



drishti

Current Affairs (CONSOLIDATION)

FEBRUARY 2021
(PART – II)

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Polity and Governance

Highlights

- UNHRC's New Resolution Against Sri Lanka
- New IT Rules 2021
- National Commission for Scheduled Castes
- Nurturing Neighbourhoods
- Challenge: Smart Cities Mission
- National Hydrogen Energy Mission
- Intensified Mission Indradhanush 3.0 Scheme
- Non-Alcoholic Fatty Liver Disease
- Status of WASH in Healthcare Facilities in India: CDDEP
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UNHRC's New Resolution Against Sri Lanka

Why in News

Recently, Sri Lanka has made an appeal to the member states of the **United Nations Human Rights Council (UNHRC)** to reject the impending resolution on the island nation's human rights accountability and reconciliation.

- Sri Lanka is facing a **new resolution** calling on it to hold human rights abusers to account and deliver justice to victims of its **26-year civil war (1983-2009)**.
 - The war was mainly a **clash** between the **Sinhalese-dominated Sri Lankan government** and the **Liberation Tigers of Tamil Eelam (LTTE)** insurgent group, the latter of which had hoped to establish a separate state for the Tamil minority.
- Sri Lankan forces and Tamil rebels were **accused of atrocities during the war**, which killed at least 1,00,000 people.



Key Points

- **The New Draft Resolution/ The Zero Draft:**
 - It incorporates some of the elements of the UNHRC report, including those on **strengthening the HRC's capacity on preserving evidence, devising strategies for future accountability processes, and supporting judicial proceedings in member states with jurisdiction**.
 - As per the UNHRC report, the government of Sri Lanka had created **parallel military task forces** and commissions that **encroach on civilian functions**, and reversed important institutional checks and balances, **threatening democratic gains**, the **independence of the judiciary** and other key institutions.
 - It also talks about encouraging the Sri Lankan government to implement the requirements of the previous **30/1 resolution** (from which it pulled out).
 - **Resolution 30/1:**
 - It wanted Colombo to establish a **credible judicial process**, with the participation of Commonwealth and other foreign judges, defence lawyers and authorised prosecutors and investigators, to go into the alleged rights abuses.

Note:



media intermediaries by giving them immunity from legal prosecution for any content posted on their platforms.

- **Grievance Redressal Mechanism is Mandatory:**
 - Intermediaries shall **appoint a Grievance Officer** to deal with complaints and share the name and contact details of such officers.
 - Grievance Officer shall acknowledge the complaint within **twenty four hours and resolve it within fifteen days from its receipt.**
- **Ensuring Online Safety and Dignity of Users:**
 - Intermediaries shall **remove or disable access within 24 hours of receipt of complaints** of contents that exposes the private areas of individuals, show such individuals in full or partial nudity or in sexual act or is in the nature of impersonation including morphed images etc.
 - Such a complaint can be **filed** either **by the individual** or by **any other person on his/her behalf.**
- **Additional Due Diligence for the Significant Social Media Intermediaries:**
 - **Appointments:** Need to appoint **Chief Compliance Officer**, a **Nodal Contact Person** and a **Resident Grievance Officer**, all of whom should be **resident in India.**
 - **Compliance Report:** Need to publish a **monthly compliance report mentioning the details of complaints received and action taken** on the complaints as well as details of contents removed proactively.
 - **Enabling Identity of the Originator:**
 - Significant social media intermediaries providing services primarily in the nature of messaging shall **enable identification of the first originator of the information.**
 - Required only for the purposes of prevention, detection, investigation, prosecution or punishment of an offence related to **sovereignty and integrity of India, the security of the State, friendly relations with foreign States, or public order,**
 1. Or of incitement to an offence relating to the above or in relation with rape, sexually explicit material or child sexual abuse

material punishable with **imprisonment for a term of not less than five years.**

- **Removal of Unlawful Information:**
 - An intermediary upon receiving actual knowledge in the form of an **order by a court or being notified by the Appropriate Govt. or its agencies** through authorized officer **should not host or publish any information which is prohibited under any law** in relation to the interest of the sovereignty and integrity of India, public order, friendly relations with foreign countries etc.
- **Rules for News Publishers and OTT Platforms and Digital Media:**
 - **For OTT:**
 - **Self-Classification of Content:**
 - The OTT platforms, called as the publishers of online curated content in the rules, would self-classify the content into five age based **categories- U (Universal), U/A 7+, U/A 13+, U/A 16+, and A (Adult).**
 - **Parental Lock:**
 - Platforms would be required to implement parental locks for content classified as U/A 13+ or higher, and reliable age verification mechanisms for content classified as "A".
 - **Display Rating:**
 - Shall prominently display the classification rating specific to each content or programme together with a content descriptor informing the user about the nature of the content, and advising on viewer description (if applicable) at the beginning of every programme enabling the user to make an informed decision, prior to watching the programme.
 - **For Publishers of News on Digital Media:**
 - They would be required to observe Norms of **Journalistic Conduct of the Press Council of India** and the Programme Code under the **Cable Television Networks Regulation Act 1995** thereby providing a level playing field between the offline (Print, TV) and digital media.
 - **Grievance Redressal Mechanism:**
 - A three-level grievance redressal mechanism has been established under the rules with different levels of self-regulation.
 - **Level-I:** Self-regulation by the publishers;

Note:



- **Level-II:** Self-regulation by the self-regulating bodies of the publishers;
- **Level-III:** Oversight mechanism.
- **Self-regulation by the Publisher:**
 - Publisher shall appoint a Grievance Redressal Officer based in India who shall be responsible for the redressal of grievances received by it.
 - The officer shall take decision on every grievance received by it **within 15 days**.
- **Self-Regulatory Body:**
 - There may be one or more self-regulatory bodies of publishers.
 - Such a body shall be headed by a retired judge of the SC, a High Court or independent eminent person and have not more than six members.
 - Such a body will have to register with the Ministry of Information and Broadcasting.
 - This body will **oversee the adherence by the publisher to the Code of Ethics and address grievances** that have not been resolved by the publisher within 15 days.
- **Oversight Mechanism:**
 - **Ministry of Information and Broadcasting** shall formulate an oversight mechanism.
 - It shall publish a charter for self-regulating bodies, including Codes of Practices. It shall establish an Inter-Departmental Committee for hearing grievances.

National Commission for Scheduled Castes

Why in News

Recently, **Vijay Sampla** has been appointed as the chairman of the **National Commission for Scheduled Castes (NCSC)**.

Key Points

- **About:**
 - NCSC is a **constitutional body** that works to **safeguard the interests of the scheduled castes (SC)** in India.
 - **Article 338** of the constitution of India deals with this commission:

- It provides for a **National Commission for the Scheduled Castes and Scheduled Tribes** with duties to investigate and **monitor all matters relating to safeguards provided for them**, to inquire into specific complaints and to participate and advise on the planning process of their socio-economic development etc.
- **History and Origin:**
 - **Special Officer:**
 - Initially, the constitution provided for the appointment of a **Special Officer** under Article 338.
 - The special officer was designated as the Commissioner for Scheduled Castes and Scheduled Tribes.
 - **65th Amendment, 1990:**
 - It replaced the one-member system with a multi-member **National Commission for Scheduled Castes (SC) and Scheduled Tribes (ST)**.
 - The Constitution (65th Amendment) Act 1990, amended Article 338 of the Constitution.
 - **89th Amendment, 2003:**
 - By this amendment, the erstwhile National Commission for SC and ST was replaced by **two separate Commissions** from the year 2004 which were: **National Commission for Scheduled Castes (NCSC)** and **National Commission for Scheduled Tribes (NCST)**- under **Article 338-A**.
- **Structure:**
 - It consists of:
 - Chairperson.
 - Vice-chairperson.
 - Three other members.
 - They are **appointed by the President** by warrant under his hand and seal.
- **Functions:**
 - **Monitoring and investigating all issues** concerning the safeguards provided **for the SCs** under the constitution.
 - **Enquiring into complaints** relating to the deprivation of the rights and safeguards of the SCs.
 - Taking part in and **advising the central or state governments** with respect to the planning of socio-economic development of the SCs.
 - Regular **reporting to the President** of the country on the implementation of these safeguards.

