparation for historical injustice and indignity.

➤ **Scheduled Castes & Scheduled Tribes (Prevention Of Atrocities) Act, 1989:**

○ In 1989, the Prevention of **Atrocities Act** became an integrated guard for sanitation workers, more

than **90% people employed as manual scavengers belonged to the Scheduled Caste.** This became an important landmark to free manual scavengers from designated traditional occupations.

➤ **Safaimitra Suraksha Challenge:**

○ It was launched by **the Ministry of Housing and Urban Affairs** on **World Toilet Day** (19th November) in 2020.

○ The Government launched this "challenge" for all states to make sewer-cleaning mechanised by April 2021 — if any human needs to enter a sewer line in case of unavoidable emergency, proper gear and oxygen tanks, etc., are to be provided.

➤ **Swachhta Abhiyan App:**

○ It has been developed to **identify and geotag the data of insanitary latrines and manual scavengers so that the insanitary latrines can be replaced** with sanitary latrines and rehabilitate all the manual scavengers to provide dignity of life to them.

➤ **National Action Plan for Mechanised Sanitation Ecosystem (NAMASTE):**

○ The NAMASTE scheme is being undertaken jointly by the Ministry of Housing and Urban Affairs and the MoSJ&E and **aims to eradicate unsafe sewer and septic tank cleaning practices.**

➤ **SC Judgment:** In 2014, a **Supreme Court** order made it mandatory for the government to identify all those who died in sewage work since 1993 and provide Rs. 10 lakh each as compensation to their families.

Entry of Women in Masjids

Why in News?

Recently, the **Jama Masjid in Delhi** prohibited the **entry of single women or women in groups** inside the mosque premises and withdrew after the intervention of Lieutenant-Governor.

➤ The authorities reasoned that **some women fail to respect the sanctity of the place of worship**, making videos etc.

What is the Islamic Law on Women's Entry?

➤ **Islamic Law:**

○ The Quran, **at no place prohibits women** from going to mosques for prayers.

  ● Wherever the Quran talks of establishing prayer, **it talks in gender neutral terms.**

❍ Before the five daily prayers, a prayer call or azaan is pronounced.

  ● The azaan is a **general invitation to both men and women for prayers**, reminding the faithful, 'Come for prayer, come for success'.

➢ **Global Scenario:**

❍ Across West Asia, there is **no ban on women coming to the masjid for prayers**.

❍ In the U.S. and Canada too, women access mosques for prayers, and even **gather there for special Taraweeh prayers in Ramzan** and lessons on religion.

➢ **National Scenario:**

❍ In India, **only a handful of mosques** maintained or owned by Jamaat-e-Islami and the Ahl-e-Hadith sect have **provisions for women worshippers.**

❍ Most mosques, while **not expressly forbidding women's entry in masjids**, have **no provision for women** to do ablutions for prayer or a separate prayer zone for them.

  ● They are **built keeping only men in mind.**

  ● Under the circumstances, they are reduced to a '**men only**' zone.

➢ **Opinion of Scholars:**

❍ Most Islamic scholars agree that **a prayer can be offered at home** but ca**n only be established in a group**, hence the importance of going to a mosque.

❍ Most also agree that **women have been exempted**, not prohibited from going to the mosque, keeping in mind **their child-rearing and other domestic responsibilities.**

What is the Legal Issue behind the Ban?

➢ According to the **Constitution of India**, there is **complete equality between men and women**.

➢ In the **Haji Ali Dargah case** too, the High Court quoted **Articles 15**, **Article 16** and **Article 25** of the Constitution to grant **women the desired access to the dargah**.

➢ There are petitions filed before the **Supreme Court** wherein access has been sought for women in all mosques across the country.

❍ The apex court has clubbed them with the **Sabarimala case**.

Have there been Similar Bans Before?

➢ Back in 2011, a **grill was put up** on the premises of the vastly popular 15th century dargah, Haji Ali Dargah in Mumbai, **prohibiting women from going beyond it.**

❍ Following this, some **women approached the dargah management** for redress.

❍ However, with the requests having been denied, they started a campaign, **'Haji Ali for All'**, winning over more women in the process.

❍ Led by the **Bharatiya Muslim Mahila Andolan**, the women approached the **Bombay High Court** which **ruled in their favour in 2016.**

Report on Forced Displacement: UNDP

Why in News?

According to the **United Nations Development Program (UNDP)** report "**Turning the tide on internal displacement: A development approach to solutions**", for the first time ever, more than 100 million people were forcibly displaced in 2022, most of them within their own countries.

What are the Findings of the Report?

➢ **Statistics:**

❍ At the end of 2021, there were over **59 million people forcibly displaced within their own countries** due to conflict, violence, disasters and **climate change**.

❍ Before the **war in Ukraine**, 6.5 million people are estimated to have been internally displaced.

❍ By 2050, climate change may force more than an **estimated 216 million people to move within their own countries.**

❍ Disaster-related internal displacement is even more widespread, with new displacements **recorded in over 130 countries and territories in 2021.**

❍ Around 30% of professional lives became unemployed and 24% were not able to earn money the same way as before. 48% of the internally displaced **households earned less money** than before displacement.

➢ **Impact:**

❍ The internally displaced persons **struggle to cover their basic needs**, find decent work or have a stable source of income.

  ● Female and youth-headed households **are more impacted.**

Note:

drishti

- ❍ Sub-Saharan Africa, the Middle East and North Africa and parts of the Americas are the mostly affected regions from forced displacement.
- ❍ The direct impact of internal displacement globally is estimated **at over USD 21.5 billion in 2021** in the form of the **financial cost of providing every internally displaced** person with housing, education, health and security, and accounts.
- ❍ Lack of Proper and Commonly Accepted Statistics about displacement has led to **a lack of policies for displaced people.**
- ➢ **Suggestions:**
  - ❍ Longer-term development **action is needed to reverse record levels of internal displacement,** with millions more people predicted to be uprooted by climate change.
  - ❍ Humanitarian aid **alone cannot overcome record levels** of internal displacement globally. There is a need to devise new ways **to address the consequences of internal displacem**ent through a development approach.
  - ❍ Five **key pathways to development solutions** can be adopted, which are,
    - ● Strengthening governance institutions
    - ● Boosting **socio-economic integration** through access to jobs and services
    - ● Restoring security
    - ● Enhancing participation
    - ● Building social cohesion

What is United Nations Development Program?

- ➢ The **United Nations Development Programme (UNDP)** is the **UN's global development network.**
- ➢ UNDP is based on the **merging of the United Nations Expanded Programme of Technical Assistance** and the **United Nations Special Fund**.
- ➢ The UNDP was **established in 1965 by the United Nations General Assembly**, and became **operational in January 1966.**
- ➢ It provides **expert advice, training and grants support** to developing countries, with increasing emphasis on assistance to the least developed countries.
- ➢ The UNDP **Executive Board is made up of representatives from 36 countries** around the world who serve on a rotating basis.

- ➢ It is funded entirely by voluntary contributions from member nations.
- ➢ UNDP is **central to the United Nations Sustainable Development Group (UNSDG)**, a network that spans 165 countries and unites the 40 UN funds, programmes, specialized agencies and other bodies working **to advance the 2030 Agenda for Sustainable Development.**
- ➢ **UNDP Publication: Human Development Index.**

World Malaria Report 2022

Why in News?

Recently, the **World Malaria Report 2022** was released by the **World Health Organization (WHO).**

What are the Highlights of the Report?

- ➢ **Deaths due to Malaria:**
  - ❍ **High-burden malaria countries maintained a strong front** against the disease in 2021 despite the Covid-19 pandemic, with cases and deaths stabilising.
    - ● While deaths came down to 619,000 in 2021 from 625,000 in the first year of the pandemic, it remained higher than the pre-pandemic level of 568,000 deaths in 2019.
- ➢ **Trend of Malaria Cases:**
  - ❍ As for Malaria cases, the **upward trend continued but at a slower rate** — 247 million cases in 2021, compared to 245 million cases in 2020 and 232 million in 2019.
- ➢ **Scenario of High Burden Countries:**
  - ❍ Among the 11 high-burden countries, five — the Democratic Republic of the Congo, Ghana, **India**, Niger and the United Republic of Tanzania — **recorded a decline in deaths.**
  - ❍ But these **countries continued to contribute heavily** to the **global disease burden.**
- ➢ **Control Tools used by Countries:**
  - ❍ **Insecticide-treated bednets (ITNs)** are the **key vector control tool** used by endemic countries.
  - ❍ Prevalence of **Intermittent Preventive Treatment in Pregnancy (IPTP)** has remained consistent in 2021 as compared to 2020.
- ➢ **Hurdles in Ending Malaria:**

Note:

○ Hurdles impeding the process of ending Malaria include - **mutating parasites** which can evade rapid diagnostic tests, **increasing drug resistance** and the **invasion of an urban-adapted mosquitoes**, especially in Africa.

● New tools and fundings to deploy them are urgently needed to help defeat malaria.

What is Malaria?

➢ **About:**

○ **Malaria** is a life-threatening mosquito borne blood disease caused by **plasmodium parasites.**

○ It is predominantly found in the **tropical and subtropical areas of Africa, South America as well as Asia.**

○ It is preventable as well as curable.

➢ **Spread:**

○ The parasites spread through the **bites of infected female Anopheles mosquitoes.**

● After entering the human body, parasites initially multiply within the liver cells and then attack the Red Blood Cells (RBCs) resulting in their rupture.

○ There are 5 parasite species that cause malaria in humans, and 2 of these species – Plasmodium falciparum and Plasmodium vivax – pose the greatest threat.

➢ **Symptoms:**

○ Symptoms of malaria include fever and flu-like illness, including shaking chills, headache, muscle aches, and tiredness.

➢ **Malaria Vaccine:**

○ Known by its lab initials as **RTS, S but branded as Mosquirix,** the vaccine has passed lengthy scientific trials that found it to be safe and **reducing the risk of malaria by nearly 40%, the best recorded.**

○ It was developed by GlaxoSmithKline (GSK) company and approved by the European Medicines Agency in 2015.

○ The RTS, S vaccine trains the immune system to attack the malaria parasite (Plasmodium (P.) falciparum, the deadliest species of the malaria parasite).

What are the Initiatives to Curb Malaria?

➢ **Global:**

○ The WHO has also identified 25 countries with the potential to eradicate malaria by 2025 under its **'E-2025 Initiative'.**

○ The WHO's **Global technical strategy for malaria 2016–2030** aims is to reduce malaria case incidence and mortality rates by at least 40% by 2020, at least 75% by 2025 and at least 90% by 2030 against a 2015 baseline.

➢ **India-Specific:**

○ In India, malaria elimination efforts were initiated in 2015 and were intensified after the launch of the National Framework for Malaria Elimination (NFME) in 2016 by the Ministry of Health and Family Welfare.

● NFME is in line with WHO's 2016-2030 Malaria Strategy, which guides the WHO Global Malaria Programme (GMP).

○ The **National Strategic Plan for Malaria Elimination (2017-22)** was launched in July 2017 which laid down strategies for the following five years.

● It gives year-wise elimination targets in various parts of the country depending upon the endemicity of malaria.

○ Implementation of the **High Burden to High Impact (HBHI) initiative** was started in four states (West Bengal, Jharkhand, Chhattisgarh and Madhya Pradesh) in July 2019.

● Distribution of Long Lasting Insecticidal Nets (LLINs) to high burden areas has led to a reduction in endemicity in these 4 very high endemic states.

○ The **Indian Council of Medical Research (ICMR)** has established **Malaria Elimination Research Alliance-India (MERA-India)** which is a conglomeration of partners working on malaria control.

India's Progress in Tackling IMR, MMR and Malnutrition

Why in News?

The data presented by the **Registrar General of India (RGI)** presents a gain in momentum of the pace of decline in India's **maternal and infant mortality rates (MMR and IMR)** post-2005.

➢ Unfortunately, nutrition is one key area that has **remained oblivious to any major progress.**

What is the Registrar General of India?

➢ Founded in 1961 under the **Ministry of Home Affairs**, the RGI **arranges, conducts and analyses the results of the demographic surveys of India** (**Census of India** and **Linguistic Survey of India**).

➢ The **position of Registrar is usually held by a civil servant** holding the rank of Joint Secretary.

➢ The Office of RGI is primarily responsible for conducting:
  ❍ Housing & Population Census
  ❍ **Civil Registration System (CRS)**
  ❍ Sample Registration System (SRS)
  ❍ **National Population Register (NPR)**
  ❍ Mother Tongue Survey

What Progress has been Made in Reducing MMRs and IMRs?

➢ **Declining Trends:**
  ❍ According to a special bulletin released by the office of the RGI, **India's MMR was 97 during 2018-2020** compared to **301 during 2001-03.**
  ❍ The **IMR has also been reduced to 27 (as of 2021)** compared to **58 in 2005.**
    ● The Rural-Urban difference in this context has also been narrowed.

➢ **Role of NHM and NRHM:** As observed, for the last few years the **National Rural Health Mission (NRHM)** and the **National Health Mission (NHM)** has been a game changer for the country in terms of mortality reductions for infants and mothers.
  ❍ The NRHM was launched in 2005 to provide accessible and affordable healthcare through a public system of primary health care.
  ❍ NHM was launched by the government of India in 2013 subsuming the National Rural Health Mission (Launched in 2005) and the National Urban Health Mission (Launched in 2013).

GOALS of Nationanl Health Mission

➢ Reduce MMR to 1000 live births
➢ Reduce IMR to 25/1000 live births
➢ Reduce TFR to 2.1
➢ Prevention and reduction of anemia in women aged 15-49 years

➢ Prevent and reduce mortality and morbidity from communicable, non communicable, injuries and emergency diseases
➢ Reduce household out-of pocket expenditure on total health care expenditure
➢ Reduce annual incidence and mortality from Tuberculosis by half
➢ Reduce prevalance of Leprosy to <1/10000 population and incidence to zero in all districts
➢ Annual Malaria incidence to be <1/1000
➢ Less than 1 percent microfilaria prevalence in all districts
➢ Lala-Azar Elimination by2015, <1case per 10000 population in all blocks

What is the Scenario of Tackling Malnutrition?

➢ **About:**
  ❍ **Malnutrition** is the condition that develops when the body is deprived of vitamins, minerals and other nutrients it needs to maintain healthy tissues and organ function.
  ❍ Malnutrition occurs in people who are either **undernourished or over nourished.**

➢ **Findings of NFHS 5:**
  ❍ The **5th National Family Health Survey 2019-21** reports **35.5% of children under 5 are stunted**, **19.3% are wasted**, and **32.1% are underweight.**
    ● **Meghalaya** has the **highest number of stunted children** (46.5%), followed by Bihar (42.9%).
    ● **Maharashtra** (25.6%) has the **highest percentage of wasted children** followed by Gujarat (25.1%).
  ❍ Compared with NFHS-4, the **prevalence of overweight or obesity has increased** in most States/UTs in NFHS-5.
    ● At the national level, it increased from 21% to 24% among women and 19% to 23% among men.
  ❍ The **incidence of anaemia** in under-5 children (from 58.6 to 67%), women (53.1 to 57%) and men (22.7 to 25%) has **worsened in all States of India.**

➢ **Inefficiency of Govt. Initiatives:**
  ❍ The **POSHAN Abhiyaan**, though innovative, is still not addressing the institutional **decentralised public action challenge** yet.
  ❍ The initiatives for nutrition have remained **compartmentalised and fragmented;** the

institutional role of local panchayats and communities with **untied financial resources is still lagging.**

➤ **Other Issues:**

❍ The **vicious cycle of poverty, undernutrition,** diminished work capacity, low earnings and poverty.

❍ **Infections like malaria and measles** precipitate acute malnutrition and **aggravate the existing nutritional deficit.**

❍ Arbitrariness and inter-state-variation in determining a household's BPL status results in **arbitrary identification of hunger.**

❍ **Negligence towards micro-nutrient deficiency** (**hidden hunger**) and **inadequate knowledge among mothers** regarding nutrition and breast-feeding.

What Should be the Reorganisation Principles for Nutrition Success?

➤ Vesting in **grassroot level administration** (Gram Panchayat, Gram Sabha and other community organisations), the **responsibility of education, health, nutrition, skills and diversified livelihoods.**

➤ Operationalising **village-specific planning process** with **decentralised financial resources.**

➤ Assessing (and accordingly increasing) (a) the **need for additional caregivers** with capacity development to **ensure household visits** and (b) the **intensity of monitoring** needed for outcomes in nutrition.

➤ Encouraging **diversity of local food including millets,** served hot.

➤ Intensifying **behaviour change communication.**

➤ Institutionalising monthly health days at every Anganwadi centre with **community connection and parental involvement.**

➤ Creating a **platform for adolescent girls in every village for empowerment** and for diversified livelihoods through skills.

What Initiatives have been launched to Tackle Malnutrition?

➤ **POSHAN Abhiyaan:** The government of India has launched the National Nutrition Mission (NNM) or POSHAN Abhiyaan to ensure a **"Malnutrition Free India" by 2022.**

➤ **Anemia Mukt Bharat Abhiyan:** Launched in 2018, the mission aims at **accelerating the annual rate of decline of anaemia** from one to three percentage points.

➤ **The National Food Security Act (NFSA), 2013:** It aims to ensure **food and nutrition security for the most vulnerables** through its associated schemes and programmes, making access to food a legal right.

➤ **Pradhan Mantri Matru Vandana Yojana (PMMVY):** Rs.6,000 is transferred directly to the bank accounts of pregnant women for availing better facilities for their delivery.

➤ **Integrated Child Development Services (ICDS) Scheme:** It was launched in 1975 and the scheme aims at **providing food, preschool education, primary healthcare, immunisation, health check-up and referral services** to children under 6 years of age and their mothers.

➤ **Eat Right India** and **Fit India Movement** are some other initiatives to **promote healthy eating and healthy lifestyle.**

Conclusion

Nutrition as a subject calls for a whole-of-government and whole-of-society approach. Technology can at best be a means and monitoring too has to become local. Panchayats and community organisations are the best way forward.

■■■

Note:

Science & Technology

Highlights

- World AIDS Day
- Near-Earth Asteroid Ryugu
- ChatGPT Chatbot
- Zombie Virus
- Measles
- End-to-End Encryption

- India's First Private Space Vehicle Launchpad
- SpaceTech Innovation Network: ISRO
- Air Breathing Engines
- HAKUTO-R Moon Mission: Japan
- Binary Merger of Gamma Ray Burst with Kilonova
- Fusion Energy Breakthrough

World AIDS Day

Why in News?

World AIDS Day is observed on **1st December every year** all over the world to spread awareness about the disease and remember all those who lost their lives to it.

Why is World AIDS Day Celebrated?

➢ **About:**
  ○ It was founded in 1988 by the **World Health Organization (WHO)** and was the **first ever global health day** with a motto of raising public awareness about **Acquired ImmunoDeficiency Syndrome (AIDS)**.

➢ **Theme for 2022:**
  ○ '**Equalize**'.
    - It encourages people to unite globally to eliminate the disparities and inequities that create barriers to HIV testing, prevention, and access to HIV care.'

➢ **Significance:**
  ○ The very day reminds the public and government that HIV has not gone away and there is still a vital need to raise money, increase awareness, fight prejudice and improve education.
  ○ It is an opportunity to show solidarity with the millions of people living with HIV worldwide.

What is AIDS Disease?

➢ **About:**

○ **AIDS** is a chronic, potentially life-threatening health condition caused by the **human immunodeficiency virus (HIV)** that interferes with the body's ability to fight infections.

○ HIV attacks **CD4, a type of White Blood Cell (T cells)** in the body's immune system.
  - T cells are those cells that move around the body detecting anomalies and infections in cells.

○ After entering the body, HIV multiplies itself and destroys CD4 cells, thus severely damaging the human immune system. Once this virus enters the body, it can never be removed.

○ The CD4 count of a person infected with HIV reduces significantly. In a healthy body, CD4 count is between 500- 1600, but in an infected body, it can go as low as 200.

➢ **Transmission:**
  ○ HIV can spread through **multiple sources**, by coming in direct contact with certain **body fluids** from a person infected with HIV, who has a detectable viral load. It can be blood, semen, rectal fluid, vaginal fluid or breast milk.

➢ **Symptoms:**
  ○ Once HIV converts into AIDS then it may **present in initial symptoms like unexplained fatigue, fever, sores around genitals or neck, pneumonia etc.**

➢ **Prevention:**
  ○ Make sure to use protective techniques.
  ○ Make sure to avoid using contaminated needles.
  ○ Prevent mother to child transmission.