Note:

- **Recommending steps** to be taken to further the **socio-economic development and other welfare activities** of the SCs.
- Any other function with respect to the welfare, protection, development and advancement of the SC community.
- The Commission is also required to discharge similar functions with regard to the **Anglo-Indian Community** as it does with respect to the SCs.
- Till 2018, the commission was also required to discharge similar functions with regard to the other backward classes (OBCs). It was relieved from this responsibility by the **102nd Amendment Act of 2018**

Other Constitutional Provisions For Upliftment of the Schedule Caste

- **Article 15(4)** refers to the special provisions for their advancement.
- **Article 16(4A)** speaks of “**reservation in matters of promotion to any class or classes of posts in the services under the State in favour of SCs/ STs**, which are not adequately represented in the services under the State’.
- **Article 17** abolishes Untouchability.
- **Article 46** requires the State ‘**to promote with special care the educational and economic interests of the weaker sections** of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and to protect them from social injustice and all forms of exploitation.
- **Article 335** provides that the claims of the members of the Scheduled Castes and the Scheduled Tribes shall be taken into consideration, consistently with the maintenance of efficiency of administration, in the making of **appointments to services and posts** in connection with the affairs of the Union or of a State.
- **Article 330** and **Article 332** of the Constitution respectively provide for **reservation of seats in favour of the Scheduled Castes and the Scheduled Tribes in the House of the People and in the legislative assemblies** of the States.
- Under **Part IX** relating to the **Panchayats** and **Part IXA** of the Constitution relating to the Municipalities, reservation for SC and ST in local bodies has been envisaged and provided.

Nurturing Neighbourhoods Challenge: Smart Cities Mission

Why in News

The **Ministry of Housing and Urban Affairs** has announced the names of the **25 cities selected** for the **Nurturing Neighbourhoods Challenge** under the **Smart Cities Mission**.

Key Points

- **About the Challenge:**
 - **Launch:** November 2020.
 - **Features:**
 - It is a **3-year initiative** that **aims to** work with Indian cities and their partners to pilot and scale ways to improve public space, mobility, neighborhood planning, access to early childhood services and amenities, and data management across city agencies.
 - It aims to propagate an **early childhood centric approach** among Indian cities.
 - **Partner Organisations:**
 - Ministry of Housing and Urban Affairs, Bernard van Leer Foundation (BvLF) and World Resources Institute (WRI) India.
 - **Support to Selected Cities:**
 - Selected cities based on their proposal, readiness, and commitment - **will receive technical support and capacity-building** to develop, pilot and scale solutions that enhance the quality of life of young children.
- **Significance:**
 - **Sensitivity Towards Children:** Urban design and city planning play a crucial role in **shaping the early years (0- 5 years) of a child’s life** – the period most vital for a child’s long-term health and development.
 - **In Line with the ITCN Framework of the Smart Cities Mission:** ITCN refers to the **Infant, Toddler, Caregiver-Friendly Neighbourhoods** framework. It has the following **five objectives** pertaining to neighbourhoods - Safe, Playful, Accessible, Inclusive and Green.
 - **Promotes Inclusive Development:** It promotes inclusive development as it aims to enhance

Note:

opportunities in urban areas for all vulnerable citizens, especially young children.

Smart City Mission

- **About:** It is an innovative initiative under the Ministry of Housing and Urban Affairs, **to drive economic growth and improve the quality of life of people** by enabling local development and harnessing technology as a means to create smart outcomes for citizens.
- **Objective:** To promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of Smart Solutions.
- **Focus:** On sustainable and inclusive development and to look at compact areas, create a replicable model which will act like a lighthouse to other aspiring cities.
- **Strategy:**
 - Pan-city initiative in which at least one Smart Solution is applied city-wide.
 - Develop areas step-by-step with the help of following three models:
 - Retrofitting.
 - Redevelopment.
 - Greenfield.
- **Coverage and Duration:** The Mission covered 100 cities for the duration of five years starting from the financial year (FY) 2015-16 to 2019-20.
- **Financing:** It is a **Centrally Sponsored Scheme**.

National Hydrogen Energy Mission

Why in News

The **Union Budget for 2021-22** has announced a **National Hydrogen Energy Mission (NHM)** that will draw up a road map for using hydrogen as an energy source. The initiative has the potential of transforming transportation.

- **NHM** initiative will capitalise on one of the most abundant elements on earth (Hydrogen) for a cleaner alternative fuel option.

Key Points

- **About the National Hydrogen Energy Mission:**

- Focus on **generation of hydrogen from green power resources**.
- To **link India's growing renewable capacity with the hydrogen economy**.
 - India's ambitious goal of 175 GW by 2022 got an impetus in the 2021-22 budget which allocated Rs. 1500 crore for renewable energy development and NHM.
 - The usage of hydrogen will not only help India in achieving its emission goals under the **Paris Agreement**, but will also **reduce import dependency on fossil fuels**.
- **Hydrogen:**
 - Hydrogen is the **lightest** and **first element** on the **periodic table**. Since the **weight of hydrogen is less than air**, it rises in the atmosphere and is therefore **rarely found in its pure form, H₂**.
 - At standard temperature and pressure, hydrogen is a nontoxic, nonmetallic, odorless, tasteless, colorless, and **highly combustible diatomic gas**.
 - Hydrogen fuel is a **zero-emission fuel** burned with oxygen. It can be **used in fuel cells or internal combustion engines**. It is also used as a **fuel for spacecraft propulsion**.
 - **Type of Hydrogen:**
 - **Grey Hydrogen:**
 - Constitutes India's bulk Production.
 - Extracted from hydrocarbons (fossil fuels , natural gas).
 - By product: CO₂
 - **Blue Hydrogen:**
 - Sourced from fossil fuels.
 - By product: CO, CO₂
 - **By products are Captured and Stored**, so better than grey hydrogen.
 - **Green Hydrogen:**
 - Generated from renewable energy (like Solar, Wind).
 - Electricity splits water into hydrogen and oxygen.
 - By Products : Water , Water Vapor
- **Asia-Pacific Stance:**
 - In Asia-Pacific sub-continent, **Japan** and **South Korea** are on the **front foot** in terms of **hydrogen policy making**.

Note:

- In 2017, **Japan** formulated the **Basic Hydrogen Strategy** which sets out the country's action plan till 2030, including the establishment of an international supply chain.
- **South Korea** is operating hydrogen projects and **Hydrogen Fuel Cell** production units under the auspices of its **Hydrogen Economy Development and Safe Management of Hydrogen Act, 2020**.
 - South Korea has also passed the Economic Promotion and Safety Control of Hydrogen Act, which deals with three key areas - **hydrogen vehicles, charging stations** and **fuel cells**. This law is **intended to bring transparency to the nation's hydrogen pricing system**.
- **Indian Context:**
 - India has a **huge edge in green hydrogen production** owing to its **favorable geographic conditions** and presence of **abundant natural elements**.
 - The government has given impetus in **scaling up the gas pipeline infrastructure** across the length and breadth of the country, and has introduced reforms for the power grid, including the **introduction of smart grids**. Such steps are being taken to **effectively integrate renewable energy in the present energy mix**.
 - Capacity addition to renewable power generation, storage and transmission, **producing green hydrogen in India can become cost effective** which will not only guarantee energy security, but also ensure self-sufficiency gradually.
- **Policy Challenges:**
 - One of the biggest challenges faced by the industry for using hydrogen commercially is the **economic sustainability of extracting green or blue hydrogen**.
 - The technology used in production and use of hydrogen like **Carbon Capture and Storage (CCS)** and **hydrogen fuel cell technology** are at **nascent stage** and are expensive which in turn increases the cost of production of hydrogen.
 - **Maintenance costs** for fuel cells post-completion of a plant can be costly.
 - The commercial usage of hydrogen as a fuel and in industries **requires mammoth investment in R&D of such technology and infrastructure** for production, storage, transportation and demand creation for hydrogen.

Intensified Mission Indradhanush 3.0 Scheme

Why in News

Recently, the **Intensified Mission Indradhanush (IMI) 3.0** scheme has been rolled out to cover children and pregnant women who missed routine immunisation during the **Covid-19** pandemic.

Key Points

- **About the Intensified Mission Indradhanush (IMI) 3.0 Scheme:**
 - **Objective:**
 - To reach the unreached population with all the available vaccines under Universal Immunisation Programme (UIP) and thereby accelerate the full immunization and complete immunization coverage of children and pregnant women.
 - **Coverage:**
 - It will have **two rounds this year** which will be **conducted in 250 pre-identified districts/urban areas** across 29 States/UTs.
 - The districts have been classified to reflect 313 low risk, 152 medium risk and 250 high risk districts.
 - **Beneficiaries from migration areas and remote areas** would be targeted as they may have missed their vaccine doses during the pandemic.
 - **Significance:** It will foster India's march towards the **Sustainable Development Goals**.
- **Universal Immunization Programme:**
 - **Launch:**
 - The **Immunization Programme in India was introduced in 1978** as 'Expanded Programme of Immunization (EPI) by the Ministry of Health and Family Welfare.
 - In **1985**, the Programme was **modified as 'Universal Immunization Programme (UIP)'**.
 - **Objectives of the Programme:**
 - Rapidly increasing immunization coverage,
 - Improving the quality of services,
 - Establishing a reliable cold chain system to the health facility level,
 - Introducing a district-wise system for monitoring of performance, and

Note:

- Achieving self-sufficiency in vaccine production.
- **Analysis:**
 - UIP prevents mortality and morbidity in children and pregnant women **against 12 vaccine-preventable diseases**. But in the past, it was seen that the increase in immunization coverage had slowed down and it increased at the rate of 1% per year between 2009 and 2013.
 - To accelerate the coverage, **Mission Indradhanush was envisaged and implemented since 2015** to rapidly increase the full immunization coverage to 90%.
- **Mission Indradhanush:**
 - **Objective:**
 - To fully immunize more than 89 lakh children who are either unvaccinated or partially vaccinated under UIP.
 - Targets children under 2 years of age and pregnant women for immunization.
 - **Diseases Covered:**
 - Provides vaccination against **12 Vaccine-Preventable Diseases (VPD)** i.e. diphtheria, Whooping cough, tetanus, polio, tuberculosis, hepatitis B, meningitis and pneumonia, Haemophilus influenzae type B infections, Japanese encephalitis (JE), rotavirus vaccine, pneumococcal conjugate vaccine (PCV) and measles-rubella (MR).
 - However, Vaccination against Japanese Encephalitis and Haemophilus influenzae type B is being provided in selected districts of the country.
- **Intensified Mission Indradhanush 1.0:**
 - **Launch:**
 - It was launched in October 2017.
 - **Coverage:**
 - Under IMI, greater focus was **given on urban areas** which were one of the gaps of Mission Indradhanush.
 - It focused to **improve immunisation coverage in select districts and cities** to ensure full immunisation to more than 90% by December 2018 instead of 2020.
- **Intensified Mission Indradhanush 2.0:**
 - **Launch:**

- It was a nationwide immunisation drive to mark the **25 years of Pulse polio programme** (2019-20).
- **Coverage:**
 - It had **targets of full immunization coverage in 272 districts** spread over 27 States.
 - It aimed to **achieve at least 90% pan-India immunisation coverage by 2022**.

Non-Alcoholic Fatty Liver Disease

Why in News

Recently, the **Ministry of Health & Family Welfare** has launched the operational guidelines for integration of **NAFLD (Non-Alcoholic Fatty Liver Disease)** with **NPCDCS (National Programme for Prevention & Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke)**.

- The NPCDCS is being implemented under the **National Health Mission (NHM)**. It was launched in 2010 to prevent and control **Non-Communicable Diseases (NCDs)**.

Key Points

- **About NAFLD:**
 - It is the **abnormal accumulation of fat in the liver** in the absence of secondary causes of fatty liver, such as harmful alcohol use, viral hepatitis.
 - Fatty liver occurs when too much fat builds up in liver cells.
 - It is a **serious health concern as it encompasses a spectrum of liver abnormalities**, from a simple non-alcoholic fatty liver (NAFL, simple fatty liver disease) to more advanced ones like **non-alcoholic steatohepatitis (NASH), cirrhosis** and even liver cancer.
 - **Steatohepatitis** is characterized by **inflammation of the liver** with concurrent fat accumulation in the liver. Mere deposition of fat in the liver is termed steatosis.
 - **Cirrhosis** is a complication of liver disease that involves loss of liver cells and irreversible scarring of the liver.
 - NAFLD acts as an **independent predictor of future risk of cardiovascular diseases, type 2**

Note:

diabetes and other metabolic syndromes like hypertension, abdominal obesity, dyslipidaemia, glucose intolerance.

- **Risk From NAFLD:**
 - **High Fatality Rate:**
 - Over the last two decades, the global burden of NASH has more than doubled. NASH caused 40 lakh prevalent cases of compensated cirrhosis in 1990, which increased to 94 lakh cases in 2017.
 - **Risks Obese and Diabetic Individuals:**
 - Epidemiological studies suggest that prevalence of NAFLD is around 9% to 32% of the general population in India with a higher prevalence in those with overweight or obesity and those with diabetes or prediabetes.
 - **Incurable:**
 - Once the disease develops, there is **no specific cure available**, and **health promotion and prevention aspects** targeting weight reduction, healthy lifestyle, etc. can prevent the mortality and morbidity due to NAFLD.
- **Steps Taken by the Government:**
 - **Aligning NPCDCS programme strategies** to prevent and control NAFLD by encouraging behavior changes, early diagnosis and capacity building at various levels of healthcare.
 - Promoting screening of cancer, diabetes and hypertension under **Ayushman Bharat scheme**.
 - Along with the focus of 'Eat Right India' and 'Fit India Movement', the entire vision of the government is to move from Diagnostic Cure to Preventive Health.

Status of WASH in Healthcare Facilities in India: CDDEP

Why in News

A recent research from **Center for Disease Dynamics, Economics and Policy (CDDEP)**, USA, has estimated the cost of ensuring WASH and taking related steps for infection prevention and control for one year in healthcare facilities across India.

- CDDEP aims to use research to support better decision-making in health policy.

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.