○ If someone is aware of the infection in their body, make sure they are on the right treatment path.

○ Opt for the set of pre-marital tests before marriage which includes an HIV test and helps to ensure safety from other **Sexually Transmitted Diseases** as well.

What is the Global & National Status of AIDS?

➢ **Global:**

○ According to the Joint **United Nations Programme on HIV/AIDS (UNAIDS)**, as of 2021, 38.4 million people were living with HIV, out of which 1.7 million were children.

● 54% of all people living with HIV were women and girls.

● 85% of all people living with HIV knew their HIV status in 2021.

○ In 2021, 6,50,000 people died of AIDS-related diseases.

➢ **National:**

○ According to UNAIDS, an estimated 2.4 million people were living with HIV in India in 2021 (including 70,000 children).

● Maharashtra had the maximum numbers followed by Andhra Pradesh and Karnataka.

What are India's Initiatives to Curb AIDS Disease?

➢ **HIV and AIDS (Prevention and Control) Act, 2017:** According to this act, the central and state governments shall take measures to prevent the spread of HIV or AIDS.

➢ **Access to ART:**

○ India has made **Antiretroviral Therapy (ART)** affordable and accessible to over 90 per cent of people living with HIV in the world.

➢ **Memorandum of Understanding (MoU):**

○ The **Ministry of Health and Family Welfare** signed a MoU with the **Ministry of Social Justice and Empowerment** in 2019 for enhanced HIV/AIDS outreach and to reduce the incidence of social stigma and discrimination against victims of drug abuse and Children and People Living with HIV/AIDS.

➢ **Project Sunrise:**

○ **Project Sunrise** was launched by the Ministry of Health and Family Welfare in 2016, to tackle the

rising HIV prevalence in north-eastern states in India, especially among people injecting drugs.

Near-Earth Asteroid Ryugu

Why in News?

A sample of a space rock called Ryugu that was carried to Earth in 2020 by the Japanese space agency's asteroid sample-return mission, Hayabusa 2 may hold the answers to the **origin of the Earth.**

➢ It is the first time several grams of **asteroid** samples have been brought back to Earth.

What is Asteroid Ryugu?

➢ Asteroid Ryugu is **a diamond-shaped space rock**. The asteroid's name means "dragon palace" in Japanese and refers to a magical underwater castle in a Japanese folktale.

➢ Ryugu was discovered in 1999 by the **Lincoln Near-Earth Asteroid Research (LINEAR) project**, a collaborative, U.S.-based project to catalogue and track space rocks.

➢ The asteroid is about 2,952 feet (900 meters) in diameter.

➢ Ryugu is orbiting the sun between Earth and Mars and **occasionally crosses Earth's orbit, which means the space rock is classified as "potentially hazardous,"** though the body poses no imminent danger to our world.

What are the Key Highlights?

➢ **Findings:**

○ Roughly 5 % of materials that assembled to form Earth more than 4.5 billion years ago could have come **from space rocks similar to near-Earth asteroid Ryugu**.

○ These asteroid samples represent the **first solids to be formed in the solar system.** This means they could be the building blocks of Earth.

○ Ryugu has **copper and zinc isotope ratios similar to a very rare group of meteorites** that are likely the most primitive (ones with the closest composition to the Sun).

● They are primitive because they likely formed in the outer solar system, where volatile elements are preserved.

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- In contrast, materials created closer to the Sun may have lost a part of their volatile inventory due to evaporation.

➢ **Significance:**
  ❍ These samples could help evaluate the role of **Ryugu-like objects in depositing volatile elements** to terrestrial planets.
    - Volatile elements such as hydrogen, carbon, nitrogen and oxygen are thought to have played a key role in forging complex organic molecules — ingredients essential to build habitable worlds like Earth.
  ❍ It can also help to evaluate whether **Ryugu-type materials also contributed to the origin of Mars.**

What are Asteroids?
➢ **About**
  ❍ Asteroids are **also known as minor planets.**
  ❍ They are **rocky remnants left over from the early formation** of our solar system about 4.6 billion years ago.
  ❍ Most asteroids are **irregularly shaped**, though a few are nearly spherical.
  ❍ Many asteroids are known to have a small companion moon (some have two moons).
  ❍ There are **also binary (double) asteroids, in which two rocky bodies of roughly equal size orbit each other**, as well as triple asteroid systems.
➢ **Classification of Asteroids:**
  ❍ **Main Asteroid Belt:** The majority of known asteroids orbit within the **asteroid belt** between Mars and Jupiter.
  ❍ **Trojans:** These asteroids share an orbit with a larger planet, but do not collide with it because they gather around two special places in the orbit (called the L4 and L5 Lagrangian points). There, the gravitational pull from the sun and the planet are balanced.
    - Lagrange Points are positions in space where the gravitational forces of a two-body system like the Sun and the Earth produce enhanced regions of attraction and repulsion. These can be used by spacecraft to reduce fuel consumption needed to remain in position.
  ❍ **Near-Earth Asteroids:** These objects have orbits that pass close by that of Earth. Asteroids that actually cross Earth's orbital path are known as Earth-crossers.

ChatGPT Chatbot

Why in News?

Recently, OpenAI has introduced a new **chatbot** called **ChatGPT, which is a** 'conversational' AI and will answer queries just like a human would.

What is ChatGPT?

➢ **About:**
  ❍ The ChatGPT can answer **"follow-up questions",** and can also "admit its mistakes, challenge incorrect premises, and **reject inappropriate requests."**
  ❍ It is based on the **company's GPT 3.5 series of language learning models (LLM).**
    - GPT stands for Generative Pre-trained Transformer 3 and this is a kind of **computer language model that relies on deep learning techniques to produce human-like text** based on inputs.
  ❍ The model is trained to predict what will come next, and **that's why one can technically have a 'conversation' with ChatGPT.**
  ❍ The chatbot was also trained using **Reinforcement Learning from Human Feedback (RLHF).**
➢ **Usage:**
  ❍ It can be used in **real-world applications** such as digital marketing, online content creation, answering customer service queries or as some users have found, even to help debug code.
  ❍ The bot can respond to a large range of questions **while imitating human speaking styles.**
  ❍ It is being seen as a replacement for the basic emails, party planning lists, CVs, and even college essays and homework.
  ❍ It can also be used **to write code, as examples have shown**.
➢ **Limitations:**
  ❍ The chatbot **displayed clear racial and sexist biases,** which remains a problem with almost all AI models.
  ❍ The chatbot gives answers which are grammatically correct and read well– though some have pointed out that **these lack context and substance**, which is largely true.
  ❍ ChatGPT occasionally produces inaccurate information and **that its knowledge is restricted to global events** that occurred before 2021.

Note:

What is a Chatbot?

➢ **About:**

○ Chatbots, also called chatterbots, is a form of **Artificial Intelligence (AI)** used in messaging apps.

○ This tool helps add convenience for customers— **they are automated programs that interact with customers like a human would** and cost little to nothing to engage with.

● Key examples are **chatbots used by businesses in Facebook Messenger, or as virtual assistants,** such as Amazon's Alexa.

○ Chatbots tend to operate in one of two ways— either via **machine learning or with set guidelines.**

○ However, due to advancements in AI technology, chatbots using set guidelines are becoming a historical footnote.

➢ **Types:**

○ **Chatbot with Set Guidelines:**

● It can only respond to a **set number of requests and vocabulary and is only as intelligent** as its programming code.

● An example of **a limited bot is an automated banking bot** that asks the caller some questions to understand what the caller wants to do.

○ **Machine Learning Chatbot:**

● A chatbot that functions through machine learning have an **artificial neural network** inspired by the neural nodes of the human brain.

● The bot is programmed to self-learn as it is introduced to new dialogues and words.

● In effect, as a **chatbot receives new voice or textual dialogues,** the number of inquiries that it can reply to and the accuracy of each response it gives increases.

■ Meta (as Facebook's parent company is now known) has a machine learning chatbot that creates a platform for companies to interact with their consumers through the Messenger application.

➢ **Advantages:**

○ Chatbots are convenient for **providing customer service and support 24 hours a day, 7** days a week.

○ They also free up phone lines and are far less expensive over the long run than hiring people to perform support.

○ Using AI and **natural language processing, chatbots are becoming better at understanding what customers want** and providing the help they need.

○ Companies also like chatbots because they can collect data about customer queries, response times, satisfaction, and so on.

➢ **Disadvantages:**

○ Even with natural language processing, they may **not fully comprehend a customer's input and may provide incoherent answers.**

○ Many chatbots are also limited in the scope of queries that they are able to respond to.

○ Chatbots can be **expensive to implement and maintain,** especially if they must be customized and updated often.

○ The challenges of AI metamorphosing **into sentient are far in the future; however, unethical AI perpetuating historical bias** and echoing hate speech are the real dangers to watch for.

Zombie Virus

Why in News?

European researchers have raised concerns of yet another pandemic after resurrecting a **48,500-year-old 'Zombie Virus'** from a frozen lake in Russia.

➢ The researchers warned that Climate change-induced thawing of the **permanently frozen land (permafrost)** in the **Arctic** could pose a new public health threat.

What is a Zombie Virus?

➢ **About:**

○ 13 new pathogens have been characterized, what are termed **'Zombie Viruses',** which remained **infectious despite spending many millennia trapped in the frozen ground.**

○ The virus emerged due to the **thawing of permafrost as the global temperature is rising.**

○ The new strain is **one of 13 viruses**, each of which possesses its own genome.

● The oldest, dubbed Pandoravirus yedoma after the mythological character Pandora, was 48,500 years old, a record age for a frozen virus returning to a state where it has the potential to infect other organisms.

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○ This has broken the previous record held by a 30,000-year-old virus discovered by the same team in Siberia in 2013.
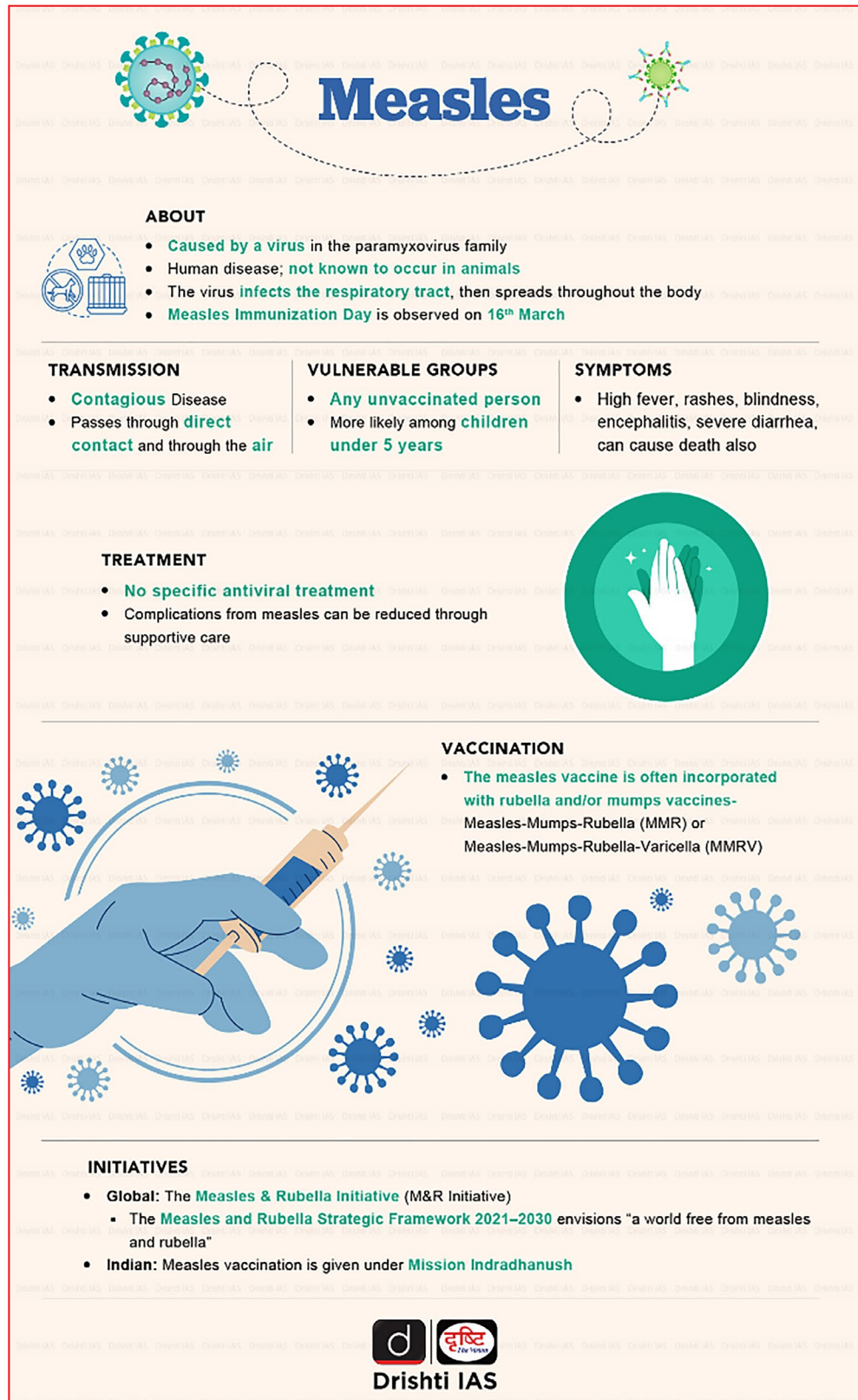
➤ **Causes:**

○ One-quarter of the **Northern hemisphere is underlain by permanently frozen ground,** referred to as permafrost.

○ Due to climate warming, **irreversibly thawing permafrost is releasing organic matter frozen for up to a million years**, most of which decomposes into carbon dioxide and methane, further enhancing the greenhouse effect.

○ Part of this organic matter also consists of **revived cellular microbes (prokaryotes, unicellular eukaryotes)** as well as viruses that remained dormant since prehistoric times.

➤ **Potential Impact:**

○ All of the "zombie viruses" have the potential to be infectious and hence pose a **"health danger"** after researching the live cultures.

○ It is believed that pandemics like **Covid-19 will become more common in the future** as melting permafrost releases long-dormant viruses like a microbial Captain America.

Measles

ABOUT
- **Caused by a virus** in the paramyxovirus family
- Human disease; **not known to occur in animals**
- The virus **infects the respiratory tract**, then spreads throughout the body
- **Measles Immunization Day** is observed on **16th March**

TRANSMISSION
- **Contagious** Disease
- Passes through **direct contact** and through the **air**

VULNERABLE GROUPS
- **Any unvaccinated person**
- More likely among **children under 5 years**

SYMPTOMS
- High fever, rashes, blindness, encephalitis, severe diarrhea, can cause death also

TREATMENT
- **No specific antiviral treatment**
- Complications from measles can be reduced through supportive care

VACCINATION
- **The measles vaccine is often incorporated with rubella and/or mumps vaccines-** Measles-Mumps-Rubella (MMR) or Measles-Mumps-Rubella-Varicella (MMRV)

INITIATIVES
- **Global:** The **Measles & Rubella Initiative** (M&R Initiative)
  - The **Measles and Rubella Strategic Framework 2021–2030** envisions "a world free from measles and rubella"
- **Indian:** Measles vaccination is given under **Mission Indradhanush**

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Note:

End-to-End Encryption

Why in News?

Recently, Apple has announced it will be increasing the number of data points protected by **End-to-End Encryption (E2EE)** on iCloud from 14 to 23 categories.

What is the Purpose of Announcing this?

➢ According to a data-breach-research by Apple, the total number of data breaches **more than tripled between 2013 and 2021.** Data of 1.1 billion personal records were exposed in 2021 alone.

➢ With end-to-end encryption, user data will be **protected even in case data is breached in the cloud.** The extra layer of protection would be **valuable to targets of hacking attacks launched by well-funded groups.**

What is End-to-End Encryption?

➢ **About:**
  ○ End-to-end encryption is a **communication process that encrypts data being shared between two devices**.
  ○ It prevents third parties **like cloud service providers, internet service providers (ISPs) and cybercriminals from accessing data** while it is being transferred.

➢ **Mechanism:**
  ○ The cryptographic keys **used to encrypt and decrypt the messages** are stored on the endpoints.
  ○ The process of end-to-end encryption uses **an algorithm that transforms standard text into an unreadable format.**
  ○ This format can only be unscrambled and read by those **with the decryption keys, which are only stored on endpoints and not with any third parties** including companies providing the service.

➢ **Usage:**
  ○ E2EE has long been used when **transferring business documents**, financial details, legal proceedings, and personal conversations.
  ○ It can also be used to control **users' authorisation when accessing stored data.**
  ○ End-to-end encryption is used to **secure communications.**
  ○ It is also used **to secure passwords, protect stored data and safeguard data on cloud storage.**

What are the Advantages of E2EE?

➢ **Security in Transit:**
  ○ End-to-end encryption uses public key cryptography, which stores private keys on the endpoint devices. Messages can only be decrypted using these keys, so **only people with access to the endpoint devices are able to read the message.**

➢ **Safety from Third Parties:**
  ○ E2EE ensures that user **data is protected from unwarranted parties** including service providers, cloud storage providers, and companies that handle encrypted data.

➢ **Tamper-Proof:**
  ○ With E2EE, the decryption key does not have to be transmitted; the recipient will already have it.
  ○ If a message encrypted with **a public key gets altered or tampered within transit**, the recipient will not be able to decrypt it, so the **tampered contents will not be viewable.**

➢ **Compliance:**
  ○ Many industries are bound by regulatory compliance laws that require **encryption-level data security.**
  ○ E2EE can help **organizations protect that data** by making it unreadable.

What are the Disadvantages of E2EE?

➢ **Complexity in Defining the Endpoints:**
  ○ Some E2EE implementations **allow the encrypted data to be encrypted and re-encrypted at certain points** during transmission.
  ○ This makes it important to clearly **define and distinguish the endpoints** of the communication circuit. **If endpoints are compromised, encrypted data may be revealed.**

➢ **Too Much Privacy:**
  ○ Government and law enforcement agencies **express concern that E2EE can protect people sharing illicit content** because service providers are unable to provide law enforcement with access to the content.

➢ **No Protection to Metadata:**
  ○ Although messages in transit are encrypted and impossible to read, information about the message - **date of sending message and recipient, for instance - is still visible**, which may provide useful information to an interloper.

Note:

What is the Legal Framework for Encryption in India?

➤ **Minimum Encryption Standards:**

○ **India does not have a specific encryption law.** Although, a number of industry rules, such as those governing the banking, **finance, and telecommunications industries, include requirements for minimum encryption standards** to be utilised in protecting transactions.

➤ **Prohibition on Encryption Technologies:**

○ Users are not **authorised to employ encryption standards larger than 40 bits** using symmetric key algorithms or similar methods without prior clearance and deposition of decryption keys, according to the licencing agreement between the ISP and the DoT.

○ There are a variety of additional rules and recommendations **that use a greater encryption level than 40 bits for particular sectors.**

➤ **The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021:**

○ It superseded the earlier Information Technology (Intermediary Guidelines) Rules 2011.

○ The new set of rules have the potential to impact the end-to-end encryption techniques of social messaging applications like WhatsApp, Telegram, Signal, etc.

➤ **Information Technology Act of 2000:**

○ It regulates electronic and wireless modes of communication, is devoid of any substantive provision or policy on encryption.

India's First Private Space Vehicle Launchpad

Why in News?

Recently, Chennai-based space tech startup **Agnikul Cosmos inaugurated India's first private space vehicle launchpad** at the **Satish Dhawan Space Centre (SDSC) in Sriharikota.**

➤ It was executed in support of the **Indian Space Research Organisation (ISRO)** and IN-SPACe (Indian National Space Promotion and Authorization Center).

What is Agnikul's Launchpad Facility?

➤ **About:**

○ The facility has two parts: **the Agnikul launchpad and the Agnikul mission control centre**, which are four kilometres apart.

○ The launchpad has been designed to **accommodate and support liquid stage-controlled launches.**

○ Agnikul Cosmos is **planning to launch its Agnibaan rocket from this launchpad.**

➤ **Significance:**

○ The launchpad is specifically built to **address the need for ISRO's range operations team** to monitor key flight safety parameters during launches.

○ Additionally, it has the ability to share data and other critical information with ISRO's Mission Control Center.

What is Agnibaan?

➤ Agnibaan is a **two-stage launch vehicle that is capable of taking payloads of up to 100 kilograms to a low-earth orbit around 700 kilometres** from the surface of the Earth.