Key Points

- **Need for Study:**
 - **Inadequate Healthcare And Sanitation Facilities:** A 2019 joint global baseline report by WHO and UNICEF had pointed out that globally, one in four healthcare facilities lacked basic water servicing and one in five had no sanitation service and 42% had no hygiene facilities at point of care.
 - **Economic Importance of Sanitation:** A 2012 WHO report had calculated that for every dollar invested in sanitation, there was USD 5.50 to be gained in lower health costs, more productivity and fewer premature deaths.
 - **Fatalities due to Improper Implementation of the WASH Strategy:**
 - A WHO document on WASH in healthcare facilities points out that 8,27,000 people in low- and middle-income countries die as a result of inadequate water, sanitation and hygiene each year.
 - Also, death of 2,97,000 children under five years can be prevented each year if better WASH could be provided.
- **Objectives of the Study:**
 - To determine the cost-effectiveness of WASH interventions to reduce healthcare-associated infections among mother and neonates across the Indian healthcare system.

Note:



➤ Findings:

- **Cost Estimates:** Improving WASH across the public healthcare facilities in India and maintaining this for a year would cost Rs. 2567 crores approximately in capital costs and Rs. 2095 crores in recurrent expenses.
 - **Costly Interventions:** Providing clean water, linen reprocessing and sanitation.
 - **Least Expensive Interventions:** Hand hygiene, medical device reprocessing and environmental surface cleaning.
- **Healthcare Associated Infections:**
 - Inadequacies in proving WASH and also lack of infection prevention and control can lead to healthcare associated infections.
 - **Causative Agents:** The pathogens like *Acinetobacter baumannii*, *Enterococcus faecalis*, *Escherichia coli*, *Salmonella typhi*, *Streptococcus pneumoniae* have been found to be causative agents of healthcare associated infections because of their **ability to develop resistance to antibiotics**.
 - **Common Healthcare Associated Infections:** Central-line-associated bloodstream infections, Catheter-associated urinary tract infections, Surgical site infections and Ventilator-associated pneumonia.
- **Importance of the Study:**
 - **Suggests Suitable Strategies:** Findings show that addressing gaps in WASH across the Indian healthcare system is not only within the realm of possibility in terms of affordability – when compared to other national health campaigns – but can also be combined with other national efforts to address health priorities such as **antimicrobial resistance**.
 - It also highlights the need for a concerted effort from local bodies, State and Central governments to sustainably **address quality and inequality issues in WASH provision**.
 - **Improve Healthcare Policy Framing:** The intersection between WASH, infection prevention and control and antimicrobial resistance is unique in that it offers policy makers an opportunity to address multiple overlapping problems through interventions on WASH in healthcare facilities.

International Mother Language Day

Why in News

Every year, the **United Nations Educational, Scientific and Cultural Organization (UNESCO)** celebrates **21st February** as **International Mother Language Day** to promote mother tongue-based multilingual education.

- The theme of the 2021 celebrations, “Fostering multilingualism for inclusion in education and society,” recognizes that languages and multilingualism can advance inclusion, and the **Sustainable Development Goals** focus on leaving no one behind.
- The world has over 7,000 languages whereas India alone has about 22 officially recognized languages, 1635 mother tongues, and 234 identifiable mother tongues.

Key Points

- **About the International Mother Language Day:**
 - UNESCO declared 21st February as International Mother Language Day in 1999 and World has been celebrating the same since 2000. The day **also commemorates a long struggle by Bangladesh to protect its mother language Bangla**.
 - The resolution to mark 21st February as the International Mother Language Day was **suggested by Rafiqul Islam**, a Bangladeshi living in Canada. He proposed the said date to commemorate the **1952 killings in Dhaka during the Bangla Language Movement**.
 - The initiative is aimed at preserving and promoting mother languages. The aim is to protect the diverse culture and intellectual heritage of different regions of the world.
- **Related Data:**
 - According to the United Nations (UN), **every two weeks, a language disappears** and the world loses an entire cultural and intellectual heritage.
 - Due to globalization, the rush for learning foreign languages for better job opportunities is a major reason behind the disappearance of mother languages.
 - At least **43% of the estimated 6000 languages spoken in the world are endangered**.

Note:

- Only a few hundred languages have been genuinely given a place in education systems and public domain. Also, 40% of the global population does not have access to education in a language they speak or understand.
- **Less than a hundred languages** are used in the digital world.
- **Global Efforts for Protection of Languages:**
 - The UN has designated the period between **2022 and 2032 as the International Decade of Indigenous Languages**.
 - Earlier, the **United Nations General Assembly** had proclaimed 2019 as the International Year of Indigenous Languages (IYIL).
 - The **Yuelu Proclamation, made by UNESCO at Changsha (China)** in 2018, plays a central role in guiding the efforts of countries and regions around the world to protect linguistic resources and diversity.
- **India's Initiatives:**
 - The recently announced **National Education Policy 2020** has given maximum attention to the development of mother tongues.
 - The policy recommends that as far as possible, the medium of instruction shall be, at least till class 5, (preferably up to grade 8 and beyond) mother tongue / vernacular / regional language.
 - Instructions in mother tongue empowers students with the subject and language of their choice. It will help in building a truly multilingual society in India, improve attendance and learning outcomes, and the ability to learn new languages.
 - The **Commission for Scientific and Technical Terminology (CSTT)** is providing publication grants towards the publications of University Level Books in regional languages.
 - It was established in 1961 to evolve technical terminology in all Indian Languages.
 - The **National Translation Mission (NTM)** is being implemented through the Central Institute of Indian Languages (CIIL), Mysore under which the text books of various subjects prescribed in Universities and Colleges are being translated in all languages of the Eighth Schedule.
 - **"Protection and Preservation of Endangered Languages"** scheme for conservation of threatened languages.
- The **University Grants Commission (UGC)** also promotes regional languages in higher education courses in the country and supports nine Central Universities under the scheme "Establishment of Centre for Endangered Languages in Central Universities".
- Other Initiatives by the Government of India include the **Bharatvani project** and the proposed setting up of a **Bharatiya Bhasha Vishwavidyalaya (BBV)**.
 - Further, the Vice President has highlighted **other areas for the use of local languages**, i.e. in administration, court proceedings, higher and technical education, etc.
- Recently, an initiative **Namath Basai** by Kerala State Government has proved to be very beneficial in educating children from tribal areas by adopting vernacular languages as medium of instruction.
- Google's Project **Navlekha** uses technology to protect mother language. The project is aimed at increasing the online content in Indian local languages.

Related Constitutional and Legal Provisions

- **Article 29 of the Constitution (Protection of interests of minorities)** gives all citizens right to conserve their language and prohibits discrimination on the basis of language.
- **Article 120 (Language to be used in Parliament)** provides for use of Hindi or English for transactions of Parliament but gives the right to members of Parliament to express themselves in their mother tongue.
- **Part XVII of the Indian Constitution deals with the official languages in Articles 343 to 351.**
 - **Article 350A (Facilities for instruction in mother-tongue at primary stage)** provides that it shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups.
 - **Article 350B (Special Officer for linguistic minorities):** The President should appoint a special officer for linguistic minorities to investigate all matters relating to the constitutional safeguards for linguistic minorities and to report to him. The President should place all such reports before

Note:



the Parliament and send to the state government concerned.

- **The Eighth Schedule** recognises following 22 languages: Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, Urdu, Bodo, Santhali, Maithili and Dogri.
- **Right to Education (RTE) Act, 2009** says that the medium of instruction shall, as far as practicable, be in a child's mother tongue.