➤ It will be powered by the company's **3D-printed Agnilet engines.**

○ Agnilet is the **world's first single-piece 3-D printed engine** fully designed and manufactured in India and was successfully test-fired in early 2021, making Agnikul the first company in the country to test its engines at ISRO.

○ The Agnilet rocket is a **"semi-cryogenic" engine that uses a mixture of liquid kerosene and supercold liquid oxygen to propel itself.**

○ The engine is very complex and it **functions at very high temperatures.**

SpaceTech Innovation Network: ISRO

Why in News?

The **Indian Space Research Organisation (ISRO)** has signed an MoU with Social Alpha, a multistage innovation curation and venture development platform to launch **SpaceTech Innovation Network (SpIN).**

Note:

What is SpIN?

➤ **About:**

○ SpIN is India's **first dedicated platform for innovation, curation, and venture development** for the burgeoning space entrepreneurial ecosystem.

○ The SPIN platform would create a **level playing field for various stakeholders to collaborate and contribute to the space ecosystem** in the country.

○ SpIN will **primarily focus on facilitating space tech entrepreneurs in three distinct innovation categories:**

● Geospatial Technologies and Downstream Applications

● Enabling Technologies for Space & Mobility

● Aerospace Materials, Sensors, and Avionics.

➤ **Significance:**

○ Innovative technologies are expected **to bring a paradigm shift in utilising the space applications to maximise the economic, social, and environmental benefits** for the larger society.

➤ **Innovation Challenge:**

○ SpIN has launched its first innovation challenge **for developing solutions in areas of maritime and land transportation,** urbanization, mapping, and surveying.

○ The selected start-ups and innovators **will be able to access both Social Alpha's and ISRO's infrastructure** and resources as per the prevailing guidelines.

○ They will be provided active hand-holding in critical areas, including access to product design, testing and validation infrastructure, **and intellectual property management.**

Air Breathing Engines

Why in News?

Recently, the **Indian Space Research Organisation (ISRO) has successfully conducted** the **hot test of Scramjet Engine**, a type of **Air Breathing Engine.**

➤ India is the fourth country to demonstrate the flight testing of a Scramjet Engine.

What are Air Breathing Engines?

➤ **About:**

○ An air-breathing engine is an **engine that takes in air from its surroundings in order to burn fuel.**

○ All practical air breathing engines are **internal combustion engines that directly heat the air by burning fuel,** with the **resultant hot gases used for propulsion** *via* a propulsive nozzle.

○ A continuous stream of air flows through the air-breathing engine. The air is compressed, mixed with fuel, ignited and expelled as the exhaust gas.

○ **Thrust produced** by a typical air-breathing engine is about **eight times greater than its weight.**

● The thrust results from the expulsion of the working gases from the exhaust nozzle.

➤ **Types:**

○ **Ramjet:** A ramjet is a form of air-breathing jet engine that **uses the vehicle's forward motion to compress incoming air for combustion** without a rotating compressor.

● Ramjets work most efficiently at supersonic speeds but they are not efficient at hypersonic speeds.

○ **Scramjet:** A scramjet engine is an **improvement over the ramjet engine** as it **efficiently operates at hypersonic speeds** and allows **supersonic combustion.**

○ **Dual Mode Ramjet (DMRJ):** A dual mode ramjet (DMRJ) is a type of jet engine where a **ramjet transforms into a scramjet over Mach 4-8 range,** which means it can **efficiently operate both in subsonic and supersonic combustion modes.**

Speed Range	Mach Number	Velocity in m/s
Subsonic	< 0.8	< 274
Transonic	0.8–1.2	274–412
Supersonic	1.2–5	412–1715
Hypersonic	5–10	1715–3430
High-hypersonic	10–25	3430–8507

➤ **Significance:**

○ Air Breathing Engine provides a technological key for **low-cost space transportation system.**

○ The technology is an important step towards developing reusable launch vehicles.

○ Basically, of the total launch vehicle mass, 86% is propellant mass in the launch vehicle. Out of that propellant, 70% is oxidiser.

● These engines can reduce nearly 70% of the propellent carried in the vehicles as these systems use atmospheric oxygen, which is available up to a height of 50km from the earth's surface.

Note:

HAKUTO-R Moon Mission: Japan

Why in News?

Recently, a **Japanese space startup ispace Inc** has launched its own private **lander M1** to the Moon under its **HAKUTO-R mission,** from the **SpaceX** Falcon 9 rocket.

➢ It is Japan's **first-ever lunar mission** and the first of its kind by a private company.

What are the Key Points of the Mission?

➢ **About:**
  ○ The name HAKUTO-R refers to the **white rabbit that Japanese folklore suggests lives on the Moon**.
  ○ The M1 lander will deploy **two robotic rovers, two-wheeled, orange-sized devices from Japan's JAXA space agency** and a four-wheeled Rover made by the **UAE known as the Explorer Rashid**, after the Dubai royal family patriarch.
    ● If the rover Rashid lands successfully, it will be the Arab world's first Moon mission.
    ● So far only the Us, Russia and China have managed to put a robot on the lunar surface.
  ○ It will also be carrying an **experimental solid-state battery** made by NGK Spark Plug Co, a Japanese-based spark plug company

➢ **Features:**
  ○ It is designed in such a way that it will use **minimal fuel to save money and leave more room** for cargo.
  ○ It is taking a **slow, low-energy path to the Moon**, flying 1.6 million km (one million miles) from Earth before looping back and making a planned landing by the end of April.

➢ **Objective:**
  ○ It is aimed to search for **water deposits before touching down in the Atlas Crater,** which lies in the northeastern section of the Moon's near side and measures more than 87km (54 miles) across and just over 2km (1.2 miles) deep.
  ○ Mission success would also represent a milestone in space cooperation between **Japan and the US at a time when China is becoming increasingly competitive** and rides on Russian rockets are no longer available in the wake of **Russia's invasion of Ukraine.**
  ○ Japan has a contract with NASA to ferry payloads to the Moon from 2025 and is aiming to build **a permanently staffed lunar colony by 2040.**

What are other Lunar Missions?
➢ **Indian:**
  ○ **Chandrayaan 1**
  ○ **Chandrayaan-2**
  ○ **Chandrayaan-3**
➢ **Other Countries:**
  ○ **UAE's Moon Mission**
  ○ **NASA's Artemis Mission** (USA)
  ○ **Lunar Evacuation System Assembly (USA)**
  ○ **Chang'e-5 Mission** (China)

Binary Merger of Gamma Ray Burst with Kilonova

Why in News?

Recently, a **rare astronomical event** involving a **compact binary merger emitting long Gamma Ray Burst (GRB) twinned with a kilonova emissions** was reported. This **never before scientifically accepted or proven combination** was also confirmed by **India's largest optical telescope, Devasthal Optical Telescope (DOT).**

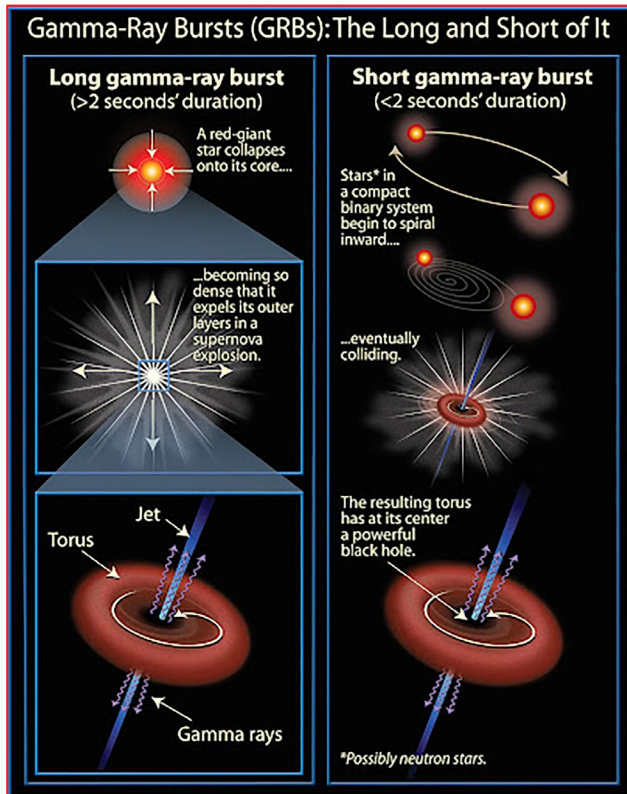➢ The GRB lasted for over 50 seconds and **identified as GRB211211A.**

➢ Kilonovae occur when two compact objects, like **binary neutron stars or a neutron star and a black hole, collide.**

What are Gamma-Ray Bursts?

➢ **About:**
  ○ GRBs are **massive but extremely bright, high-energy short gamma radiations** which get released **when massive stars collapse or die in the Universe.**

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○ They are the **most powerful events** in the universe, detectable across billions of **light-years.**

- A light-year is the distance a beam of light travels in a single Earth year, or 9.5 trillion kilometers.

○ Astronomers classify them as **long or short based on whether the event lasts for more or less than two seconds.**

Gamma-Ray Bursts (GRBs): The Long and Short of It

Long gamma-ray burst
(>2 seconds' duration)

A red-giant star collapses onto its core....

...becoming so dense that it expels its outer layers in a supernova explosion.

Jet
Torus

Gamma rays

Short gamma-ray burst
(<2 seconds' duration)

Stars* in a compact binary system begin to spiral inward....

...eventually colliding.

The resulting torus has at its center a powerful black hole.

*Possibly neutron stars.

➢ **Long GRBs:**

○ They observe long bursts **in association with the demise of massive stars.**

○ When a star much more massive than the Sun **runs out of fuel, its core suddenly collapses and forms a black hole.**

- Black hole refers to a point in space where matter is so compressed as to create a gravity field from which even light cannot escape.

○ As matter swirls toward the black hole, some of that **escapes in the form of two powerful jets** that rush outward at almost the speed of light in opposite directions.

○ Astronomers only detect a GRB **when one of these jets happens to point almost directly toward Earth.**

○ Each jet drills through the star, producing a pulse of gamma rays – the highest-energy form of light – that can last up to minutes. **Following the**

burst, the disrupted star then rapidly expands as a supernova.

- A supernova is the name given to an exploding star that has reached the end of its life.

➢ **Short GRB:**

○ Short GRB, on the other hand, forms when pairs of compact objects – such as **neutron stars, which also form during stellar collapse – spiral inward over billions of years and collide.**

- A neutron star comprises one of the possible evolutionary end-points of high mass stars.

Fusion Energy Breakthrough

Why in News?

Recently a few scientists at the Lawrence Livermore facility, the US have achieved a **net gain in energy from a nuclear fusion reaction**, which is seen as a big breakthrough.

➢ **China's Artificial Sun,** the Experimental Advanced Superconducting Tokamak (EAST) device replicates the nuclear fusion process carried out by the sun.

What was the Experiment?

➢ The experiment forced a minuscule amount of hydrogen **into a peppercorn-sized capsule,** for which scientists used a powerful **192-beam laser that could generate 100 million degrees Celsius of heat.**

➢ It is also called **'Inertial Fusion'.**

○ At some other places, including the international collaborative project in southern France called **ITER (International Thermonuclear Experimental Reactor)** in which India is a partner; **very strong magnetic fields are used for the same purpose.**

➢ The laser beam was hotter than the Sun's centre and **helped to compress the hydrogen fuel to more than 100 billion** times that of Earth's atmosphere.

➢ Under the pressure of these forces, the capsule started imploding on itself and leading to the fusion of hydrogen atoms and the release of energy.

What can be the Future Prospect?

➢ Attempts to master the fusion process have been going on at least since the 1950s, but it is **incredibly difficult and is still at an experimental stage.**

➢ The nuclear energy currently in use across the world comes from the **fission process**.

Note:

➤ Besides greater energy yield, **fusion is also a carbon-free source of energy**, and has **negligible radiation risks.**

➤ Though the achievement is significant, it **does little to bring the goal of producing electricity from fusion reactions** any closer to reality.

➤ By all estimates, use of the fusion process for generating electricity at a commercial scale is **still two to three decades away.**

➤ The technology used in the US experiment **might take even longer to get deployed.**

What is Fusion?

➤ Fusion is a different, but more powerful, way of harnessing the immense energy trapped in the nucleus of an atom.

➤ In fusion, **nuclei of two lighter elements are made to fuse together** to form the nucleus of a heavier atom.

➤ A large amount of energy is released in both these processes, but substantially **more in fusion than fission.**
   ○ This is the process that makes the **Sun and all other stars shine and radiate energy.**
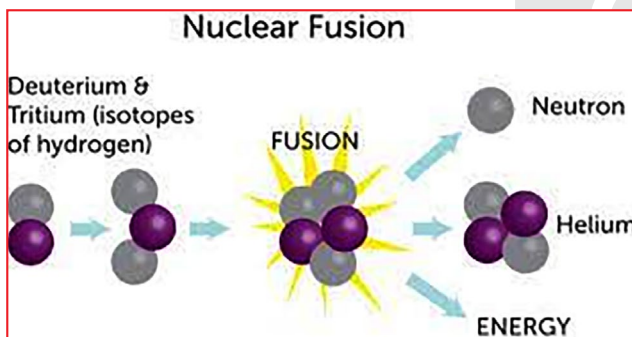
Nuclear Fusion

What are Advantages of Nuclear Fusion?

➤ **Abundant Energy:**
   ○ Fusing atoms together in **a controlled way releases nearly four million times more energy** than a chemical reaction such as the burning of coal, oil or gas and four times as much as nuclear fission reactions (at equal mass).
   ○ Fusion has the **potential to provide the kind of baseload energy** needed to provide electricity to the cities and the industries.

➤ **Sustainability:**
   ○ Fusion fuels are **widely available and nearly inexhaustible.** Deuterium can be distilled from all forms of water, while tritium will be produced during the fusion reaction as fusion neutrons interact with lithium.

➤ **No CO₂:**
   ○ Fusion doesn't emit **harmful toxins like carbon dioxide or other greenhouse gases** into the atmosphere. Its major by-product is helium: an inert, non-toxic gas.

➤ **No long-lived Radioactive Waste:**
   ○ Nuclear fusion reactors produce no high activity, long-lived nuclear waste.

➤ **Limited Risk of Proliferation:**
   ○ Fusion doesn't employ fissile materials like uranium and plutonium (Radioactive tritium is neither a fissile nor a fissionable material).

➤ **No Risk of Meltdown:**
   ○ It is difficult enough to **reach and maintain the precise conditions necessary for fusion**—if any disturbance occurs, the plasma cools within seconds and the reaction stops.

What is the difference between Nuclear Fusion & Nuclear Fission?

Speed Range	Mach Number	Velocity in m/s
Definition	Fission is the splitting of a large atom into two or more smaller ones.	Fusion is the fusing of two or more lighter atoms into a larger one.
Occurrence	Fission reaction does not normally occur in a fission reaction.	Fusion occurs in stars, usch as the sun.
Energy Requirement	Takes little energy to split two atoms in a fission reaction.	Extermely high energy is required to bring two or more protons.
Energy Released	The energy released by fission is a million times greater than that relateased in chemical reactions, but lower than the energy released by unclear fusion.	The Energy released by fusion is three to four times greater than the energy released by fission.
Energy Production	Fission is used in nuclear power plants.	Fusion is an experimental technology for producing power

Environment & Ecology

Highlights

- *Stubble Burning*
- *Regenerative Agriculture*
- *Global Water Resources Report 2021: WMO*
- *Green Cooling Solutions in India by 2040*
- *State of Finance for Nature Report*
- *Binturong*
- *World Monkey Day*

- *Pharmaceutical Pollution*
- *Three Himalayan Medicinal Plants Enter IUCN Red List*
- *NMCG & Namami Gange Programme*
- *Indo-French Partnership on Kaziranga Project*
- *Global Status of Black Soils: FAO*
- *Biodiversity Framework & Indigenous People*

Stubble Burning

Why in News?

According to the **Commission for Air Quality Management (CAQM),** fire count from **Stubble Burning** in Delhi and the **NCR (National Capital Region)** has reduced by 31.5% in 2022 as compared to 2021.

➢ As compared to 2021, stubble burning decreased in Punjab, Haryana, and Uttar Pradesh by 30%, 47.60%, and 21.435% respectively in 2022. The fire counts are based on information from **NASA (National Aeronautics and Space Administration)** Satellites.

What caused
the Reduction in Stubble Burning?

➢ State governments went **for both in-situ and ex-situ management and a special campaign** was started to honour the farmers **who did not burn stubble.**
  - ○ **In-Situ Treatment of Stubble:** For example, crop residue management by zero-tiller machine and Use of bio-decomposers (e.g., **Pusa bio-decomposer).**
  - ○ **Ex-Situ (off-site) Treatment:** For example, Use of rice straw as cattle fodder.
➢ About **10 million tonnes of straw had been managed through in-situ management,** which is about 25% more than last year in Punjab.
  - ○ Similarly, 1.8 million tonnes of straw had been managed through the ex-situ method, which is more than 33% over the previous year.

➢ Punjab had chalked out an **action plan for three years,** which has been shared with the central government.

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.
  - ○ **Soil Fertility:**

Note:

- 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:**
  - ❍ **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 CAQM to tackle the problem of air pollution.

What is CAQM?

- ➤ CAQM is a **statutory body** formed under the **Commission for Air Quality Management in National Capital Region and Adjoining Areas, Act 2021.**
  - ❍ Earlier, the commission was formed through the promulgation of the Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance, 2021.
- ➤ The Commission for Air Quality Management in the **National Capital Region and Adjoining Areas, Act 2021** also dissolved the Environment Pollution Prevention and Control Authority (EPCA) established in the NCR in 1998.
- ➤ It has been set up for **Air Quality Management in National Capital Region and Adjoining Areas** for better co-ordination, research, identification and resolution of problems surrounding the air quality index and for matters connected therewith or incidental thereto.

Regenerative Agriculture

Why in News?

The **importance of regenerative agriculture was emphasised** in the **Intergovernmental Panel on Climate Change (IPCC) report** on **"Climate Change and Land."**

- ➤ It is a 'sustainable land management practice' that can be effective in **building the resilience of agroecosystems.**

  What is Regenerative Agriculture?
- ➤ Regenerative agriculture is a **holistic farming system** that **focuses on soil health, food quality, biodiversity improvement, water quality and air quality** through methods such as **reducing the use of chemical fertilisers and pesticides, reducing tillage, integrating livestock** and **using cover crops.**
- ➤ It adheres to the following principles:
  - ❍ Minimise soil distribution through **conservation tillage**
  - ❍ **Diversify crops** to replenish nutrients and disrupt pest and disease lifecycles
  - ❍ Retain soil cover using **cover crops**
  - ❍ **Integrate livestock,** which adds manure to the soil and serves as a source of carbon sinks.

What is the Need of Regenerative Agriculture?

- ➤ The **current intensive agriculture system has led to soil degradation** and constant losses. T**here may not be enough soil to feed the world** in next 50 years, according to international scientists. **Soil fertility and biodiversity are decreasing** across the globe.
- ➤ Regenerative agriculture **improves soil health through practices that increase soil organic matter, biota and biodiversity.** It also aims at **enhancing water-holding capacity and carbon sequestration.**
  - ❍ It facilitates **soil aggregation, water infiltration, retention and nutrient cycling.**
  - ❍ Regenerative agriculture also **reduces erosion, provides habitat** and **food for diverse species** and is **beyond sustainability.**

Global Water Resources Report 2021: WMO

Why in News?

Recently, **WMO (World Meteorological Organization)** has released its first annual **State of Global Water Resources Report 2021.**

What is this Report About?

- ➤ The aim of this annual report is to s**upport monitoring and management of global freshwater resources** in an era of growing demand and limited supplies.

Note:

➢ The report **focuses on three major areas:**
  ○ **Streamflow**, the volume of water flowing through a river channel at any given time.
  ○ **Terrestrial water storage (TWS)** — all water on the land surface and in the sub-surface.
  ○ **The cryosphere** (frozen water).

What are the Findings of the Report?

➢ **Overview:**
  ○ Between 2001 and 2018, UN-Water reported that a **staggering 74% of all natural disasters were water-related.**
    ● The recent UN climate change conference, COP27, in Egypt, urged governments to further integrate water into adaptation efforts, the first-time water has been referenced in a COP outcome document in recognition of its critical importance.
  ○ **3.6 billion people have inadequate access to water at least one month per year** and this is expected to increase to more than five billion by 2050.
  ○ Large areas of the **globe recorded drier-than-normal conditions in 2021**, which was a year in which precipitation patterns were **influenced by climate change** and a **La Niña event.**
  ○ The area with below-average streamflow was **approximately two times larger than the above-average area,** in comparison to the 30-year hydrological average.