OTT Service Providers vs Telecom Service Providers

Why in News

The **Cellular Operators Association of India (COAI)** has urged the government to **bring over-the-top (OTT) service providers** such as WhatsApp under the **licensing regime** and **defer net neutrality rules on telecom operators** till the time 'same service, same rules' are applied on the applications.

- COAI was **constituted in 1995** as a registered, non-governmental society. COAI's core membership includes **private Telecom Service Providers (TSPs)**, namely Bharti Airtel Ltd., Vodafone India Ltd., Reliance Jio Infocomm Ltd., operating across the whole country.

Key Points

- **Over-The-Top Service Providers:**
 - OTT services **refer to applications** where providers **deliver audio, video and other media over an IP network** such as the internet, **bypassing the traditional telecom operators** (such as cable companies).
 - **Examples:** Skype, Viber, WhatsApp and Hike are popular and widely-used **OTT communication services**.
- **Impact of OTT Services on TSPs:**
 - **OTT applications** actively **use TSPs' infrastructure** to provide their services.
 - Many telecom operators are worried by the threat OTT services provide to their own services. **Countless OTT applications are designed as alternative formats of existing 'classic' communications** such as SMS.

➤ Issue of Regulation:

○ Licensing Regime:

- Telecom operators are **required to comply with** quality of service norms, audit of accounts, procure **spectrum** for services, pay **goods and services tax**, licence fees and spectrum usage charges, facilitate lawful interception and monitoring system etc. but **no such obligations are imposed on OTT players**.

○ UCC Regulation:

- The second important aspect is the **Unsolicited Commercial Communication (UCC) regulation** that **has been in force for TSPs** since 2007.
- Recently, the government has also decided to set up a **Digital Intelligence Unit (DIU)** as a nodal agency to deal with complaints of UCC and cases of financial fraud.
- **Telecom Regulatory Authority of India (TRAI)** had **come up with a consultation paper** to deal with **UCC on OTT service providers**. However, it clarified that **no regulations would be imposed on OTT calling and messaging apps** till the time clarity emerges in the international jurisdictions.

○ Net Neutrality Rules:

- The **net neutrality** principles **prohibit service providers from discriminating against Internet content and services** by blocking, throttling or according preferential higher speeds.
- In 2016, TRAI published **Prohibition of Discriminatory Tariffs for data services regulations, 2016**.
 - As per these Regulations, **no service provider can offer or charge discriminatory tariffs** for data services on the basis of content.
- TSPs invest in network infrastructure and acquire spectrum, without getting a share in the revenue of the OTT service providers.
 - Some have argued that the **investment by TSPs in internet infrastructure or penetration levels would diminish** if they are not permitted to practice differential pricing, due to a lack of incentive.
- Another contention of the TSPs is that **certain websites or applications require higher bandwidth** than others.
 - For example, websites that stream video content utilise much more bandwidth than

Note:

smaller messaging applications, for which the TSPs need to build and upgrade network infrastructure.

➤ **Demands by the COAI:**

- Till the time any decision is taken regarding licensing of OTT communication providers, **unequity between TSPs and OTTs should not be increased** further by the TRAI.
- Till such time, no new licensing conditions, including that of traffic management practices for net neutrality etc., should be imposed on TSPs.

Liberalisation of the Geo-Spatial Sector

Why in News

Recently, the Ministry of Science and Technology released **new guidelines for the Geo-Spatial Sector** in India, which deregulates existing protocol and **liberalises the sector** to a more competitive field.

Key Points

➤ **Geo-Spatial Data:**

- Geospatial data is data about **objects, events, or phenomena that have a location on the surface of the earth.**
 - The location may be static in the short-term, like the **location of a road, an earthquake event, malnutrition** among children, or dynamic like a **moving vehicle** or pedestrian, the **spread of an infectious disease.**
- It combines Information on:
 - **Location,**
 - **Attribute** (the characteristics of the object, event, or phenomena concerned),
 - **Temporal or time.**
- The past decade has seen an increase in the use of geo-spatial data in daily life with various apps such as **food delivery, e-commerce** or even **weather apps.**

➤ **Current State of the Geo-Spatial Sector:**

- **Strict Restriction:**
 - There are **strict restrictions on the collection, storage, use, sale, dissemination** of geo-spatial data and mapping under the current regime.

○ **Renewal:**

- The policy had not been renewed in decades and has been driven by **internal as well as external security concerns.**

○ **Dominated by Government:**

- The sector so far is dominated by the Indian government as well as government-run agencies such as the **Survey of India** and **private companies need to navigate a system of permissions** from different departments of the government (depending on the kind of data to be created) as well as the defence and Home Ministries, to be able to collect, create or disseminate geo-spatial data.

➤ **New Policy:**

○ **Open Access:**

- Open access to its geospatial data and services, including maps, for all Indian entities, with the **exception of sensitive defence or security-related data.**

○ **Restrictions Removed:**

- Indian corporations and innovators are **no longer subject to restrictions nor do they require prior approvals** before they collect, generate, prepare, disseminate, store, publish, update digital geospatial data and maps within the territory of India.
 - There shall be **no requirement for security clearance, licence** or any other restrictions.

➤ **Reason for Deregulation of Geo-Spatial Data:**

○ **Delayed Projects:**

- System of acquiring licenses or permission, and the **red tape involved, took months, delaying projects**, especially those that are in mission mode – for both Indian companies as well as government agencies.
- The deregulation eliminates the requirement of permissions as well as scrutiny, even for security concerns. **Indian companies now can self-attest, conforming to government guidelines** without actually having to be monitored by a government agency- these guidelines therefore place a great deal of trust in Indian entities.

○ **Lack of Data:**

- There is also a huge lack of data in the country

Note:



which **impedes planning for infrastructure, development and businesses** which are data-based.

- The mapping of the entire country, that too with high accuracy, by the Indian government alone could take decades.
- The government therefore felt an urgent **need to incentivise** the geo-spatial sector for Indian companies and increased investment from private players in the sector.

○ **Changing Needs:**

- For decades, geo-spatial data has been a priority for strategic reasons and for internal and external security concerns, this priority has seen a shift in the past 15 years.
- Initially conceptualised as a matter solely concerned with security, geo-spatial data collection was the prerogative of the defence forces and the government.
 - **Geographic Information System (GIS)** mapping was also rudimentary, with the government investing heavily in it after the **Kargil war** highlighted the dependence on foreign data and the need for indigenous sources of data..
- Geo-spatial data has now become imperative for the government in **planning for infrastructure, development, social development, natural calamities as well as the economy**, with more and more sectors such as agriculture, environment protection, power, water, transportation, communication, health (tracking of diseases, patients, hospitals etc) relying heavily on this data

○ **Global Push:**

- There has also been a global push for open access to geo-spatial as it affects the lives of ordinary citizens.
- Large amounts of **geo-spatial data are also available on global platforms**, which makes the regulation of data that is freely available in other countries, untenable.

➤ **Impact of Deregulation:**

○ **Increased Competitiveness:**

- By liberalising the system, the government will **ensure more players in the field, competitiveness of Indian companies in the global market,**

and more accurate data available to both the government to formulate plans and administer, but also for individual Indians.

○ **New Employment:**

- Startups and businesses can now also use this data in setting up their concerns, especially in the sector of e-commerce or geo-spatial based apps – which in turn will **increase employment in these sectors.**
- Indian companies will be able to develop indigenous apps.

○ **Increased Public-Private Partnership:**

- There is also likely to be an increase in public-private partnerships with the opening of this sector with data collection companies working with the Indian government on various sectoral projects.