➢ **Region wise Streamflow:**
  ○ **Drought:** Areas that were unusually dry included **South America's** Rio de la Plata area, where a **persistent drought** has affected the region since **2019.**
  ○ **Below Normal:** In Africa, major rivers such as the Niger, Volta, Nile and Congo had **below-average water flow in 2021.** The same trend was observed in **rivers in parts of Russia, West Siberia and in Central Asia.**
  ○ **Above Normal:** On the other hand, there **were above-normal river volumes in some North American basins**, the North Amazon and South Africa, as well as in China's Amur River basin, and northern India.

➢ **Terrestrial Cover:**

  ○ **Below Normal:** Aside from river flow variations, **overall terrestrial water storage was classified as below normal** on the west coast of the United States, in central South America and Patagonia, North Africa and Madagascar, Central Asia and the Middle East, Pakistan and North India.
  ○ **Above Normal:** It was **above normal in Central Africa**, northern South America – specifically the Amazon Basin – and northern China.

➢ **Cryosphere:**
  ○ Mountains are often called natural "water towers" because they are the source of **rivers and freshwater supplies for an estimated 1.9 billion people.**
  ○ Changes to **cryosphere water resources affect food security**, human health, ecosystem integrity and maintenance, and lead to significant impacts on economic and social development.

What is the Scenario of India?

➢ There is more evidence of the **worsening impact of global warming on the Indo-Gangetic Plain (IGP)** that straddles eastern Pakistan, northern India, southern Nepal and the whole of Bangladesh.

➢ The Ganga-Brahmaputra and Indus basins that form the Plain, recorded more **water flowing in the river channels due to glacial melt** even as their total water storage declined in 2021.

➢ This will be **extremely worrying news since the IGP** supports **nearly half a billion people** across the four countries.

What are the Recommendations?

➢ There is insufficient understanding of changes in the distribution, quantity, and quality of freshwater resources, there is a need to fill that **knowledge gap and provide a concise overview of water availability in different parts** of the world.

➢ There is a need for the **development of end-to-end drought and flood early warning systems.**

➢ The long-term projections of glacier run-off and the timing of peak water, should be key **inputs to long-term adaptation decisions.**

➢ There is a need to accelerate the **availability and sharing of hydrological data, including river discharge and transboundary** river basin information.

Note:

drishti

Green Cooling Solutions in India by 2040

Why in News?

According to the report **'Climate Investment Opportunities in India's Cooling Sector'** released by the **World Bank Group**, investment opportunities in India's cooling sector through less carbon-intensive technologies could add up to USD 1.6 trillion.

What are the Highlights of the Report?

➢ The report analyzed the **India Cooling Action Plan (ICAP)** launched in 2019 and came up with suggestions for prioritizing the government's investment opportunities in the cooling sector.

➢ The report does not focus on air conditioning because only 40% of Indians will have air conditioning by 2040 — which is currently around 8% — and the rest for whom passive cooling technologies have to be the focus.

➢ Investment opportunities across three different sectors — **construction, cold chains and refrigerants** — have the potential to **reduce greenhouse gas (GHG) emissions** significantly and also **create nearly 3.7 million jobs.**

➢ Around 34 million people in the country **might lose their jobs because of heat stress** and subsequent decline in productivity.

➢ The world is already **on a path where there would be many more intense heat waves** like the one India witnessed in 2022

➢ Heat stress is set to increase drastically in a world **on its way to a two-three degree rise in temperatures.**

What are the Recommendations?

➢ **Sustainable Space Cooling:**
  ○ Sustainable space cooling solutions may **reduce annual GHG emissions by 213 metric tonnes** of carbon dioxide equivalent by 2040.
  ○ This can be achieved by **increasing the efficiency of cooling technologies** — air conditioners, ceiling fans and chillers — which can save 30% energy by 2037-38.

➢ **Passive Cooling Strategies:**
  ○ Passive cooling strategies for buildings in cities can reduce **energy usage by 20-30% by 2038.**
  ○ A drop in the temperature of a building by one degree Celsius **could lower peak electricity demand** for cooling by two-four per cent.

➢ **Thermal Comfort:**
  ○ Government should include a thermal **comfort programme** in its affordable housing Programme, **Pradhan Mantri Awas Yojana (PMAY).**
  ○ Thermal comfort through passive cooling technologies in these households could benefit over **11 million urban households and 29 million households in rural areas that** the government wants to construct.
  ○ This would also ensure that the **people most affected by rising temperatures** are not disproportionately affected.

➢ **District Cooling Systems (DCS):**
  ○ DCS are centralized cooling techniques **for clusters of buildings** instead of individual buildings, which is much more efficient.
  ○ District cooling should be made **mandatory for real estate complexes** that are of high density.
  ○ DCS generates chilled water in a central plant **which can then be distributed to multiple buildings** via underground insulated pipes.

➢ **Cold Chain and Refrigeration:**
  ○ It is suggested to use concessional finance from Multilateral Development Banks like the World Bank for investments in **strategies to plug the gaps in the cold chain distribution networks.**

Note:

○ Such investments can hel**p reduce food loss by about 76%** and decrease carbon emissions by 16%.

What is ICAP?
➢ It seeks to **recognize "cooling and related areas"** as a thrust area of research under the National S&T Programme.
➢ It is part of India's national strategy for cooling, whose objective is to reduce country-wide demand for cooling **by 25 % by 2037-2038.**
➢ It also seeks to reduce cooling energy requirements by 25% to 40% by 2037-38.
➢ Training and certification of 1,00,000 servicing sector technicians by 2022-23, in synergy with **Skill India Mission.**
➢ It also makes provision for cooling for Economically Weaker Section (EWS) and Low-Income Group (LIG) housing.
➢ In line with Montreal Protocol, the plan **emphasizes cutting those elements that deplete the ozone layer.**
➢ Its goal is to provide sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society.

State of Finance for Nature Report

Why in News?

Recently, the second edition of the State of Finance for Nature report was released.
➢ The report was released jointly by the **UN Environment Programme (UNEP)** along with the Economics of Land Degradation initiative of the Federal Ministry for Economic Cooperation and Development (BMZ) of Germany, the **United Nations Convention to Combat Desertification (UNCCD)** and the European Commission.

What are the Findings of the Report?

➢ **Current Financial Flows:**
○ Current public and private financial flows to NbS **are estimated to be USD 154 billion per year.**
● Public funds make up 83% of the total and the private sector contributes approximately 17%.
➢ **Changes in NbS Finance Flows:**

○ Total finance flows to NbS have **increased by USD 3.9 billion from USD 150 billion (SFN 2021) to USD 154 billion per year.**
○ This represents year-on-year growth in investment of 2.6% in real terms across the sum of public and private financial flows.
➢ **Investment in Marine NbS and Protected Areas:**
○ **SFN 2022 broadened the scope by including marine nature-based solutions** and detailed assessment of protected area finance.
○ **Finance flows to marine NbS are roughly USD 14 billion**, 9% of total (terrestrial and marine).
○ Annual domestic government expenditure in marine NbS is over USD 10 billion per year, including spending on marine protected areas, sustainable management of fisheries and research and development of fisheries.
➢ **Nature-negative Financial Flows:**
○ Public financial support for nature-negative activities ranges from USD 500 to 1,100 billion per year at present, which is three to seven times larger than current investments in NbS.

What are the Recommendations?

➢ **Investment in Nature Based Solution:**
○ **Without an increase in investments in nature-based solutions to USD 384 billion/year by 2025,** the goals of climate change, biodiversity, and land degradation will not be met.
○ There is a need to double the funding for NbS and reduce it for activities that increase **Greenhouse Gas Emissions (GHG).**
➢ **Private Investments:**
○ Private sector actors **will have to combine 'net zero' with 'nature positive'.**
○ For this, **private companies must create a sustainable supply chain**, reduce activities that negatively impact climate and biodiversity, offset any unavoidable activities through high-integrity nature markets, pay for ecosystem services and invest in nature-positive activities.
➢ **Increase Inclusion in Financial Systems:**
○ In order to scale up NbS investments, **public and private sectors must incorporate just transition principles that safeguard human rights.**

Note:

- A Just Transition involves **maximizing the social and economic opportunities of climate action, while minimizing and carefully managing any challenges** – including through effective social dialogue among all groups impacted, and respect for fundamental labour principles and rights.

What is Nature-based Solution(NbS)?

➢ The **NbS refers to sustainable management** and use of nature to tackle socio-environmental challenges, which range from disaster risk reduction, climate change and biodiversity loss to food and water security as well as human health.

➢ **NbS creates harmony between people and nature,** enables ecological development and represents a holistic, people-centred response to climate change.

  ❍ Thus, NbS underpin the **Sustainable Development Goals,** as they support vital ecosystem services, biodiversity, and access to fresh water, improved livelihoods, healthy diets and food security (organic agriculture) from sustainable food systems.

  ❍ Also, NbS are an essential component of the overall global effort to achieve the goals of the **Paris Agreement on Climate Change.**
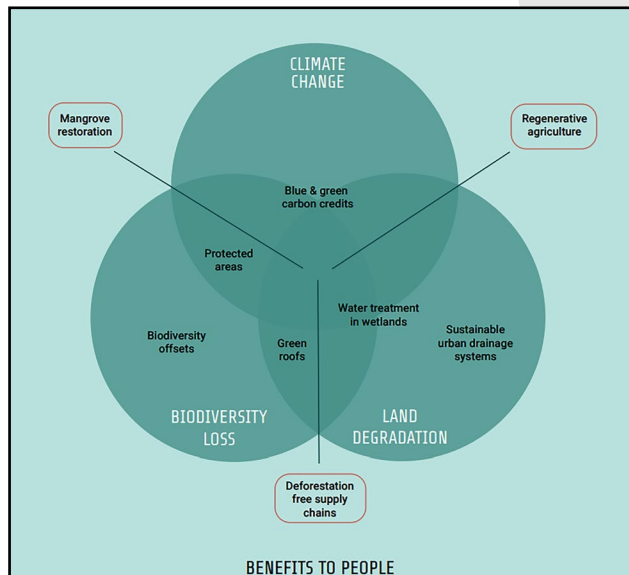
What is the United Nations Environment Programme?

➢ **About:** The UNEP is a leading global environmental authority established on 5th June 1972.

➢ **Functions:** It sets the global environmental agenda, promotes the sustainable development within the **United Nations** system, and serves as an authoritative advocate for global environment protection.

➢ **Major Reports: Emission Gap Report, Adaptation Gap Report, Global Environment Outlook,** Frontiers, Invest into Healthy Planet.

➢ **Major Campaigns:** Beat Pollution, UN75, World Environment Day, Wild for Life.

➢ **Headquarters:** Nairobi, Kenya.

Binturong

Why in News?

The police and forest officials in **Manipur's Ukhrul town have been scanning "gambling dens"** following reports of **wild animals (dead or alive) such as Binturong being** offered as prizes for raffle draws (a lottery in which the prizes are goods rather than money).

➢ Different types of birds such as the grey-sided thrush and tragopans (often called horned pheasants) have also been spotted.

➢ Blyth's tragopan is the **State bird of Nagaland.**

What are the Key Facts about Binturong?

➢ **About:**

  ❍ Binturong, (*Arctictis binturong*), also called bear cat or cat bear, catlike omnivore of the civet family (Viverridae), found in dense forests of Southeast Asia.

  ❍ It has long shaggy hair, tufted ears, and a long, bushy, prehensile tail. The colour generally is black with a sprinkling of whitish hairs.

  ❍ The binturong is **principally nocturnal and crepuscular** (that is, active during twilight).

  ❍ It is found most often among the trees, using its prehensile tail as an aid in climbing. It feeds mainly on fruit, such as figs, but it also takes eggs and small animals.

  ❍ In some areas binturongs are tamed and have been reported as being affectionate pets.

➢ **Distribution:**

  ❍ Its **range extends from Nepal, India, and Bhutan southward to the Indonesian islands of Sumatra and Java** and eastward to Borneo.

Note:

➢ **Conservation:**
  ❍ **IUCN Red List:** Vulnerable
  ❍ **CITES listing:** Appendix III
  ❍ **Indian Wildlife Protection Act, 1972:** Schedule I

What are the Key Facts about Blyth's Tragopan?

➢ **Distribution:**
  ❍ Bhutan, China, India, Myanmar.
➢ **Conservation:**
  ❍ **IUCN Red List:** Vulnerable
  ❍ **CITES listing:** Appendix I
  ❍ **Indian Wildlife Protection Act, 1972:** Schedule I

World Monkey Day

Why in News?

World Monkey Day is celebrated worldwide on **14th December, every year.**

What is World Monkey Day?

➢ Monkey Day has been created to **celebrate monkeys and other non-human primates.**
  ❍ A **primate is any mammal of the group that includes** lemurs, lorises, tarsiers, monkeys, apes, and humans.
➢ It is a great day when it comes to **raising awareness about different types of monkeys and primates around the world,** as well as the **issues they face and how we can help** them.

What are the Key Facts about Monkey?

➢ **About:**
  ❍ Monkeys, also **known as simians, live all over the world.**
  ❍ **More than 250 species** of monkeys **populate Africa, Central America, South America, and Asia.**
  ❍ Monkeys are divided into **two categories– Old World monkeys and New World monkeys.**
    ● Old World monkeys are native to Africa and Asia while New World monkeys are indigenous to the Americas, but their homes are not the only ways in which they are different.

➢ **Physical Characteristics:**
  ❍ They **range in size from mere ounces** like the pygmy marmoset to the mandrill **at a heavier 80 pounds.**
  ❍ Monkeys tend to **walk on all four limbs.**
  ❍ As a member of the primate family, they are **considered a lesser ape.**
  ❍ Most monkeys **have a tail, though not all do.**
    ● Usually, New World monkeys possess prehensile tails, meaning they can use their tails to grasp or hold on to objects.
    ● On the other hand, Old World monkeys all have tails, but they lack the ability to grasp objects.
➢ **IUCN Status:**
  ❍ According to **International Union for Conservation of Nature (IUCN),** approximately **70% of Asian species are Endangered,** as are about **50% of African species** and **40% of neo-tropical species.** Some of them are:
    ● **Western Chimpanzee:** Critically Endangered.
    ● **Roloway Monkey:** Critically Endangered.
    ● **Lion-tailed Macaque:** Endangered.
    ● **Diana Monkey:** Endangered.
    ● **Long-tailed Macaque:** Endangered.
    ● **Gee's Golden Langur:** Endangered.

Pharmaceutical Pollution

Why in News?

According to a research paper, **Pharmaceutical Pollution is an overlooked but urgent issue** that needs coordinated action from across the pharmaceutical, healthcare and environmental sectors.

Almost half, or 43% of the world's rivers are contaminated with active pharmaceutical ingredients in concentrations that can have disastrous ramifications on health.

What is Pharmaceutical Pollution?

➢ **About:**
  ❍ **Pharmaceutical plants** are often **incapable of filtering out all the chemical compounds used in their manufacturing process** and as such, the chemicals will **seep into the surrounding freshwater systems** and eventually into the oceans, lakes, streams, and rivers.

Note:

○ **Wastewater** from pharmaceutical manufacturers is also sometimes **discharged into open fields and nearby water bodies,** thereby increasing the pharmaceutical waste or their **by-product load in the environment, landfills, or dumping areas**. All this is basically known as **pharmaceutical pollution.**

➢ **Effects:**

○ **Effects on Fish and Aquatic Life:**

● A number of studies have indicated that estrogen found in birth control pills and postmenopausal hormone treatments, have a feminizing effect on male fish and can alter female-to-male ratios.

○ **Disruption of Sewage Treatment Process:**

● **Antibiotics** present in the sewage treatment systems can, therefore, inhibit the activities of the sewage bacteria, and therefore seriously affect the organic matter decomposition.

○ **Effect on Drinking Water:**

● The chemicals present in these pharmaceuticals, find a way into waterways, after being excreted from the body or after being flushed down the toilet.

● Most municipal sewage treatment facilities can't remove these pharmaceutical compounds from drinking water and people end up consuming the same compounds.

● Chronic exposure to these compounds could result in serious health issues.

○ **Long-term Effects on the Environment:**

● Some pharmaceutical compounds can persist for long in the environment and in water supplies.

■ These **bioaccumulate, enter a cell and move up food chains**, becoming **more concentrated** in the process. This can have disastrous effects on life and environment, in the long run.

➢ **Solutions:**

○ **Investment in public education** on the **proper disposal of drugs** should be done as part of the drug take-back programs

○ **Tougher Regulations** to limit large-scale medicine flushing in hospitals, nursing homes and other healthcare institutions.

○ **Additional research** is desperately required to **assess the potential human effects** of pharmaceutical pollution.

○ **Limiting bulk purchases** will ensure only the required amount is supplied and therefore, **less pollution.**

○ **Proper trashing must be preferred over flushing** as it leads to them being incinerated or buried in landfills.
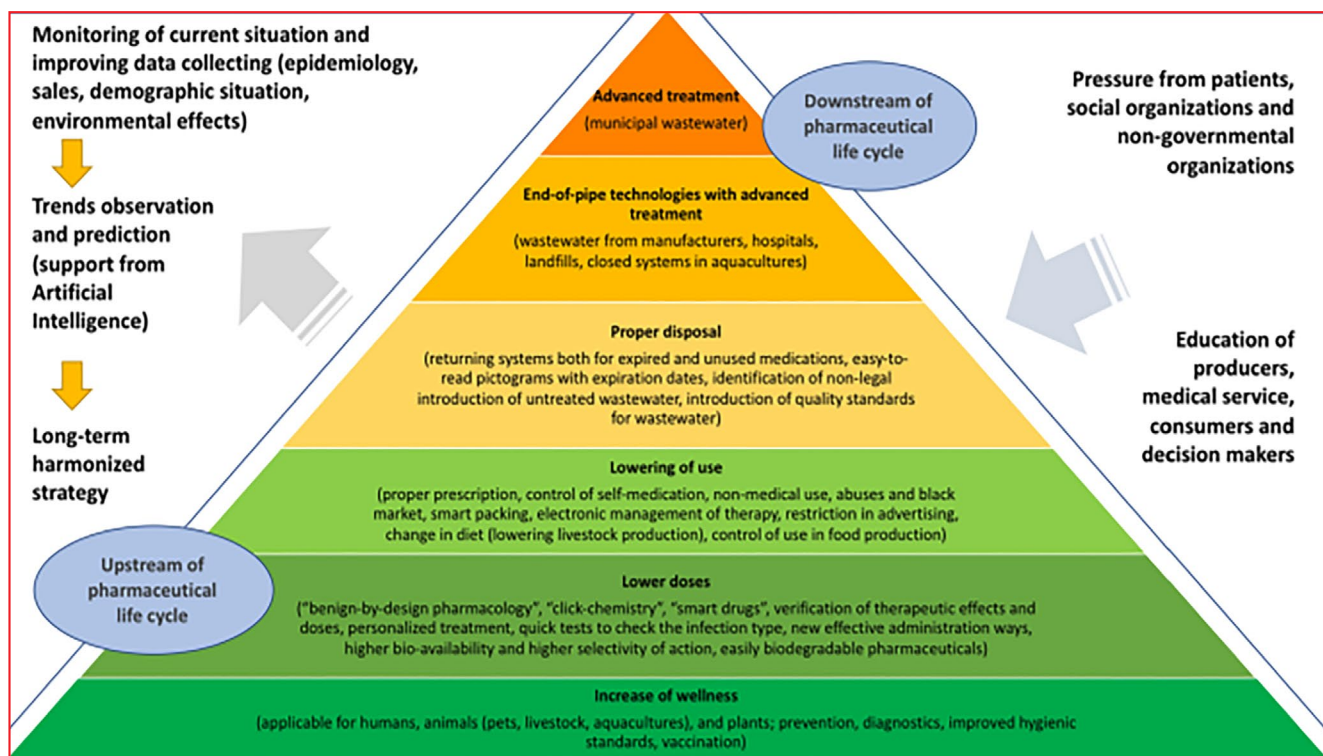
Note:

What is the Status of Pharmaceutical Pollution in India?

➢ **World's Third-Largest Producer:**
   ○ India is the world's third-largest producer of pharmaceuticals, in which about **3000 drug companies and about 10500 manufacturing units are involved.**
   ○ Pharmaceuticals production has been considered **one of the most polluting industries in various parts of India.**

➢ **Bulk Drug Capital of India:**
   ○ In India, the dominant pharma industries are located in the **city of Hyderabad (known as the 'Bulk Drug Capital of India").**
   ○ It accounts for **more than about 800 pharma/biotech units.**
   ○ According to the survey, local people argue that the **groundwater is highly contaminated in the regions where industries are situated.**

➢ **Multi-Drug Resistance Infections:**
   ○ It has been estimated that about **60000 newborns die annually in India because of multidrug-resistance infections**, where pharmaceutical water pollution with **antimicrobial drugs** is responsible for that.

What are the Related Government Initiatives?

➢ **National Action Plan for Antimicrobial Resistance 2017**: It was proposed to tackle the problem related to limits on antibiotics in industrial waste.

➢ **Zero Liquid Discharge Policy: Central Pollution Control Board (CPCB)** has introduced **guidelines to various pharma industries** to achieve zero liquid discharge.
   ○ Around **86 of the 220 bulk drug makers in Hyderabad have zero liquid discharge facilities,** which showed that they could recycle almost all the liquid effluent.

➢ **Continuous Monitoring of Effluents:** The **Ministry of Environment, Forest, and Climate Change (MoEFCC) has also announced** that industries must **install devices to monitor** the effluent continuously.

Three Himalayan Medicinal Plants Enter IUCN Red List

Why in News?

Three medicinal plant species (*Meizotropis pellita, Fritillaria cirrhosa, Dactylorhiza hatagirea*) found in the Himalayas** have been **added to the IUCN Red List of Threatened Species** following a recent assessment.

➢ This **assessment in the Himalayan region shows deforestation**, habitat loss, **forest fires**, illegal trade and **climate change** pose a serious threat to the species. **The fresh data is expected to aid conservation efforts in the region**.

### What are the Key Highlights of these Species?

➢ *Meizotropis pellita:*
   ○ **About:**

   • It is commonly known as Patwa, is a perennial shrub with a restricted distribution that is endemic to Uttarakhand.
   ○ **Enlisting in IUCN:**
      • The study stated that the species is listed as 'critically endangered' based on its limited area of occupancy (less than 10 sq. km).
      • The species is threatened by deforestation, habitat fragmentation and forest fires.
   ○ **Significance:**
      • The essential oil extracted from the leaves of the species possesses strong antioxidants and can be a promising natural substitute for synthetic antioxidants in pharmaceutical industries.

➢ *Fritillaria cirrhosa:*
   ○ **About:**

   • It is commonly known as Himalayan fritillary, is a perennial bulbous herb.
   ○ **Enlisting in IUCN:**
      • Considering the rate of decline, long generation length, poor germination potential, high trade value, extensive harvesting pressure and illegal trade, the species is listed as 'vulnerable'.
   ○ **Significance:**
      • In China, the species is used for the treatment of bronchial disorders and pneumonia. The plant is also a strong cough suppressant and a source of expectorant drugs in traditional Chinese medicine.

Note:

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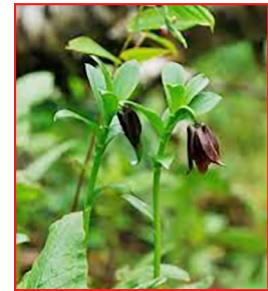
- ➤ *Dactylorhiza hatagirea:*
  - ○ **About:**
    - It is commonly known as Salampanja, is a perennial tuberous species endemic to the Hindu Kush and Himalayan ranges of Afghanistan, Bhutan, China, India, Nepal, and Pakistan.
  - ○ **Enlisting in IUCN:**
    - It is threatened by habitat loss, livestock grazing, deforestation, and climate change, the species is listed as 'endangered'.
  - ○ **Significance:**
    - It is extensively used in Ayurveda, Siddha, Unani and other alternative systems of medicine to cure dysentery, gastritis, chronic fever, cough and stomach aches.

NMCG & Namami Gange Programme

Why in News?

Recently, the Union Minister for Jal Shakti chaired the **10th meeting of the Empowered Task Force (ETF) of National Mission for Clean Ganga (NMCG).**

- ➤ As part of its flagship **Namami Gange programme**, the Union government has shifted its focus from improving sanitation to conservation, tourism, and economic development of the Ganga River.

THE GANGA RIVER MAP

What are the Recent Developments in Ganga Rejuvenation?

- ➤ Ministry of Tourism working on a **comprehensive plan for development of tourism circuits** along Ganga in line with **Arth Ganga.**
  - ○ **'Arth Ganga' implies a sustainable development model with a focus on economic activities related to Ganga.**
- ➤ Exhibitions & Fairs across 75 towns along Ganga River planned as part of **Azadi ka Amrit Mahotsav.**
- ➤ Ministry of Agriculture & Farmers' Welfare (MoA&FW) **undertaking various steps to build organic farming and natural farming** corridors along River Ganga
  - ○ **Eco-agriculture being promoted** besides efforts to improve water-use efficiency in Ganga villages by MoA&FW.
- ➤ Ministry of Housing and Urban Affairs focusing on mapping of urban drains and **management of solid and liquid waste in Ganga towns** under **SBM 2.0** and **AMRUT 2.0**
- ➤ The **Ministry of Environment, Forests and Climate Change** mulling scaling up of afforestation activities in the Ganga belt and a detailed plan to take **'Project Dolphin'** forward is also underway.

What is NMCG?

- ➤ **About:**
  - ○ It is being implemented by the National Council for Rejuvenation, Protection and Management of River Ganga also known as the **National Ganga Council.**
  - ○ This mission was established on 12th August 2011 under the **Societies Registration Act,1860** as a registered society.
- ➤ **Objectives:**
  - ○ The mission **incorporates rehabilitating and boosting the existing STPs (Sewage Treatment Plants)** and instant short-term steps to curb pollution at exit points on the riverfront in order to check the inflow of sewage.
  - ○ To **maintain the continuity of the water flow** without changing the natural season variations.
  - ○ To **restore and maintain the surface flow and groundwater.**
  - ○ To regenerate and maintain the natural vegetation of the area.

❍ To conserve and **regenerate the aquatic biodiversity** as well as the riparian biodiversity of the river Ganga basin.

❍ To allow participation of the public in the process of protection, rejuvenation and management of the river.

What is Namami Gange Programme?

➢ **About:**

❍ Namami Gange Programme is an Integrated Conservation Mission, **approved as a 'Flagship Programme' by the Union Government in June 2014** to accomplish the twin objectives of effective abatement of pollution and conservation and rejuvenation of National River Ganga.

❍ It is being operated under the Department of Water Resources, River Development and Ganga Rejuvenation, **Ministry of Jal Shakti.**

❍ The program is being **implemented by the NMCG and its state counterpart organizations** i.e State Program Management Groups (SPMGs).

❍ In **phase 2 of Namami Gange Programme (2021-26)**, the states will focus on expeditious completion of projects and preparation of bankable Detailed Project Report (DPR) for projects in Ganga tributary towns, cutting down delays.

● Focus is also being given to the revival of small rivers and wetlands.

● For future, each Ganga district is to develop scientific plan and health card for at least 10 wetlands and adopt policies for reuse of treated water and other by products.

➢ **Main Pillars:**

❍ Sewage Treatment Infrastructure

❍ River-Front Development

❍ River-Surface Cleaning

❍ Biodiversity

❍ Afforestation

❍ Public Awareness

❍ Industrial Effluent Monitoring

❍ Ganga Gram

What are the Other Related Initiatives?

➢ **Ganga Action Plan:** It was the first River Action Plan that was taken up by the Ministry of Environment, Forest and Climate Change in 1985, to improve the water quality by the interception, diversion, and treatment of domestic sewage.

❍ The National River Conservation Plan is an extension to the Ganga Action Plan. It aims at cleaning the Ganga river under Ganga Action Plan phase-2.

➢ **National River Ganga Basin Authority (NRGBA):** It was formed by the Government of India in the year 2009 under Section-3 of the Environment Protection Act, 1986.

❍ It declared the Ganga as the 'National River' of India.

➢ **Clean Ganga Fund:** In 2014, it was formed for cleaning up of the Ganga, setting up of waste treatment plants, and conservation of biotic diversity of the river.

➢ **Bhuvan-Ganga Web App:** It ensures involvement of the public in monitoring of pollution entering into the river Ganga.

➢ **Ban on Waste Disposal:** In 2017, the **National Green Tribunal** banned the disposal of any waste in the Ganga.

Indo-French Partnership on Kaziranga Project

Why in News?

India and France are collaborating on **Kaziranga Project.**

➢ **Agence Francaise de Developpement (AFD) of France has committed funding** of €80.2 million for a 10-year period, between 2014-2024.

What is Kaziranga Project?

➢ The **Kaziranga project is a part of** a larger **Assam Project on Forest and Biodiversity Conservation (APFBC).**

❍ The Assam government, with the support of AFD, launched the **APFBC in 2012,** to restore forest ecosystems, protect wildlife and enhance the livelihood of the forest-dependent communities.

➢ The project conceptualised the **reforestation of 33,500 hectares of land and the training of 10,000 community members** in alternate livelihoods by 2024.

What are Key Facts about Kaziranga National Park?

➢ **Location:**

❍ It is located in the State of Assam and covers **42,996 Hectare (ha).**

Note:

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○ It is the **single largest undisturbed and representative area** in the Brahmaputra Valley floodplain.

➢ **Legal Status:**
  ○ It was declared as a **National Park in 1974.**
  ○ It has been declared a **tiger reserve** since 2007. It has a total tiger reserve area of 1,030 sq km with a core area of 430 sq. km.

➢ **International Status:**
  ○ It was declared a **UNESCO World Heritage Site** in 1985.
  ○ It is recognized as an Important Bird Area by BirdLife International.

➢ **Biodiversity**:
  ○ It is the home of the **world's most one-horned rhinos.**
    ● **Pobitora Wildlife Sanctuary** has the highest density of one-horned rhinos in the world and second highest number of Rhinos in Assam after Kaziranga National Park.
  ○ Much of the focus of conservation efforts in Kaziranga are **focused on the 'big four' species - Rhino, Elephant, Royal Bengal tiger and Asiatic water buffalo.**
  ○ Kaziranga is also home **to 9 of the 14 species** of primates found in the Indian subcontinent.

➢ **Rivers and Highways:**
  ○ National Highway 37 passes through the park area.
  ○ The park also has more than 250 seasonal water bodies, besides the Diphlu River running through it.

7 NATIONAL PARKS IN ASSAM

• 6th : Raimona National Park (Notified in 2021)
• 7th : Dihing Patkai National Park (Notified in June 2021)

Global Status of Black Soils: FAO

Why in News?

The **Food and Agriculture Organization (FAO)** marked **World Soil Day 2022 (5th December)** with the launch of its first **Global Status on Black Soils**, which are at greater risk than ever due to the climate crisis, biodiversity loss and land use change.

What are the Findings?

➢ **Significance of Black Soil:**
  ○ The ability of the soils to remove carbon from the atmosphere and lock it up in soil organic matter (called **carbon sequestration**) has been proposed as an important solution to mitigate human-induced climate change.
  ○ The inherent fertility of the soils **makes them the food basket for many countries and are considered essential** to the global food supply.
  ○ Black soils have the **potential to provide 10% of the total Soil Organic Carbon (SOC) sequestration globally** if they receive proper attention.
    ● Europe and Eurasia have the **highest potential at over 65%** and Latin America and the Caribbean at around 10%.
  ○ Black soils were home to 2.86% of the global population and had 17.36% of cropland, 8.05% of global SOC stock and 30.06% SOC stock of global cropland.
  ○ However, despite representing a small portion of the world's soils, **black soils were key for food security** and the global economy.
    ● Globally in 2010, 66% of sunflower seeds, 51% of small millet, 42% of sugar beet, 30% of wheat and 26% of potatoes were harvested from black soils.

➢ **Status of Black Soils:**
  ○ Black soils are quickly **losing their SOC stocks.** They have lost 20 to 50% of their original SOC stock, with the carbon being released into the atmosphere mostly as **carbon dioxide, exacerbating global warming.**

➢ **Causes of Losses in Black Soil:**
  ○ Land-use change, unsustainable management practices and excessive use of agrochemicals are to blame.

Note:

○ Most of the black soils suffered from **moderate to severe erosion processes**, as well as nutrient imbalances, acidification and biodiversity loss.

➢ **Food and Fertilizer Crisis:**

○ Smallholder farmers, particularly from vulnerable countries across Africa, Latin America and Asia, **lack access to organic and inorganic fertilizers** and are currently facing a 300% increase in fertilizer prices.

○ Today, reduced availability and soaring fertilizer prices are driving increased food prices and food insecurity.

➢ **Suggestions:**

○ Preserving natural vegetation on black soils such as grasslands, forests and wetlands and adopting sustainable soil management approaches on cropped black soils are needed.

○ There is a need to work together to **produce safe, nutritious and micronutrient-rich food in a sustainable wa**y that avoids soil degradation, reduces greenhouse gas emissions and decreases agrifood systems pollution."
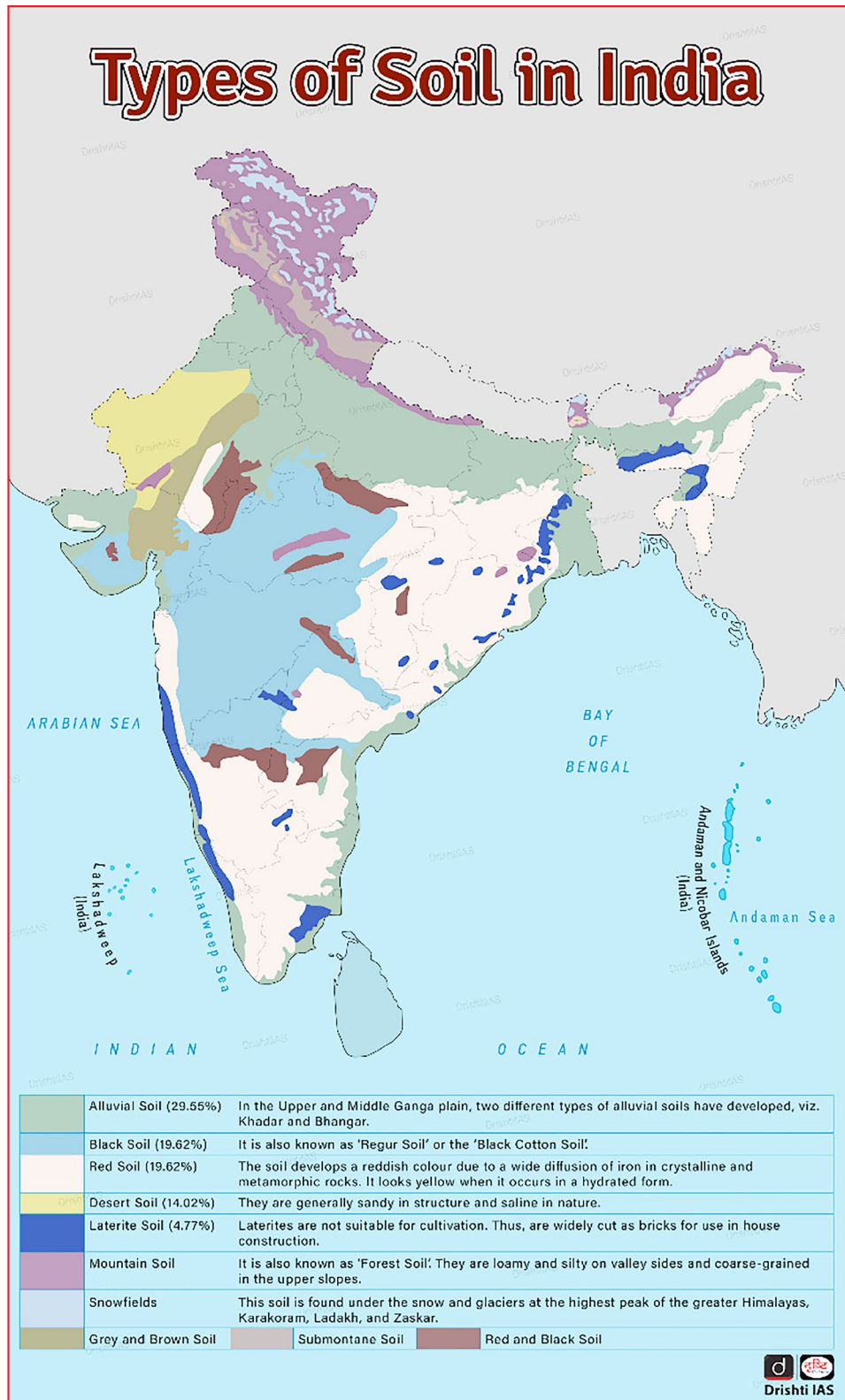
What is Black Soil?

➢ Black soils are characterised by a **thick, dark-coloured soil horizon rich in organic matter.**

○ They are found in Russia (327 million hectares), Kazakhstan (108 M ha), China (50 M ha), Argentina, Mongolia, Ukraine etc.

➢ Black soils are extremely **fertile and can produce high agricultural yields** due to their elevated moisture storage capacity.

Types of Soil in India

	Type	Description
	Alluvial Soil (29.55%)	In the Upper and Middle Ganga plain, two different types of alluvial soils have developed, viz. Khadar and Bhangar.
	Black Soil (19.62%)	It is also known as 'Regur Soil' or the 'Black Cotton Soil'.
	Red Soil (19.62%)	The soil develops a reddish colour due to a wide diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.
	Desert Soil (14.02%)	They are generally sandy in structure and saline in nature.
	Laterite Soil (4.77%)	Laterites are not suitable for cultivation. Thus, are widely cut as bricks for use in house construction.
	Mountain Soil	It is also known as 'Forest Soil'. They are loamy and silty on valley sides and coarse-grained in the upper slopes.
	Snowfields	This soil is found under the snow and glaciers at the highest peak of the greater Himalayas, Karakoram, Ladakh, and Zaskar.
	Grey and Brown Soil	Submontane Soil　　　Red and Black Soil

ARABIAN SEA

BAY OF BENGAL

Lakshadweep (India)

Lakshadweep Sea

Andaman and Nicobar Islands (India)

Andaman Sea

INDIAN OCEAN

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Note:

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- Black soils are **rich in iron, lime, calcium, potassium, aluminum and magnesium** but **deficient in nitrogen, phosphorous**.
- They constitute 5.6 % of global soils and contain 8.2 % of the world's **SOC stocks**, approximately **56 billion tonnes of carbon.**
  - Soil organic carbon is **a measurable component of soil organic matter,** which makes up just **2–10% of most soil's mass and has an important role in the physical, chemical and biological functio**n of agricultural soils.
  - SOC refers **only to the carbon component** of organic compounds.
- This signifies their importance for climate change mitigation and adaptation.
- With their inherent fertility, they are t**he food basket for many countries and are considered essential to the** global food supply.

What is World Soil Day (WSD)?

- It was recommended by the **International Union of Soil Sciences (IUSS) in 2002.**
- The **FAO** has supported the formal establishment of WSD as a global awareness-raising platform under the leadership of the Kingdom of Thailand within the framework of the Global Soil Partnership.
- 5th December 2014 was designated as the first official WSD by the **UN General Assembly (UNGA).**
  - The day was chosen because it corresponds with the official birthday of H.M. King Bhumibol Adulyadej, the King of Thailand, who officially sanctioned the event.
- World Soil Day **enjoins individuals to consider sustainably managing soil resources.** The main goal of the day is to increase public awareness of the significant environmental issues that soil degradation can lead to, such as erosion, the loss of organic matter, and a drop in soil fertility.
- The **theme** for World Soil Day 2022 is "Soils, where food begins".

What are the Initiatives to Improve Soil Health?
- **Soil Health Card Scheme**
- **Organic Farming**
- **Paramparagat Krishi Vikas Yojana**
- **Fertilizer Self-Sufficiency**
- **Digital Agriculture**
- **Carbon Farming**
- The Nutrient Based Subsidy (NBS) Scheme

Biodiversity Framework & Indigenous People

Why in News?

Recently, at the **15th Conference of Parties (COP15)** to the **United Nations Convention on Biological Diversity (CBD)**, a group representing **indigenous people** stressed that the **Post-2020 Global Biodiversity Framework (GBF)** must work on respecting, promoting and supporting the rights of **indigenous peoples and local communities (IPCL)**.

- Members of the **International Indigenous Forum on Biodiversity (IIFB)** have also stressed upon the rights of indigenous people.

What are the Key Areas Stressed by Indigenous People?