○ **Increased Investment:**

- The government also expects an increase in investment in the geo-spatial sector by companies, and also an increase in export of data to foreign companies and countries, which in turn **will boost the economy.**

Digital Intelligence Unit

Why in News

Recently, the **Ministry of Communications** has decided to set up a **Digital Intelligence Unit (DIU)** as a nodal agency to deal with complaints of unsolicited commercial communication (UCC) and cases of financial fraud, especially in the digital payments space.

- Apart from the DIU a Telecom Analytics for **Fraud Management and Consumer Protection (TAFMCP)** will also be set up at all the 22 license service area levels.
- It would also ensure strict compliance of the **Telecom Commercial Communications Customer Preferences Regulations (TCCPR)** 2018 which provides a revised regulatory framework aimed at regulating 'unsolicited commercial communication' (UCC) in India.

Key Points

➤ **Background:**

- Recently, the Delhi High Court (HC) ordered the **Telecom Regulatory Authority of India (TRAI)**

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to ensure “complete and strict” implementation of the regulation issued by it in 2018 for curbing **Unsolicited Commercial Communications (UCC)**.

- Earlier in November, 2020 **TRAI had imposed fines of up to Rs 30 crore on telecom companies** such as Bharat Sanchar Nigam Limited, Vodafone Idea and Reliance Jio Infocomm for not putting enough measures to control UCC, which occurred over their networks between April and June 2020.
- The **Reserve Bank of India (RBI)** had, in its annual report for 2018-19, said frauds related to misuse of credit and debit cards, cloning of identities, and spam amounted to Rs 220 crore in the year. DIU could mitigate this menace.
- **Digital Intelligence Unit**
 - **Objective:**
 - To coordinate with various law enforcement agencies, financial institutions and telecom service providers in investigating any fraudulent activity involving telecom resources.
 - **Significance:**
 - **Checking Unsolicited Commercial Communication (UCC):**
 - The issue of UCC has been a major area of concern for the Telecom Ministry as well as the **Telecom Regulatory Authority of India (TRAI)**. It has from time to time fined telecom operators for not following its directives on stopping UCC.
 - **Effective Redressal of Complaints:**
 - Along with DIU, a web and mobile application as well as a SMS-based system shall be developed for effective redressal of complaints.
 - **Instilling Trust In the Digital Ecosystem:**
 - The DIU system will strengthen the trust of people in the digital ecosystem and will make financial digital transactions primarily through mobile more secure and reliable, which will result in promotion of Digital India.
 - **UCC on over-the-top (OTT) Service Providers:**
 - TRAI is also about to come up with a consultation paper to deal with **UCC on over-the-top (OTT) service providers**. The launched systems does not address the issue of UCC on over-the-top (OTT) service providers such as **WhatsApp**.

- **The Telecom Commercial Communication Customer Preference Regulation, 2018** tightened the norms for all stakeholders in the telecom ecosystem to have facilities for users to complain against unsolicited calls or SMS. However, OTT players have thus far remained untethered from regulations as far as UCC is concerned.

Telecom Regulatory Authority of India

➤ **Statutory Body:**

- Established by an Act of Parliament (Telecom Regulatory Authority of India Act, 1997)

➤ **Objectives:**

- **To regulate telecom services**, including fixation/revision of tariffs for telecom services.
- **Provide a fair and transparent policy environment** which promotes a level playing field and facilitates fair competition.

➤ **Recent Amendment:**

- The TRAI Act was amended in the year 2000 to establish a **Telecommunications Dispute Settlement and Appellate Tribunal (TDSAT)** to take over the adjudicatory and disputes functions from TRAI.

Report on Road Accidents: World Bank

Why in News

Recently, the Union Minister for Road Transport and Highways released the **World Bank** Report titled “**Traffic Crash Injuries And Disabilities: The Burden on India Society**”.

- The Report has been prepared in collaboration with the **NGO-Save Life Foundation**.
- The survey data was collected from four Indian states i.e. **Uttar Pradesh, Bihar, Tamil Nadu and Maharashtra**.

Key Points

➤ **Global Fatalities due to Road Accidents:**

- Road Traffic Injuries (RTIs) - **Eighth leading cause of death**.
- **Road Crash Fatality Rate** - Three times higher in low-income countries compared to high-income countries.

Note:



- **Road Accidents and Related Deaths in India:**
 - Accounts for **11% of the global death** in road accidents, the **highest in the world**.
 - Accounts for about **4.5 lakh road crashes per annum**, in which 1.5 lakh people die.
- **Economic Impacts of Road Accidents:**
 - **Estimated Economic Loss** - 3.14% of **Gross Domestic Product (GDP)**, indicating **underreporting phenomenon** in the country.
 - **Ministry of Road Transport and Highways (MoRTH) Estimates** -
 - Socio-economic cost of Road Crashes is equivalent to **0.77% of the GDP**.
 - **76.2% of people** who are killed in road crashes are in their prime working-age, **18-45 years**.
- **Social Impact:**
 - **Burden on Households:**
 - At the individual level, road crash injuries and deaths **impose a severe financial burden and push entire (non-poor) households** into poverty and the already poor into debt.
 - Every road accident death causes **depletion of nearly seven months' household income in poor families**, and pushes the kin of victims in a cycle of poverty and debt.
 - **Vulnerable Road Users (VRUs):**
 - **VRUs bear a disproportionately large burden of road crashes** and account for more than half of all road crash deaths and serious injuries in the country.
 - It is often the **poor, especially male road-users** of working age, that constitute the category of **VRUs**.
 - Daily wage workers and workers employed as casual labourers in informal activities are more prone to be defined as vulnerable compared to workers engaged in regular activities.
 - In India, where **VRUs** are forced to share space with other less vulnerable road users, **the income level of an individual has a direct bearing on the mode of transport used**.
 - **Gender Specific Impact:**
 - Women in the families of victims **bore the burden across poor and rich** households, often taking up extra work, assuming greater responsibilities, and performing caregiving activities.
 - About **50% of women were severely affected by the decline in their household income** after a crash.
 - About **40% of women reported a change in their working patterns** post-accident, while around **11% reported taking up extra work** to deal with the financial crisis.
- **Rural-Urban Divide:**
 - The **income decline** for low-income **rural households (56%) was the most severe** compared to low-income urban (29.5%) and high-income rural households (39.5%).
- **Steps Taken at Global Level:**
 - **Brasilia Declaration on Road Safety (2015):**
 - The **declaration** was signed at the second Global High-Level Conference on Road Safety held in Brazil. **India is a signatory** to the Declaration.
 - The countries plan to achieve the **Sustainable Development Goal 3.6** i.e. to half the number of global deaths and injuries from road traffic accidents by 2030.
 - **Decade for Road Safety:**
 - The United Nations (UN) declared **2011-2020** as the decade of action for Road Safety.
 - **UN Global Road Safety Week:**
 - It is **celebrated every two years**, the fifth edition (held from 6-12 May 2019) highlighted the need for strong leadership for road safety.
 - **The International Road Assessment Programme (iRAP):**
 - It is a registered charity dedicated to saving lives through safer roads.
- **Steps Taken by Indian Government:**
 - **Motor Vehicles Amendment Act, 2019:**
 - The **Act** hikes the penalties for traffic violations, defective vehicles, juvenile driving, etc.
 - It provides for a **Motor Vehicle Accident Fund**, which would provide compulsory insurance cover to all road users in India for certain types of accidents.
 - It also provides for a **National Road Safety Board**, to be created by the Central Government through a notification.
 - It also provides for the protection of good samaritans.

Note:

Corruption Perception Index 2020

Why in News

India's rank has slipped six places to **86th among 180 countries** in **Corruption Perception Index (CPI)** released by **Transparency International**.