- The rights of indigenous peoples and local communities, who have always been the **most effective guardians of biodiversity**, also need to be recognised and protected.
- The framework should follow a "**human rights-based approach,** by respecting, protecting and fulfilling the rights, and particularly indigenous and collective rights, and **gender equity**" by actively seeking ways to support and promote indigenous communities and their rights.
- The implementation of the post-2020 GBF must include **traditional knowledge**, practices and technologies while respecting the principles of free, prior and informed consent.

What is the Role of Indigenous People in Biodiversity Conservation?

- **Conserving Natural Flora:**
  - The **magico-religious belief** of plants' tribal communities as a god and goddess habitat leads to their conservation in their natural habitat.
  - Further, a wide variety of plants such as crop plants, wild fruits, seeds, bulb, roots and tubers are **conserved by the ethnic and indigenous people** as they have to depend on these sources for edible purposes.
- **Application of Traditional Knowledge:**
  - Indigenous people and biodiversity **complement each other.**

Note:

○ Over time, the rural communities have gathered a **pool of indigenous knowledge** for the **cultivation of the medicinal plants** and their propagation.

○ These plants conserved are **antidotes to snake bites** and **scorpion bites** or even for **broken bones or orthopaedic** treatments.

➢ **Conserving the Sacred Groves:**

○ India's ethnic people have played a vital role in **preserving the biodiversity** of several virgin forests and have conserved flora and fauna in sacred groves of tribals. Otherwise, these flora and fauna might have disappeared from the natural ecosystem.

What are the Difficulties Faced by Indigenous People?

➢ **Disruption After Designation of the Status of World Heritage Site:**

○ The approach adopted to **isolate the indigenous people** from their natural habitats to protect biodiversity is the **root cause of conflict between them and conservationists.**

○ With the announcement of **natural habitat as a World Heritage Site**, the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** takes charge of the region's conservation.

○ This leads to an infusion of many outside people and technological equipment, which in turn disrupt the lives of the Indigenous people.

➢ **Lax Implementation of the Forest Rights Act:**

○ Many states in India have a dismal record in implementing the **Forest Rights Act (FRA)**.

○ FRA's constitutionality has been challenged in the **Supreme Court** several times by various conservation organisations.

➢ **Development vs Conservation:**

○ Often, the combined stretch of land claimed by Indigenous people has been taken away for building dams, mining, laying railway lines and roads, power plants, etc.

○ Moreover, forcibly removing tribal peoples from their land will only result in environmental damage and violate human rights.

What is the Post-2020 Global Biodiversity Framework?

➢ **About:**

○ The post-2020 global biodiversity framework builds on the **Strategic Plan for Biodiversity 2011-2020**.

● As the United Nations Decade on Biodiversity 2011-2020 comes to an end, the International

Union for Conservation of Nature (IUCN) actively supports the development of what needs to be an ambitious new global biodiversity framework.

➢ **Goals and Targets:**

○ The new frameworks have four goals to achieve by 2050.

● To halt the extinction and decline of biodiversity.

● To enhance and retain nature's services to humans by conserving.

● To ensure fair and equitable benefits to all from use of genetic resources.

● To close the gap between available financial and other means of implementation and those necessary to achieve the 2050 Vision.

○ **2030 Action Targets:** The framework has **21 action-oriented targets** for urgent action over the decade to 2030, which includes:

● To bring at least 30% of land and sea under the world's protected areas.

● A 50% greater reduction in the rate of introduction of invasive alien species, and controls or eradication of such species to eliminate or reduce their impacts.

● Reducing nutrients lost to the environment by at least half, and pesticides by at least two thirds, and eliminating the discharge of plastic waste.

● Nature-based contributions to global climate change mitigation efforts of at least 10 GtCO2e (gigatonnes of equivalent carbon dioxide) per year, and that all mitigation and adaptation efforts avoid negative impacts on biodiversity.

What is the International Indigenous Forum on Biodiversity?

➢ **The IIFB** is a **collection of representatives** from indigenous governments, indigenous non-governmental organizations and indigenous scholars and activists that organize around the **CBD** and other important international environmental meetings.

➢ Its aim is to help **coordinate indigenous strategies** at the meetings, provide advice to the government parties, and influence the interpretation of government obligations to recognize and respect indigenous rights to the knowledge and resources.

➢ The IIFB was formed during the **III Conference of the Parties to the Convention on Biological Diversity (CoP III)** in **Buenos Aires, Argentina**, in November 1996.

Note:

History

Highlights

- Dr. Rajendra Prasad
- J C Bose: A Satyagrahi Scientist
- Sri Aurobindo: Prophet of Indian Nationalism
- Mahaparinirvan Diwas

Dr. Rajendra Prasad

Why in News?

The President of India paid floral tributes to **Dr. Rajendra Prasad**, the **First President of India**, on his birth anniversary at Rashtrapati Bhavan on **3rd December 2022**.

Who was Dr. Rajendra Prasad?

➢ **Birth:**
  ❍ Son of Mahadev Sahai, he was born in **Zeradei, Siwan, Bihar** on **3rd December 1884**.

➢ **Education:**
  ❍ He joined the famed **Calcutta Presidency College in 1902**.
  ❍ In 1915, Prasad appeared in the **examination of master's in law from the Department of Law, University of Calcutta**, passed the examination and won a gold medal.
  ❍ In 1916, he commenced his **legal career in the Patna High Court**. He completed his **Doctorate in Law from Allahabad University in 1937**.

➢ **Role in Fight for Freedom:**
  ❍ **Association with Gandhiji:**

- While **Gandhiji** was on a fact-finding mission in **Chamaparan district of Bihar** to address grievances of local peasants, he called on **Dr. Rajendra Prasad to come to Champaran with volunteers.**
  - Gandhiji's influence **greatly altered many of his views**, most importantly on **caste and untouchability**.
- The **Champaran Satyagraha** not only brought him closer to Mahatma Gandhi, but also changed the entire course of his life.
- **The Rowlatt Act of 1918** and the **Jallianwala Bagh massacre of 1919** pushed Rajendra Prasad closer to Gandhiji.

❍ **Call for Non-cooperation:**
- Dr. Prasad called for **non-cooperation** in Bihar as part of **Gandhiji's non-cooperation movement**.

❍ **National College:**
- He gave up his law practice and started a **National College near Patna**, 1921.

❍ **Salt Satyagraha:**
- In March 1930, Gandhiji launched the **Salt Satyagraha**. Under the guidance of Dr. Prasad, a salt Satyagraha was launched in Nakhas Pond, Bihar.
  - Batch after batch of volunteers courted arrest while making salt. He called for more volunteers.
  - Public opinion forced the Government to withdraw the police and allow the volunteers to make salt.
  - He then sold the manufactured salt to raise funds. He was sentenced to six months imprisonment.

➢ **Dr. Prasad & Indian National Congress:**
  ❍ He officially **joined the Indian National Congress in 1911**, during its annual session held in Calcutta.

○ He presided over the **Bombay session of the Indian National Congress** in October 1934.

○ Following the **resignation of Subhash Chandra Bose** as the President of the Congress in April 1939, **He was elected President for the second time**.

○ In 1946, he **joined the Interim Government** of **Pandit Jawaharlal Nehru** as the Minister of Food & Agriculture and gave the slogan of **"Grow More Food"**.

➢ **Dr. Prasad & Constituent Assembly:**

○ In July 1946, when the **Constituent Assembly** was established to frame the **Constitution of India**, he was elected its President.

○ **Committees of Constituent Assembly under the chairmanship of Dr. Prasad includes:**

● Ad hoc Committee on the National flag

● Committee on the Rules of Procedure

● Finance and Staff Committee

● Steering Committee

○ Two and a half years after independence, **on 26th January 1950**, the **Constitution of independent India was ratified** and he was elected **India's First President**.

➢ **Awards & Recognition:**

○ In 1962, after 12 years as President, **Dr. Prasad retired**, and was subsequently awarded the **Bharat Ratna**, the nation's highest civilian award.

○ Dr. Prasad recorded his life and the decades before independence in many books, which includes:

● Satyagraha at Champaran

● India Divided

● His autobiography "Atmakatha"

● Mahatma Gandhi and Bihar, Some Reminisences

● Bapu ke Kadmon Mein

➢ **Death:**

○ Dr. Rajendra Prasad spent the last few months of his life in retirement at the Sadaqat Ashram in Patna.

○ **He died on 28th February 1963**.

J C Bose: A Satyagrahi Scientist

Why in News?

Recently, the Ministry of Culture has organized an **international conference on the contributions of J C Bose: A Satyagrahi Scientist"** on his 164th birth anniversary.

Who was Jagdish Chandra Bose?

➢ **About:**

○ Born on 30th November, 1858 to Bama Sundari Bose and Bhagawan Chandra, Bengal.

○ He was a **Plant Physiologist and physicist** who invented the crescograph, a device for measuring the growth of plants. He for the first time demonstrated that plants have feelings.

➢ **Education:**

○ He earned a **BSc from University College London**, which was connected with the University of London in 1883, and a BA (Natural Sciences Tripos) from the University of Cambridge in 1884.

➢ **Scientific Contribution:**

○ Acharya Jagadish Chandra Bose was a biologist, physicist, botanist and an early writer of science fiction.

○ Bose discovered **wireless communication and was named the Father of Radio Science** by the **Institute of Electrical and Electronics Engineering.**

○ He was responsible for the **expansion of experimental science in India**.

○ Bose is **considered the father of Bengali science fiction**. A crater on the moon has been named in his honour.

○ He founded **Bose Institute**, a premier research institute of India and also one of its oldest. Established in 1917, the Institute was the **first interdisciplinary research centre in Asia.** He served as the Director of Bose Institute from its inception until his death.

○ To facilitate his research, he constructed **automatic recorders capable of registering extremely slight movements;** these instruments produced some striking results, such as quivering of injured plants, which Bose interpreted as a power of feeling in plants.

➢ **Books:**

○ His books include **Response in the Living and Non-Living (1902)** and **The Nervous Mechanism of Plants (1926)**.

➢ **Death:**

○ He died on 23th November 1937 in Giridih, Bihar.

Note:

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Sri Aurobindo: Prophet of Indian Nationalism

Why in News?

Recently, the Indian Prime Minister has participated in a programme commemorating **Sri Aurobindo's 150th birth anniversary** in Puducherry, under the aegis of **Azadi ka Amrit Mahotsav.**

➢ The PM has released a commemorative coin and postal stamp in honor of Sri Aurobindo.

Who Was Sri Aurobindo?

➢ **About:**
  ○ Aurobindo Ghose was born in Calcutta on **15th August 1872.** He was a yogi, seer, philosopher, poet, an**d Indian nationalist who propounded a philosophy of divine life on earth through spiritual evolution.**
  ○ Aurobindo's pragmatic strategies to get rid of British rule **marked him as "the Prophet of Indian Nationalism".**

➢ **Education:**
  ○ His education began in **a Christian convent school in Darjeeling.**
  ○ He entered the **University of Cambridge, where he became proficient in two classical and several modern European** languages.
  ○ In 1892, he **held various administrative posts** in Baroda (Vadodara) and Calcutta (Kolkata).
  ○ He began the study of **Yoga and Indian languages,** including classical Sanskrit.

➢ **Indian Revolutionary Movement:**
  ○ From 1902 to 1910 he partook in the struggle to free India from the British.

○ The partition of Bengal in 1905 provoked **Aurobindo to leave his job in Baroda and plunge into the nationalist movement.** He edited the patriotic journal **Bande Mataram** to propagate radical methods and revolutionary tactics instead of supplication.

○ He was **arrested thrice by the British** — twice for sedition and once for conspiring to "wage war".
  ● He was imprisoned in 1908 (Alipore Bomb case).

○ Two years later he fled British India and **found refuge in the French colony of Pondichéry (Puducherry), gave up overt political activities and embraced spiritual pursuits,** soon to emerge as one of the most original thinkers, philosophers and spiritual masters.
  ● He met Mirra Alfassa in Pondicherry, and their spiritual collaboration led to "Integral Yoga".
  ● Integral Yoga, is a yoga of Earth transformation. The aim of this yoga is not an escape from life or a shunning of worldly existence, but a radical change in our life even while living amidst it.

➢ **Aurobindo's Ideas on Second World War:**
  ○ Several Indians saw the Second World War as an opportune moment to get rid of colonial occupation; **Aurobindo asked his compatriots to support the Allies and ensure Hitler's defeat.**

➢ **Spirituality:**
  ○ In Pondichéry he founded a community of spiritual seekers, which took shape as the **Sri Aurobindo Ashram in 1926.**
  ○ He believed that the **basic principles of matter, life, and mind would be succeeded through terrestrial evolution by the principle of supermind** as an intermediate power between the two spheres of the infinite and the finite.

➢ **Literary Works:**
  ○ An English newspaper called Bande Mataram (in 1905)
  ○ Bases of Yoga
  ○ Bhagavad Gita and Its Message
  ○ The Future Evolution of Man
  ○ Rebirth and Karma
  ○ Savitri: A Legend and a Symbol
  ○ Hour of God

➢ **Death:** He died on 5th December 1950 in Pondicherry.

Note:

Mahaparinirvan Diwas

Why in News?

Recently, the **Prime Minister paid homage to Dr. Babasaheb Ambedkar on** Mahaparinirvan Diwas and recalled his exemplary service to our nation.

What is Mahaparinirvan Diwas?

➢ Parinirvana, regarded as **one of the major principles as well as goals of Buddhism,** is a Sanskrit term which means **release or freedom after death.**

  ○ As per the Buddhist text **Mahaparinibbana Sutta**, the **death of Lord Buddha** at the age of 80 is considered as the **original Mahaparinirvan.**

➢ **6ᵗʰ December is observed to commemorate the unfathomable contribution to society** given by Dr. Bhimrao Ambedkar and his achievements. Owing to Ambedkar's status as a Buddhist leader, his **death anniversary is referred to as Mahaparinirvan Diwas.**

Who was Dr. Bhimrao Ambedkar?

➢ **About:**

  ○ **Babasaheb Dr. Bhimrao Ambedkar** was a **social reformer, jurist, economist, author, polyglot** (knowing or using several languages) orator, a scholar, and thinker of comparative religions.

➢ **Birth:**

  ○ He was born in **1891 in Mhow, Central Province** (now Madhya Pradesh).

➢ **Brief Profile:**

  ○ 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.**

  ○ He was a **well-known statesman who fought for the rights of the Dalits** and other socially backward classes.

Dr. Bhimrao Ramji Ambedkar

Babasaheb Ambedkar-
The Father of Indian Constitution
14 April 1891 - 06 December 1956

1. Brief Profile

- A social reformer, jurist, economist, author and thinker of comparative religions
- Labour member in the **Executive Council of Viceroy (1942)**
- **Chairman** of the **Drafting Committee** for the new Constitution
- **First Law Minister** of India
- Posthumously awarded **Bharat Ratna (1990)**

2. Contributions

- Led the **Mahad Satyagraha in 1927** against Hindus
- Participated in **all three Round Table Conferences**
- Signed the **1932 Poona pact** with Mahatma Gandhi to abandon the idea of separate electorates for the depressed classes

The reserved seats for depressed classes were increased from 71 to 147 in provincial legislatures and to 18% in the Central Legislature.

- Opposed the special status of J&K (Article **370**)
- Supported **Uniform Civil Code**
- Referred **Article 32** as "soul of the Constitution and very heart of it"

3. Resignation and Buddhism

- Differences over **Hindu Code Bill** led to his resignation from Cabinet in **1951**
- Converted to Buddhism; his death is observed as **Mahaparinirvan Diwas**

4. Important Journals

- Mooknayak (**1920**)
- Samatha (**1929**)
- Bahishkrit Bharat (**1927**)
- Janata (**1930**)

5. Books

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

6. Organisations

- Estd. '**Bahishkrit Hitkarini Sabha**' (**1923**)
- Founded **Independent Labour Party** (**1936**)
- Founded **Scheduled Castes Federation** (**1942**)

Note:

- ➢ **Contributions:**
  - ○ He led the **Mahad Satyagraha in March 1927 against Hindus** who were opposing the decision of the Municipal Board.
    - ● **In 1926, the Municipal Board of Mahad** (Maharashtra) passed an order to throw open the tank to all communities. Earlier, the untouchables were not allowed to use water from the Mahad tank.
  - ○ 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).**
- ➢ **Election and Designation:**
  - ○ **In 1937,** 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.
- ➢ **Shift to Buddhism:**
  - ○ **He resigned** from the cabinet in **1951,** over differences on the Hindu Code Bill.
  - ○ He **converted to Buddhism in 1956**.
  - ○ He was awarded India's highest civilian honour the **Bharat Ratna** in 1990.

- ➢ **Important Works:**
  - ○ **Journals:**
    - ● 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)
- ➢ **Death:**
  - ○ He **died on 6th December 1956.**
    - ● **Chaitya Bhoomi** is a memorial to B R Ambedkar, located in Mumbai.
- ➢ **Relevance of Ambedkar in Present Times:**
  - ○ Caste-based inequality in India still persists. While Dalits have acquired a political identity through **reservation** and forming their own political parties, they **lack behind in social dimensions** (health and education) and economic dimension.
  - ○ There has been a **rise of communal polarization and communalization of politics.** It is necessary that Ambedkar's vision of constitutional morality must supersede religious morality to avoid permanent damage to the Indian Constitution.
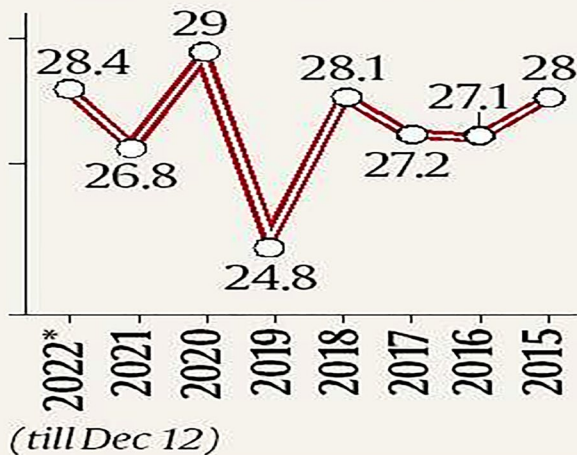
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Geography

Western Disturbances

Why in News?

Recently, the daytime's temperatures in Delhi were above normal in December 2022 because of fewer **Western Disturbances (WD).**

➢ In winter, WD brings rain and snow over the hills, and **more moisture to the plains**. The cloud cover results in **higher minimum temperatures at night and lower day-time or maximum temperatures.**

HIGHEST MAX TEMP IN DECEMBER

In degrees Celsius (°C)

29 — 28.4 — 28.1 — 28 — 27.1 — 27.2 — 26.8 — 24.8

2022* 2021 2020 2019 2018 2017 2016 2015

(till Dec 12)

What are Western Disturbances?

➢ **About:**
  ○ Western disturbances are storms that originate in the **Caspian or Mediterranean Sea**, and bring **non-monsoonal rainfall** to northwest India, according to the **India Meteorological Department (IMD).**

○ A Western Disturbance, labelled as **an extra-tropical storm originating in the Mediterranean,** is an area of low pressure that brings sudden showers, snow and fog in northwest India.

○ The disturbance travels **from the "western" to the eastern direction.**
  ● These travel eastwards on high-altitude westerly jet streams - massive ribbons of fast winds traversing the earth from west to east.
  ● They gradually travel across the middle-east from Iran, Afghanistan and Pakistan to enter the Indian sub-continent.

○ Disturbance means **an area of "disturbed" or reduced air pressure.**
  ● Equilibrium exists in nature due to which the air in a region tries to normalise its pressure.

➢ **Impact in India:**
  ○ A WD is associated with **rainfall, snowfall and fog** in northern India. It arrives with **rain and snow in Pakistan and northern India**.
  ○ The moisture which WDs carry with them **comes from the Mediterranean Sea and/or from the Atlantic Ocean.**
  ○ WD brings winter and pre-monsoon rain and is important for the development of the **Rabi crop** in the Northern subcontinent.
  ○ The WDs are not always the harbingers of good weather. Sometimes WDs can cause extreme weather events like floods, **flash floods, landslides, dust storms, hail storms and cold waves** killing people, destroying infrastructure and impacting livelihoods.
  ○ During the summer months of April and May, **they move across North India and at times help in the activation** of monsoon in certain parts of northwest India.

Note:

- During the monsoon season, western disturbances **may occasionally cause dense clouding** and heavy precipitation.
- Weak western disturbances are **associated with crop failure** and water problems across north India.
- Strong western disturbances can help residents, farmers and governments avoid many of the problems associated with water scarcity.

What have been the Recent Instances/Impact of WD?

- Excess rainfall was recorded in January and February 2022. In contrast, there was no **rainfall in November 2021 and March 2022**, and the summer **saw an unusually early start with heat waves** setting in at the end of March 2022.
- Multiple western disturbances that brought cloud cover **had also kept the maximum temperature low in February 2022**, when the lowest maximum temperature in 19 years was recorded.
- Active western disturbances eluded northwest India in March 2022, and absence of cloud cover and rain allowed temperatures to remain high.
- The **frequency of western disturbances has increased,** but not the precipitation associated with them, partly due to a warming atmosphere (**Global Warming**).
- In 2021, western disturbances **brought rain to Delhi in the first week of December.**
  - Delhi is, however, **likely to get colder with the maximum temperature likely to fall to around 24 degrees** by December 15, 2022.

Cyclone Mandous

Why in News?

Recently, it has been reported that a **cyclone** may impact the Tamil Nadu and Puducherry coasts from 8th December 2022 onwards.

What is Cyclone Mandous?

- Mandous is a **slow-moving cyclone** that often absorbs a lot of moisture, carries a humongous amount of rainfall and gains strength in the form of wind speeds.
- The name has been **suggested by the United Arab Emirates**.
- **India Meteorological Department's (IMD)** predicted that the storm system **may move in the west and northwestward directions** and intensify into a depression by the evening of December 6.
  - It may subsequently strengthen further into a cyclone over southwest Bay of Bengal and move towards the Tamil Nadu and Puducherry coasts by the morning of December 8.

What is a Cyclone?

- **Cyclones** are rapid **inward air circulation** around a **low-pressure area**. The air circulates in an **anticlockwise direction** in the Northern hemisphere and **clockwise** in the Southern hemisphere.
- Cyclones are usually accompanied by **violent storms and bad weather.**
- The word Cyclone is derived from the **Greek word Cyclos** meaning the coils of a snake. It was coined by **Henry Peddington** because the tropical storms in the Bay of Bengal and the Arabian Sea appear like coiled serpents of the sea.
- **There are two types of cyclones:**
  - **Tropical cyclones**;
  - **Extra Tropical cyclones** (also called Temperate cyclones or middle latitude cyclones or Frontal cyclones or Wave Cyclones).
- The **World Meteorological Organisation** uses the term '**Tropical Cyclone**' to cover weather systems in which winds exceed '**Gale Force' (minimum of 63 km per hour)**.
  - **Tropical cyclones** develop in the region **between the Tropics of Capricorn and Cancer.**
    - They are **large-scale weather systems** developing over tropical or subtropical waters, where they get organized into surface wind circulation.
  - **Extra tropical cyclones** occur in **temperate zones** and high latitude regions, though they are known to originate in the Polar Regions.

How are Names of Cyclones Decided?

- Cyclones that form in **every ocean basin across the world are named by the regional specialised**

meteorological centres (RSMCs) and **Tropical Cyclone Warning Centres (TCWCs).** There are six RSMCs in the world, including the India Meteorological Department (IMD), and five TCWCs.

➢ In 2000, a group of nations called **WMO/ESCAP (World Meteorological Organisation/United Nations Economic and Social Commission for Asia and the Pacific)**, which comprised Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand, decided to start naming cyclones in the region. After each country sent in suggestions, the WMO/ESCAP Panel on **Tropical Cyclones (PTC)** finalised the list.

○ The WMO/ESCAP expanded to **include five more countries in 2018** — Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen.

Coastal Red Sand Dunes

Why in News?

Recently, geologists have suggested to protect the **site of Coastal Red Sand Dunes**, of Visakhapatnam, Andhra Pradesh.

What are the Key Points of the Sites?

➢ **About:**
○ **The Coastal Red Sand Dunes** is also known as 'Erra Matti Dibbalu'. It is one of the many sites of Visakhapatnam, which have **geological importance.**
○ The site is located **along the coast and is about 20 km north-east of Visakhapatnam city** and about 4 km south-west of Bheemunipatnam.
○ This site was declared as a **geo-heritage site by the Geological Survey of India (GSI)** in 2014 and the Andhra Pradesh government has listed it under the category of 'protected sites' in 2016.

➢ **Distribution:**
○ Such sand deposits are rare and have **been reported only from three places** in the tropical regions in south Asia such as **Teri Sands in Tamil Nadu, Erra Matti Dibbalu in Visakhapatnam and one more site in Sri Lanka.**
○ They do not occur **in equatorial regions or temperate regions** due to many scientific reasons.

What is the Uniqueness of these Sediments?

➢ **Continuous Evolution:**
○ The **red sediments are a part of the continuation of the evolution of the earth** and represent the late **quaternary geologic age.**

● The Quaternary Period is a period on the **Geologic Time Scale** that's known mainly for the spread of humanity and climate change. This period runs from about **2.6 million years ago to the Present Day.**

➢ **Different Geomorphic Features:**
○ With a height of up to 30 m, they exhibit **badland topography with different geomorphic landforms and features**, including gullies, sand dunes, buried channels, beach ridges, paired terraces, the valley in the valley, wave-cut terrace, knick point and waterfalls.
● Badland topography is a dry terrain where softer sedimentary rocks and clay-rich soils have been extensively eroded by wind and water.

➢ **Geochemically Unaltered:**
○ The top light-yellow sand unit, which is estimated to have been deposited around 3,000 years ago, **could not attain the red colouration as the sediments were geochemically unaltered.**
○ These sediments are **unfossiliferous (not containing fossils) and deposited over the khondalite basement.**
● Khondalite is a regional rock with high-grade metamorphism and granulite rock formation. It was named after the Khond tribe of Odisha.

What is the Significance of Protecting this Site?

➢ It is significant to protect this site, because its study can help understand the impact of climate change, as **Erra Matti Dibbalu has seen both the glacial and the warm periods**.

➢ The site is about 18,500 to 20,000 years old and **it can be related to the last glacial period.**

➢ It is a **lively scientific evolution site**, which depicts the real-time effects of climate change.
○ About 18,500 years ago, the sea (Bay of Bengal) was at least 5 km behind from the present coastline. Since then, it has been undergoing continuous active changes till about 3,000 years ago and still the changes are on.

➢ The site also has archaeological significance, as studies of artifacts indicate an **Upper Palaeolithic horizon and on cross dating assigned to Late Pleistocene epoch**, which is 20,000 BC.

➢ The site was home to the pre-historic man as the excavations at several places in the region revealed **stone implements of three distinctive periods and also the pottery of the Neolithic man.**

Note:

Tectonic Plates

TECTONIC PLATES
OR LITHOSPHERIC PLATES

ABOUT
- Massive, irregularly-shaped slabs of solid rock (Crust + Top Mantle)
- In 1967, McKenzie, Parker and Morgan came out with the concept of Plate Tectonics

TYPE
- Continental or Oceanic (whichever occupies the larger portion of plate)
- Pacific plate - Oceanic; Eurasian plate - Continental

MAJOR AND MINOR PLATES

North American Plate
Eurasian Plate
Eurasian Plate
Arabian Plate
Juan de Fuca Plate
Caribbean Plate
Philippine Plate
Cocos Plate
Pacific Plate
African Plate
Nazca Plate
Indo-Australian Plate
South American Plate
Antarctic Plate
Scotia Plate

▲ Major Plate
● Minor Plate

THE INDIAN PLATE
- Includes - Peninsular India and the Australian continental portions
- East Extension - Rakim Yoma Mountains (Myanmar) to Java Trench
- West - Makrana coast of Balochistan (Pakistan)
- Rate of Movement - 54 mm/year in northeast direction
- Boundary b/w India and Antarctic plate - Marked by an oceanic ridge (divergent boundary)
- Formation of Himalayas - Collision of Indian and Eurasian plates

PLATE MOVEMENT
- Plates constantly move horizontally over the Asthenosphere
- Collision/drifting away of plates result in earthquakes/volcanic eruptions

> Asthenosphere – a zone of Earth's mantle lying just beneath Lithosphere; believed to be much hotter and more fluid than Lithosphere

SUBDUCTION

Occurs when tectonic plates shift and one is pushed under another

> Downgoing ocean plate → Pushed into hotter Mantle plate → Heats up → Mixes volatile elements → Produces magma → Volcanic eruption

Subduction Zone
Oceanic Crust
Oceanic Crust
Lithosphere
Lithosphere
Mantle
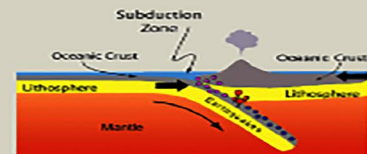
BOUNDARIES OF PLATES
- Convergent/Destructive, where plates move into one another (subduction zones)
- Divergent/Constructive, where plates move apart (rift valleys)
- Transform/Conservative, where plates move sideways in relation to each other (creates faults)

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Note:

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Pacific Ring of Fire

Pacific Ring of Fire
aka the Circum-Pacific Belt

CHARACTERISTICS

- Path along Pacific Ocean characterised by **active volcanoes and frequent earthquake**
- Majority of Earth's volcanic eruptions (**75%**)/earthquakes (**90%**) occur here

The next most seismically active region (5-6% of earthquakes) is the Alpide belt (Mediterranean region - eastward through Turkey, Iran, and northern India)

CAUSE OF FORMATION

- **Plate Tectonics**- Pacific Plate interacts with less-dense plates

GEOGRAPHICAL STRETCH

- ~**40,000** Kms; Western coast of S & N America to Eastern coast of Asia past New Zealand to Northern Coast of Antarctica

IMPORTANT COUNTRIES IN RoF

- Chile, Ecuador, Peru, Mexico, US, Canada, Russia, Japan, Philippines, Australia, Indonesia, New Zealand, and Antarctica

ACTIVE VOLCANOES IN RoF

- **Mauna Loa (Hawai)**- world's largest active volcano
- **Mount Tambora (Indonesia)**- largest volcanic eruption (**1815**)
- **Mount Fuji**- Japan's tallest
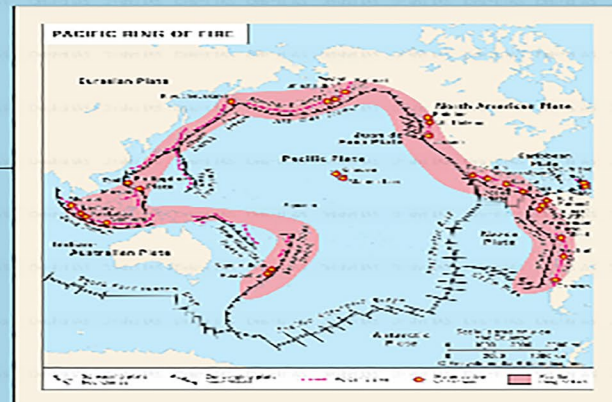
Most of the active volcanoes on the RoF are found on its western edge, from Russia to New Zealand

MAJOR EARTHQUAKES IN RoF

- **Valdivia Earthquake of Chile 1960**- strongest recorded earthquake
- **Northern Sumatra Earthquake 2004**- occurred in Indian Ocean

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Semeru Volcano of Indonesia

Why in News?

Recently, **Semeru volcano** erupted in **Indonesia's Eastern Java Island.**

**Indonesia : eruption of Mount Semeru**

What is Semeru Volcano?

➢ Semeru - also known as **"The Great Mountain" - is the highest volcano** in Java and one of the most active.

➢ It previously erupted in December, 2021.

➢ Indonesia, with the maximum number of active volcanoes in the world, is **prone to seismic upheaval** due to its location on the **Pacific's Ring of Fire.**

➢ Semeru volcano is also part of the **Island arcs** formed by the subduction of the **Indo-Australian plate** below **Sunda Plate** (part of the Eurasian Plate). The trench formed here is called the Sunda trench whose major section is the Java Trench.

What is Pacific Ring of Fire?

➢ **The Ring of Fire,** also referred to as the **Circum-Pacific Belt,** is a path along the Pacific Ocean characterized by **active volcanoes and frequent earthquakes.**

➢ It traces boundaries between several tectonic plates— including the Pacific, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.
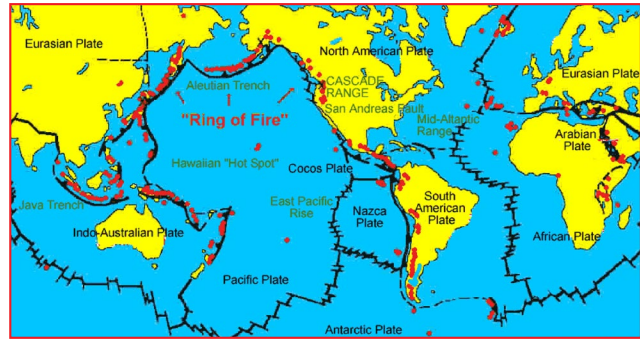
What are Island Arcs?

➢ They are long, curved chains of **oceanic islands** associated with **intense volcanic and seismic activity and orogenic** (mountain-building) processes.

  ○ An island arc typically has a **land mass or a partially enclosed, unusually shallow sea** on its concave side.

  ○ Along the convex side there almost invariably exists a long, **narrow deep-sea trench.**

  ○ The greatest ocean depths are found in these depressions of the seafloor, as in the case of the **Mariana (deepest trench in the world) and Tonga trenches.**

➢ Prime examples of this form of geologic feature include the **Aleutian-Alaska Arc** and the **Kuril-Kamchatka Arc.**

What are the Other Volcanoes?

➢ **Recently Erupted:**

  ○ **Sangay Volcano: Ecuador**

  ○ **Taal Volcano: Philippines**

  ○ **Mt. Sinabung, Merapi volcano: Indonesia**

➢ **Volcanoes in India:**

  ○ Barren Island, Andaman Islands (India's only active volcano)

  ○ Narcondam, Andaman Islands

  ○ Baratang, Andaman Islands

  ○ Deccan Traps, Maharashtra

  ○ Dhinodhar Hills, Gujarat

  ○ Dhosi Hill, Haryana

■■■

Note:

Art and Culture

Highlights

- *Swar Dharohar Festival*

Swar Dharohar Festival

Why in News?

Recently, the Ministry of Culture, Government of India in collaboration with **"Swar Dharohar Foundation,"** **inaugurated a three day "Swar Dharohar Festival" under Kalanjali.**

➢ Under Kalanjali, cultural programmes are being organised at Central Vista every week.

What is the Swar Dharohar Festival?

➢ It is a **Music, Art & Literature Festival to showcase the iconic art and culture of India** and the rich literary Art & Heritage of Indian States.

➢ In this program, the upcoming local Artists will **perform with Legend Artist on the same platform to showcase their talents.**

➢ The National as well as Local Poets will exhibit their artistry through Kavi Sammelan.
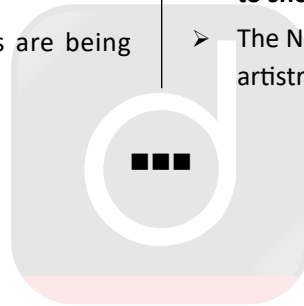
Note:

Security

Highlights

- *Advanced Light Helicopter Mk-III*   *100*
- *Greater Tipraland, Demand of Tripura*   *100*
- *12th Edition of Exercise Agni Warrior*

Advanced Light Helicopter Mk-III

Why in News?

Recently, an **Indian Coast Guard** Advanced Light Helicopter Mk-III squadron has been commissioned in Chennai.

What are the Key Facts about ALH Squadron?

➢ **About:**
  ○ The ALH Mk-III helicopters, indigenously manufactured by **Hindustan Aeronautics Limited (HAL)**, feature state-of-the-art equipment.
  ○ It includes **advanced radar as well as electro-optical sensors**, Shakti engines, full glass cockpit, high-intensity searchlight, advanced communication systems, automatic identification system as well as search-and-rescue homer.
  ○ This **feature enables the helicopter to undertake maritime reconnaissance** as well as carry out search and rescue at extended ranges while operating from ships, both by day and night.

➢ **Role:**
  ○ The aircraft has the **ability to switch roles from an offensive platform** with a heavy machine gun to that of a benign one carrying a medical intensive care unit to facilitate the transfer of critically ill patients.
  ○ The Squadron will give a major fillip to the abilities of the Indian Coast Guard in the security sensitive waters off Tamil Nadu and Andhra Region.

Greater Tipraland, Demand of Tripura

Why in News?

Recently, chief of a **political party of Tripura** led a two-day dharna at Jantar Mantar, New Delhi, to raise the demand for a **"Greater Tipraland"**.

➢ The objective is to **secure the rights of indigenous communities in the state.**

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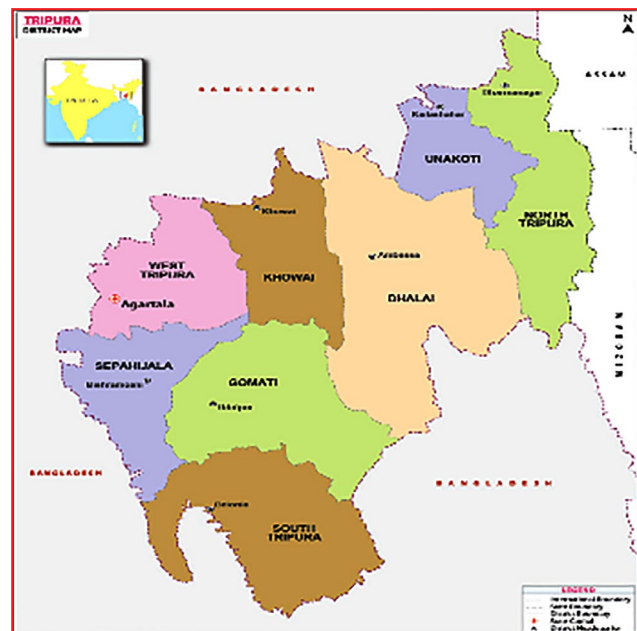
What is the Issue?

➢ **Demand:**

   ○ The party is demanding a separate state of **'Greater Tripraland'** for the **indigenous communities** of the north-eastern state.

   ○ They want the Centre to carve out the separate state under **Article 2 and 3 of the Constitution.**

      ● Among the 19 notified Scheduled Tribes in Tripura, Tripuris (aka Tipra and Tiprasas) are the largest.

      ● According to the 2011 census, there are at least 5.92 lakh Tripuris in the state, followed by Bru or Reang (1.88 lakh) and Jamatias (83,000).

   ○ They are demanding a separate state not only for the indigenous people but also for all communities who live in the **Tripura Tribal Areas Autonomous District Council (TTAADC)** area.

➢ **Historical Background:**

   ○ **Tripura** was a kingdom ruled by the **Manikya dynasty** from the late 13th century until the signing of the **Instrument of Accession** with the Indian government in 1949.

   ○ The demand stems from the **anxiety of the indigenous communities** in connection with the change in the demographics of the state, which has reduced them to a minority.

   ○ It happened due to the **displacement of Bengalis from the erstwhile East Pakistan** between 1947 and 1971.

   ○ From 63.77% in 1881, the population of the tribals in Tripura **was down to 31.80% by 2011.**

   ○ In the intervening decades, ethnic conflict and insurgency gripped the state, which shares a nearly 860-km long boundary with Bangladesh.

   ○ The joint forum has also pointed out that the **indigenous people have not only been reduced to a minority,** but have also been **dislodged from land reserved for them** by the penultimate king of the Manikya dynasty Bir Bikram Kishore Debbarman.

➢ **Other Demands in the North East:**

   ○ **Greater nagalim** (Parts of Arunachal Pradesh, Manipur, Assam and Myanmar)

   ○ **Bodoland** (Assam)

   ○ **Tribal Autonomy Meghalaya**

Does Parliament have Powers to Create a New State?

➢ **Parliament** derives powers to create a new state from **Article 2 and Article 3** of the **Constitution of India.**

➢ **Article 2:**

   ○ Parliament may by law **admit into the Union, or establish, new States** on such terms and conditions as it thinks fit.

   ○ States like Sikkim (previously not within India) became a part of the country under Article 2.

➢ **Article 3:**

   ○ It empowered the **Parliament to make law relating to the formation** of new states and alteration of existing states.

What Initiatives have the Government taken to Address the Issue?

➢ **Tripura Tribal Areas Autonomous District Council:**

   ○ **The Tripura Tribal Areas Autonomous District Council (TTADC)** was formed under the **sixth schedule of the Constitution** in 1985 to ensure development and secure the rights and cultural heritage of the tribal communities.

   ○ **'Greater Tipraland'** envisages a situation in which the entire TTADC area will be a separate state. It also proposes **dedicated bodies to secure the rights of the Tripuris** and other aboriginal communities living outside Tripura.