- India was ranked 80th out of 180 countries in 2019.

Transparency International

- Transparency International is a non-governmental organisation founded in **1993** based in **Berlin, Germany**.
- Its non profit purpose is to take action to **combat global Corruption with civil societal anti-corruption measures and to prevent criminal activities** arising from corruption.
- Its most notable publications include the **Global Corruption Barometer** and the **Corruption Perception Index**.

Key Points

➤ About:

- The index ranks **180 countries and territories** by the perceived level of public sector corruption according to experts and business people.
- It uses a scale of **zero (highly corrupt)** to **100 (very clean)**.
- CPI 2020 paints a grim picture of the state of corruption worldwide. While most countries have made little to no progress in tackling corruption in nearly a decade, more than two-thirds of countries **score below 50, with an average score of just 43**.
- Moreover, corruption not only undermines the **global health response to Covid-19** but contributes to a **continuing crisis of democracy**.

➤ Top Performers:

- The top countries on the CPI are **Denmark** and **New Zealand**, with scores of 88, followed by **Finland, Singapore, Sweden** and **Switzerland**, with scores of 85 each.

➤ Poor Performers:

- **South Sudan** and **Somalia** are the bottom Countries with scores of 12 each, followed by Syria (14), Yemen (15) and Venezuela (15).

➤ Regional Specific:

- The highest scoring region is **Western Europe** and the **European Union** with an average score of 66.
- The lowest scoring regions are **Sub-Saharan Africa** (32) and **Eastern Europe** and **Central Asia** (36).

➤ India Specific:

- In 2020, India's score is 40 (41 in 2019).
- India experienced slow progress in anti-corruption efforts, with several government commitments to reform not yet materialising effectively.

➤ Corruption, Health & Covid-19:

- Corruption shifts public spending away from essential public services. Countries with higher levels of corruption, regardless of economic development, tend to spend less on health.
 - Higher levels of corruption are associated with lower universal health care coverage and higher rates of infant and maternal mortality and deaths from cancer, diabetes, respiratory and cardiovascular diseases.
- Corruption is one of the key barriers to achieving the **United Nations' Sustainable Development Goals (SDGs)**, and the Covid-19 pandemic is making those goals even more difficult to attain.
- Covid-19 is not just a health and economic crisis, but a corruption crisis as well, with countless lives lost due to the insidious effects of corruption undermining a fair and equitable global response.
- The Covid-19 response exposed vulnerabilities of **weak oversight and inadequate transparency**. Countries with higher levels of corruption tend to be the worst perpetrators of democratic and rule-of-law breaches while managing the Covid-19 crisis.
 - Governments exploiting the pandemic to suspend Parliaments, renounce public accountability mechanisms, and incite violence against dissidents.

➤ Recommendations:

- **Strengthen oversight institutions** to ensure resources reach those most in need. **Anti-corruption authorities and oversight** institutions must have sufficient funds, resources and independence to perform their duties.
- **Ensure open and transparent contracting** to combat wrong doing, identify conflicts of interest and ensure fair pricing.

Note:



- **Defend Democracy, Promote Civic Space** by enabling civil society groups and the media to hold governments accountable.
- **Publish relevant data and guarantee access to information** to ensure the public receives easy, accessible, timely and meaningful information.

Draft Blue Economy Policy

Why in News

Recently, the Ministry of Earth Sciences (MoES) has rolled out the **draft Blue Economy policy**, inviting suggestions and inputs from various stakeholders.

- It is in line with the Government of **India's Vision of New India by 2030**.

Key Points

- **About:**
 - The policy document highlighted the blue economy as **one of the ten core dimensions for national growth**.
 - It emphasizes policies across several key sectors to **achieve holistic growth** of India's economy. It recognizes the following seven thematic areas:
 - National accounting framework for the blue economy and ocean governance.
 - Coastal marine spatial planning and **tourism**.
 - Marine **fisheries, aquaculture**, and fish processing.
 - Manufacturing, emerging industries, trade, technology, **services**, and **skill development**.
 - Logistics, infrastructure and shipping, including trans-shipments.
 - Coastal and deep-sea mining and offshore energy.
 - Security, strategic dimensions, and international engagement.
- **Aims:**
 - Enhance contribution of the blue economy to India's **Gross Domestic Product (GDP)**.
 - The blue economy, which consists of economic activities dependent on marine resources, comprises **4.1% of India's economy**.
 - Improve lives of coastal communities.
 - Preserve marine biodiversity.

- Maintain the national security of marine areas and resources.
- **Reason and Need for a Blue Economy Policy:**
 - **Vast Coastline:**
 - With a coastline of nearly **7.5 thousand kilometers**, India has a unique maritime position.
 - **Nine of its 28 states are coastal**, and the nation's geography includes 1,382 islands.
 - There are nearly **199 ports**, including **12 major ports** that handle approximately 1,400 million tons of cargo each year.



- **Utilisation of Non-living Resources:**
 - India's **Exclusive Economic Zone** of over 2 million square kilometers has a huge living and non-living resources with significant recoverable resources such as **crude oil and natural gas**.
- **Sustenance of Coastal Communities:**
 - The coastal economy sustains over 4 million **fisherfolk and coastal communities**.
- **Other Related Initiatives by India:**
 - **India-Norway Task Force on Blue Economy for Sustainable Development:**
 - It was inaugurated jointly by both the countries in 2020 to **develop and follow up joint initiatives** between the two countries.

Note:

- **Sagarmala Project:**
 - The **Sagarmala project** is the **strategic initiative for port-led development** through the extensive use of IT enabled services for modernization of ports.
 - It aims at developing Inland **waterways** and coastal shipping which will revolutionize maritime logistics, creating million new jobs, reducing logistics costs etc.
 - It focuses on the **development of coastal communities and people** in the sustainable use of ocean resources, modern fishing techniques and coastal tourism.
- **O-SMART:**
 - India has an umbrella scheme by the name of **O-SMART** which aims at regulated use of oceans, marine resources for sustainable development.
- **Integrated Coastal Zone Management:**
 - It focuses on conservation of coastal and marine resources, and improving livelihood opportunities for coastal communities etc.
- **National Fisheries Policy:**
 - India has a National Fisheries policy for promoting 'Blue Growth Initiative' which focuses on sustainable utilization of fisheries wealth from the marine and other aquatic resources.
- **Global Steps:**
 - **Sustainable Development Goal (SDG)- 14** seeks to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Blue Economy

- The concept was introduced by **Gunter Pauli** in his **2010 book**- "The Blue Economy: 10 years, 100 innovations, 100 million jobs".
- It is the **sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.**
- It **advocates the greening of ocean development strategies** for higher productivity and conservation of ocean's health.
- It encompasses–
 - **Renewable Energy:** Sustainable marine energy can play a vital role in social and economic development.

- **Fisheries:** Sustainable fisheries can generate more revenue, more fish and help restore fish stocks.
- **Maritime Transport:** Over 80% of international goods traded are transported by sea.
- **Tourism:** Ocean and coastal tourism can bring jobs and economic growth.
- **Climate Change:** Oceans are an important carbon sink (blue carbon) and help mitigate climate change.
- **Waste Management:** Better waste management on land can help oceans recover.
- Blue Economy emphasizes on **integration of development of the ocean economy with social inclusion, environmental sustainability, combined with innovative business models.**

Right of Reputation vs Right to Dignity

Why in News

Recently, a Delhi court has rejected a criminal **defamation** case filed by former Union Minister against a journalist over her tweets accusing him of **sexual harassment**.