   ○ The TTADC, which has legislative and executive powers, **covers nearly two-third of the state's geographical area.**

   ○ The council comprises 30 members of which 28 are elected while two are nominated by the Governor.

➢ **Reservation:**

   ○ Also, out of the 60 Assembly seats in the state, **20 are reserved for Scheduled Tribes.**

12th Edition of Exercise Agni Warrior

Why in News?

The 12th Edition of **Exercise Agni Warrior**, a bilateral exercise between the **Singapore & Indian Army,** culminated at Field Firing Ranges, Maharashtra.

Note:

What is Exercise Agni Warrior?

➢ Exercise Agni Warrior, involved showcasing **joint firepower planning, execution and use of New Generation Equipment** by the Artillery arm of both armies.

➢ Exercise also included participation by both sides in a joint computer war-game as part of joint planning process.

➢ Expert academic discussions were conducted on modern trends in Artillery and refinement of the Artillery planning process.

➢ The exercise achieved **its aim of enhancing mutual understanding of drills & procedures and improving interoperability** between the two armies.

What are the Other Exercises between India and Singapore?

➢ **Bold Kurukshetra** (Army)

➢ **Joint Military Training (Air Force)**

➢ **Trilateral Maritime Exercise SIMTEX** (With Thailand).

■■■

Note:

Ethics

Highlights

- *Gaslighting*

Gaslighting

Why in News?

Recently, **Merriam-Webster**, America's oldest dictionary publisher, has chosen "**Gaslighting**" as its **Word of the Year**.

➢ Searches on its website for the word have spiked by 1,740% in 2022, according to the company.

What is Gaslighting?

➢ **About:**
  ○ Merriam-Webster dictionary defines gaslighting as "**psychological manipulation** of a person usually over an **extended period of time,** that causes the **victim to question the validity** of their own thoughts, perception of reality, or memories and **typically leads to** confusion, loss of confidence and self-esteem, uncertainty of one's emotional or mental stability, and a dependency on the perpetrator."
  ○ Gaslighting involves an **imbalance of power between the abuser and the person** they're gaslighting.
    ● Abusers often **exploit stereotypes or vulnerabilities** related to gender, sexuality, race, nationality and/or class.

➢ **Emergence of the Word:**
  ○ The term "Gaslighting" comes from the title of a **1938 play "Gas Light"** by Patrick Hamilton, and the movie based on that play, the plot of which involves a man attempting to make his wife believe that she is going insane.

➢ **Impact on Mental Health:**
  ○ Gaslighting is meant to provoke uncertainty and self-doubt, which is often harmful to a victim's mental health.
    ● A victim of gaslighting may experience Anxiety, Depression, Disorientation, Lowered self-esteem.

What are Some Common Signs of Gaslighting?

➢ **The "Twilight Zone" Effect:**
  ○ Victims of gaslighting often report feeling like a **situation is surreal**, it's happening on a different plane from the rest of their life.
  ○ Being told that the victim is **exaggerating**.
  ○ Feeling **confused** and **powerless** after leaving an interaction.

➢ **Isolation:**
  ○ Many gaslighters make efforts to isolate victims from friends, family and other support networks.

➢ **Tone Policing:**
  ○ A gaslighter may criticize the tone of voice if the person challenges them on something. This is a tactic used to flip the script and make them feel that they are the one to blame, rather than the abuser.

➢ **A Cycle of Warm-Cold Behavior:**
  ○ To throw a victim off balance, a gaslighter may alternate between verbal abuse and praise, often even in the same conversation.

What is the Significance of Gaslighting in Modern Time?

➢ **Gaslighting of Misinformation:**
  ○ In this age of misinformation—of "fake news," conspiracy theories, Twitter trolls, and deepfakes—gaslighting has emerged as a word for Modern Time.

➢ **Gaslighting and Gender:**
  ○ **Gaslighting in Medicine:**
    ● Some **women are gaslighted by their doctors**, who may use the stereotype that women are irrational and convince a female patient that nothing is actually wrong with her.
  ○ **Public or Collective Gaslighting:**

Note:

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- Many women experience the **effects of public gaslighting**, also called **collective gaslighting**, when statements by a public figure or an ordinary person that are widely shared on social media can lead **women as a collective to second-guess themselves**.
  ○ **Gaslighting of Transgender People:**
    - A gaslighter may try to **convince a transgender person** that they have a mental health disorder.
  ○ **Gaslighting in the Legal System:**
    - The legal system becomes a critical site of gaslighting when **abusers gain control of the narrative** and **'flip' stories**, drawing on stereotypes about women as irrational and aggressive.
  ➢ **Gaslighting and Race:**

○ The political, social, economic and cultural process that perpetuates and normalizes a **white supremacist reality through pathologizing those who resist** is the prime example of Gaslighting and Race.

➢ **Gaslighting in the Workplace:**
  ○ If a person in a **position of power** causes **one to question themselves** in a way that is negatively affecting their career or confidence in their abilities, they may be experiencing gaslighting.

➢ **Gaslighting in Politics:**
  ○ In modern times, it's not uncommon for a politician or political entity to use **gaslighting as a tactic to divert public discourse and use manipulation** to garner support for or against a certain viewpoint.

Note:

Miscellaneous

Highlights

- *National Sports and Adventure Awards 2022*
- *Dare to Dream Contest*
- *Nagaland Statehood Day*
- *Cost of Living Report 2022*
- *Tramjatra Event*
- *Beypore Uru*

National Sports and Adventure Awards 2022

Why in News?

Recently, the **Table tennis legend Achanta Sharath Kamal was bestowed with the Major Dhyan Chand Khel Ratna award** for his outstanding performance in the **Commonwealth Games, 2022** by the President as part of the National Sports and Adventure Awards 2022.

➢ Other awards given out include the Dronacharya Award, Dhyan Chand Award for Lifetime Achievement in Sports and Games, the Rashtriya Khel Protsahan Puruskar, the Maulana Abul Kalam Azad trophy as well as the Tenzing Norgay National Adventure Award.

What are the Key Facts about the Awards?

➢ **Major Dhyan Chand Khel Ratna Award:**
- ○ Formerly known as the Rajiv Gandhi Khel Ratna, it is the **highest sporting award given by the Ministry of Youth Affairs and Sports** for the spectacular and most outstanding performance in the field of sports by a sportsperson over a period of four years.
  - It carries a cash prize of Rs 25 lakh, a medal and a scroll of honour.
- ○ The Khel Ratna award was instituted in 1991-1992 and the first recipient was Chess legend Viswanathan Anand.

➢ **Arjuna Award:**
- ○ It was instituted in 1961 by the **Government of India to recognise outstanding achievement in national sports events.**
- ○ It is given for good performance over a period of previous four years and showing qualities of leadership, sportsmanship and a sense of discipline.

○ The award carries a cash prize of Rs 15 lakh, a bronze statue of Arjuna and a scroll of honour.

➢ **Dronacharya Award:**
- ○ It was instituted in **1985 by the Government of India to recognise excellence in sports coaching.**
- ○ It is given to coaches for doing outstanding and meritorious work on a consistent basis and enabling sportspersons to excel in international events.
- ○ It carries a cash prize of Rs 15 lakh, a bronze statue of Dronacharya and a scroll of honour.

➢ **Dhyan Chand Award:**
- ○ It was instituted in the year 2002 and comprises a Dhyan Chand statuette, a cash prize of Rs 10 lakh, a certificate and a ceremonial dress.
- ○ It is given **to honour sportspersons who have contributed to sports** by their performance and continue to contribute to promotion of sports events after their retirement.

➢ **Maulana Abul Kalam Azad Trophy:**
- ○ It was instituted in the year 1956-1957.
- ○ It is for **university-level sports performances.**
- ○ It is given to a university for "top performance in the inter-university tournaments" over the period of the last one year.

➢ **Rashtriya Khel Protsahan Puruskar:**
- ○ It was instituted in the year 2009.
- ○ It is given to **corporate entities (both in private and public sector), sports control boards, NGOs** including sports bodies at the State and National level who have played a visible role in the area of sports promotion and development.

➢ **Tenzing Norgay National Adventure Awards:**
- ○ The awards are given every year to **recognize the achievements of persons in the fields of adventure**, to encourage young people to develop

the spirit of endurance, risk–taking, cooperative teamwork and quick, ready and effective reflexes in challenging situations and to provide incentive to the young people for getting exposed to the adventure activities.

Nagaland Statehood Day

Why in News?

Recently, **Nagaland** has celebrated its **60th Statehood Day** on **December 1st 2022.**

➤ Nagaland statehood day also **marks the beginning of Hornbill festival** in Nagaland.
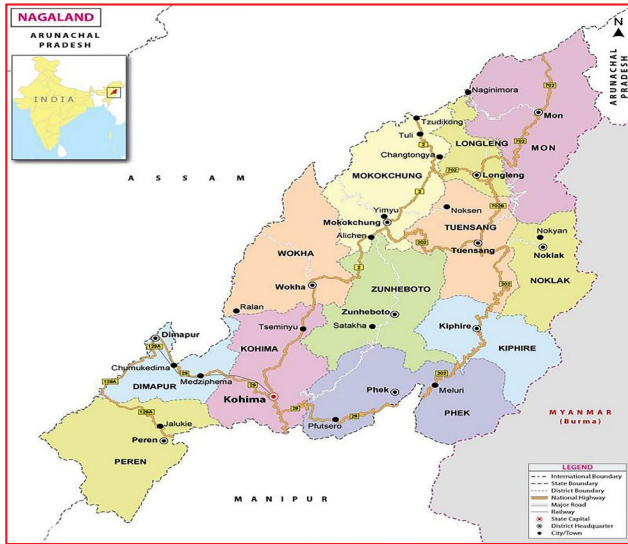
What are the Key Facts about Nagaland?

➤ **About:**
- Nagaland was formally **recognised as a separate state on 1st December, 1963**, with Kohima being declared as its capital.
- The **State of Nagaland Act, 1962**, was enacted by the Parliament to give Nagaland statehood.

➤ **Historical Background:**
- After India became independent in 1947, the Naga territory **initially remained a part of Assam**. However, a **strong nationalist movement began seeking a political union of the Naga tribes,** and extremists demanded outright secession from the Indian union.
- In **1957, the Naga Hills region of Assam and the Tuensang frontier division to the northeast were**

brought together under a single unit directly administered by the Indian government.
- In 1960 it was resolved that Nagaland should become a constituent state of the Indian union. **Nagaland achieved statehood in 1963,** and a democratically elected government took office in 1964.

➤ **Geography:**
- It is bounded by the Indian states of **Arunachal Pradesh** to the northeast, Manipur to the south, and Assam to the west and northwest and the country of Myanmar (Burma) to the east. The state **capital is Kohima**, located in the southern part of Nagaland.
- Nagaland has a **Monsoonal (wet-dry) Climate.** Annual rainfall averages between 70 and 100 inches and is concentrated in the months of the **southwest monsoon (May to September).**

➤ **Biodiversity:**
- **Flora: Forests cover about one-sixth of Nagaland.** Below 4,000 feet are tropical and subtropical evergreen forests, containing palms, rattan, and bamboo, as well as valuable timber species. Coniferous forests are found at higher elevations. Areas cleared for **jhum (shifting cultivation)** have a secondary growth of high grass, reeds, and scrub jungle.
- **Fauna: Elephants, tigers, leopards**, bears, several kinds of monkeys, sambar deer, buffalo, wild oxen, and the occasional rhinoceros live in the lower hills. Porcupines, **pangolins** (scaly anteaters), wild dogs, foxes, civet cats, and mongooses also are found in the state.
  - Mithun (Gayal) is the state animal of Nagaland and Arunachal Pradesh.
  - Blyth's tragopan is the state bird of Nagaland.

➤ **Tribes:**
- The **Konyaks are the largest tribe**, followed by the **Aos, Tangkhuls, Semas, and Angamis.**
- Other tribes include the Lothas, Sangtams, Phoms, Changs, Khiem Hungama, Yimchunger, Zeliangs, Chakhesangs (Chokri), and Rengmas.

➤ **Economy:**
- Agriculture employs **about nine-tenths of the population**. Rice, corn (maize), small millets, pulses (legumes), oilseeds, fibres, sugarcane, potato, and tobacco are the principal crops.
- Nagaland, however, still **has to depend on imports of food from neighbouring states.**

Note:

- ➢ **Protected Areas in Nagaland:**
  - ❍ **Intanki National Park**
  - ❍ **Singphan Wildlife Sanctuary**
  - ❍ **Pulie Badze Wildlife Sanctuary**
  - ❍ **Fakim Wildlife Sanctuary**
- ➢ **Major Festival:**
  - ❍ The **Hornbill Festival** is a celebration held every year from **1ˢᵗ to 10ᵗʰ December,** in Nagaland.
  - ❍ This festival is **named after the bird – Hornbill** which is the most revered and admired bird for the Nagas.
  - ❍ The significance of the festival lies in the fact that it is not an ancient festival, and it was **started in the year 2000 to popularise Nagaland among the tourists.**

What are Hornbills?

- ➢ **About:** The hornbills (Family Bucerotidae) are a family of birds found in **tropical and subtropical Africa and Asia.**
- ➢ **In India:** India is home to **nine species of hornbills.**
  - ❍ The **northeastern region has the highest diversity** of hornbill species within India.
  - ❍ They are the **cultural symbols of some ethnic communities in the northeast,** specifically the **Nyishi of Arunachal Pradesh.**
- ➢ **Threats:**
  - ❍ Hornbills are **hunted for their casques - upper beak - and feathers** for adorning headgear. They are also **poached for their meat and medicinal value** of their body parts.
    - ● A conservation programme promoting the use of fibre-glass beaks for headgear instead of real hornbill casques has helped reduce some threat to it.
  - ❍ **Illegal logging i.e.,** cutting of tall trees where the hornbill birds nest and feed has led to destruction of its natural habitat.

India's 9 Hornbill Species		
The Great Hornbill	***Rufous-necked Hornbill***	***Wreathed Hornbill***
➢ Habitat: Western Ghats and Himalayas. Largest of all hornbills in India, state bird of Arunachal Pradesh and Kerala. ➢ IUCN Red List: Vulnerable ➢ CITES: AppendixI ➢ Wildlife Protection Act (WPA), 1972: Schedule I	➢ Habitat: It has the Northernmost extent. Whole of North-East India to Mahananda Wildlife Sanctuary in West Bengal. ➢ IUCN Red List: Vulnerable ➢ CITES: Appendix I	➢ Habitat: North-East India. ➢ IUCN Red List: Vulnerable ➢ CITES: Appendix II
Narcondam Hornbill	***Malabar Pied Hornbill***	***Oriental Pied Hornbill***
➢ Habitat: Endemic to the Indian island of Narcondam in Andamans. ➢ IUCN Red List: Vulnerable ➢ CITES: Appendix II ➢ WPA, 1972: Schedule I	➢ Habitat: Evergreen and moist deciduous forests in India and Sri Lanka. ➢ IUCN Red List: Near Threatened ➢ CITES: Appendix II.	➢ Habitat: Subtropical or tropical moist lowland forests. ➢ IUCN Red List: Least Concern ➢ CITES: Appendix II

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Austen's Brown Hornbill

➤ Habitat: Forests of North East India, majorly in Namdapha National Park, Arunachal Pradesh.
➤ IUCN Red List: Near Threatened
➤ CITES: N/A

Malabar Grey Hornbill

➤ Habitat: Western Ghats.
➤ IUCN Red List: Vulnerable
➤ CITES: N/A

Indian Grey Hornbill

➤ Habitat: Foothills of Southern Himalayas.
➤ IUCN Red List: Least Concern
➤ CITES: N/A

Dare to Dream Contest

Why in News?

A **total of 5,637 applications have been received under three Dare to Dream Contests** to promote individual and start-ups for innovation in the area of defence and aerospace in last three years.

What is Dare to Dream Contest?

➤ It was initiated in memory of the **former President of India, Dr APJ Abdul Kalam.**
➤ **Defence Research and Development Organisation (DRDO)** provides a unique opportunity for start-ups and innovators to solve some key challenges in emerging technologies that can **help boost India's defence & aerospace capabilities.**
➤ DRDO has been launching this Contest every year **since 2019 to bring together innovators, entrepreneurs, individuals above 18 years and start-ups**.
  ○ **Dare to Dream 2.0 and Dare to Dream 3.0** were launched in **2020 and 2021, respectively.**
➤ The selection criteria for evaluation of the entries are **completeness of proposal, scientific soundness, design completeness, merit, technological readiness level achieved** and **innovation.**

Cost of Living Report 2022

COST OF LIVING REPORT 2022

NY, Singapore world's most expensive cities

New York and Singapore have emerged as the joint-most expensive cities to live in, according to the annual Worldwide Cost of Living report prepared by the Economist Intelligence Unit.

Asian cities tended to escape the steep price rises seen elsewhere, with the average increase in the cost of living at 4.5%, although individual country performance varied due to government policies and currency moves.

In INDIA
- Bengaluru - #161
- Chennai - #164
- Ahmedabad - #165

The cheapest cities in the rankings are **Damascus, Tripoli and Tehran**, reflecting these countries' weak economies and currencies.

1	New York United States	Singapore
3	Tel Aviv Israel	
4	Los Angeles United States	Hong Kong
6	Zurich Switzerland	
7	Geneza Switzerland	
8	San Fransisco United States	
9	Paris France	
10	Copenhegan Denmark	Sydney Australia

Soaring Prices

8.1% Rise in prices noted over the past year in the world's biggest cities, reflecting a global cost-of-living crisis sparked by the war in Ukraine and continuing covid-19 restrictions in China.

Petrol Costs

The most rapid increases in the index was caused by the price of a litre of petrol, which has risen by 22% in the last year amid higher global oil prices and a stronger US dollar

About the report

Worldwide Cost of Living report is a survey which was carried out in August and September this year. It compares more than 400 individual prices across over 200 products and services in 172 cities globally.

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Tramjatra Event

Why in News?

Kolkata will witness an event that will celebrate **150 years of its iconic tram and renew hope** that this **non-polluting mode of transport** does not become entirely extinct in February, 2023.

What is a Tramjatra Event?

➢ **History:**
  ○ Tramjatra (tram's journey) is a **moving tram carnival that was started back in 1996** jointly by enthusiasts from Melbourne and Kolkata.
  ○ At the time, **Kolkata, the only Indian city where the tram still runs**, was home to about two dozen routes.
    ● Today the number of routes that remain operational has shrunk to just two.
    ● The 2023 event, therefore, will be more about impressing the West Bengal government to preserve the tram.

➢ **About:**
  ○ Tramjatra is **essentially an international collaboration of trammies, artists,** environmentalists, and tram-loving communities.

➢ **Theme for 2022:** Heritage, Clean Air and Green Mobility

➢ **Objective:**
  ○ It **seeks to educate people**, **particularly the younger generation, about** climate change, air pollution, **and** sustainable development **objectives** with a focus on green mobility and Kolkata's tram legacy.

Beypore Uru

Why in News?

Recently, the District Tourism Promotion Council, Kozhikode has **applied for a** Geographical Indication (GI) **tag for the famous Beypore Uru (boat).**

➢ The Beypore Urus are a **symbol of Kerala's trade relations and friendship with the** Gulf countries.

What is Beypore Uru?

➢ **About:**
  ○ It is a **wooden dhow (ship / sailing boat / sailing vessel) handcrafted by skilled artisans** and carpenters **in Beypore, Kerala.**
  ○ The Beypore Urus are purely **made of premium wood, without using any modern techniques.**
  ○ The wood used to build the Uru is **still sawed the traditional way which requires immense expertise.**
  ○ It **takes anywhere between 1-4 years to build each Uru** and the entire process is done **manually.**
  ○ This traditional handicraft **has been in existence for 2000 years.**

➢ **Communities Involved in Uru-making:**
  ○ The prominent people associated with Uru-making are Odayis and Khalasis.
    ● Odayis:
➢ They manage the **technical matters of ship building.**
➢ Their family name comes from **Odam (a type of small ship previously used in interactions/trade** between the Malabar coast and Lakshadweep).
    ● Khalasis:
➢ They are also referred to as **Mappila Khalasis as majority of them are** Mappila Muslims.
➢ They are **world-famous for their skill and expertise** in launching the completed Urus into the water by using only traditional methods.
➢ The Khalasis are **considered as pioneers in the ship-building industry** and the **Arab traders** were especially enamoured of them, and were among the **first major patrons of these vessels.**

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Note:

Key Points

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Summary

Key Points

Details

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