Key Points

- **Consideration by the Court:**
 - The Court took consideration of the systematic abuse at the workplace due to the **lack of mechanism to redress the grievance of sexual harassment** at the time of the incident of sexual harassment against the accused journalist took place.
 - It was prior to the issuance of the **Vishaka Guidelines** by the **Supreme Court** and enactment of **The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.**
- **Court's Ruling:**
 - The **right of reputation** cannot be protected at the cost of the **right of life and dignity of women.**
 - **Right to Reputation:**
 - As per the SC, the right to reputation is an integral part of **Article 21** of the Constitution.
 - Further, existence of **Section 499 (Criminal Defamation) of the Indian Penal Code,**

Note:



1860 is not a restriction on the freedom of speech and expression because it ensures that the social interest is served by holding a reputation as a shared value of the public at large.

- **Right to Life (Article 21):**

- No person shall be deprived of his life or personal liberty except according to procedure established by law.
- It confers on every person the fundamental right to life and personal liberty.

- **Right to Live with Dignity:**

- In *Maneka Gandhi v. Union of India 1978*, the SC gave a new dimension to Article 21 and held that the **right to live is not merely a physical right but includes within its ambit the right to live with human dignity.**

- Woman has a **right to put her grievance at any platform** of her choice and **even after decades.**

Defamation

- **About:**

- In India, **defamation** can both be a **civil wrong** and a **criminal offence.**
 - The **difference** between the two lies in the **objects they seek to achieve.**
 - A **civil wrong** tends to provide for a **redress of wrongs** by awarding compensation and a **criminal law seeks to punish** a wrongdoer and send a message to others not to commit such acts.

- **Laws for Defamation:**

- **Criminal defamation** has been specifically defined as an offence under the **section 499 of the Indian Penal Code (IPC)** whereas the **civil defamation is based on tort law** (an area of law which does not rely on statutes to define wrongs but takes from ever-increasing body of case laws to define what would constitute a wrong).
- **Section 499** states **defamation could be through words, spoken or intended to be read, through signs, and also through visible representations.**
 - These can either be published or spoken about a person with the **intention of damaging the reputation of that person, or with the knowledge or reason to believe that the imputation will harm his reputation.**

- **Exceptions:**

- **Section 499** also cites **exceptions.** These include **“imputation of truth”** which is required for the **“public good”** and thus has to be published, on the public conduct of government officials, the conduct of any person touching any public question and merits of the public performance.

- **Punishment:**

- **Section 500 of IPC**, which is on punishment for defamation, reads, **“Whoever defames another shall be punished with simple imprisonment for a term which may extend to two years, or with fine, or with both.”**
- Moreover, in a **criminal case, defamation has to be established beyond reasonable doubt** but in a **civil defamation suit, damages can be awarded based on probabilities.**

- **Validity:**

- The SC of India, in the *Subramanian Swamy vs Union of India, 2014*, upheld the constitutional validity of the criminal defamation law.

Conclusive Land Titling

Why in News

Recently, as many States have failed to send in their feedback on a **Model Bill on Conclusive Land Titling**, the Centre has warned that their agreement would be presumed. The Bill was **prepared by the NITI Aayog.**

Key Points

- **Land Titling:**

- It is the generic term used to describe the **programs implemented by the government** to enable individuals and government **to efficiently trade in rights in land and property.**
 - Recently, the **Supreme Court** held that a **citizen’s right to own private property is a human right.**

- **Current System in India/Presumptive Land Titling:**

- **About:**
 - India currently follows a system of presumptive land titling. It means that **land records are maintained, with information on possession, which is determined through details of past transactions.**

Note:

The Framework

- **Digital land** records will facilitate switch 
- **Draft legislation** will propose that states move from presumptive to conclusive system
- **Unified legal framework** being finalised to allow govt-backed land ownership 

How will it help?

- **Reduce** land related litigations
- **Farmers** to get easy access to credit
- **Land** acquisition to get easier
- **Real estate** transactions to become more transparent
- **Title holders** to be eligible for compensation from govt

- **Ownership:**
 - It is established on the **basis of current possession**.
- **Registration:**
 - Registration of land is actually a registration of transactions, such as **sale deeds, records of inheritance, mortgage and lease**.
 - Holding registration papers **does not actually involve the government or the legal framework** guaranteeing the ownership title of the land.

➤ **Conclusive Land Titling:**

- **About:**
 - Under a conclusive land titling system, **land records designate actual ownership**.
- **Ownership:**
 - The title is **granted by the government**, which takes the responsibility for accuracy.
- **Dispute Settlement:**
 - Once a title is granted, any other **claimant will have to settle disputes with the government**, not the title holder.
- **Compensation:**
 - The **government may provide compensation to claimants in case of disputes**, but the title holder is not in any danger of losing ownership.

➤ **Need and Benefits of Conclusive Land Titling:**

- **Reduce Litigations:**
 - The conclusive system will **drastically lower litigation related to land**.
 - According to a 2007 **World Bank** study on 'Land Policies for growth and poverty reduction', **land-related disputes** accounted for **two-thirds of all pending court cases** in India.
 - A **NITI Aayog** study on strengthening arbitration estimated that **disputes on land or real estate take an average time of 20 years** in the courts to be resolved.
- **Reduced Risk:**
 - Once conclusive titling is in place, investors who want to purchase land for business activities will be able to do so **without facing the constant risk that their ownership may be questioned** and their entire investment may go to waste.
 - Right now, because land titles are based on transactions, people have to keep the entire chain of transaction records, and a dispute on any link in that chain **causes ambiguity in ownership**.
- **Reduction in Black Marketing:**
 - Ambiguity in ownership also results in a **black market for land transactions**, which deprives the government of **taxes**.
- **Speeding up Development:**
 - Land disputes and unclear titling also create **hurdles for infrastructure development and housing construction**, leading to costly delays and inefficiency. In cities, urban local bodies depend on property taxes that can be levied properly only if there is clear ownership data available.
 - Long-running court cases currently create hurdles for investment in many sectors of the economy.
- **Facilitation of Easy Credit:**
 - In rural areas, the need is even more acute. Access to **agricultural credit is dependent on the ability to use land as collateral**.
 - Without being able to prove their ownership of land and access formal credit from banks, **small and marginal farmers are often left at the mercy of unscrupulous moneylenders**, entrenching themselves in a mountain of debt.

Note:



- **Model Bill on Conclusive Land Titling:**
 - **Power to State Governments:**
 - It will provide state governments **power to order for establishment, administration and management** of a system of title registration of immovable properties.
 - **Land Authorities:**
 - Land Authorities to be set up by each State government, which will appoint a **Title Registration Officer (TRO)** to prepare and publish a draft list of land titles based on existing records and documents.
 - This will be considered a valid notice to all potential claimants interested in the property, who will have to file their claims or objections within a set period of time.
 - If disputing claims are received, the TRO will verify all the relevant documents and refer the case to a **Land Dispute Resolution Officer (LDRO)** for resolution.
 - However, **disputes** which are already **pending in courts cannot be resolved in this way.**
 - Having considered and resolved all the disputed claims, **the Land Authority will publish a Record of Titles.**
 - **Land Titling Appellate Tribunals:**
 - Over a three-year period, these titles and the **decisions of the TRO and the LDRO can be challenged before Land Titling Appellate Tribunals**, which will be set up under the law.
 - After a **three-year period**, entries in the Record of Titles will be considered conclusive proof of ownership.
 - **Special Bench of High Court:**
 - A special bench of High court shall be designated **to deal with appeals against the orders passed by the Land Titling Appellate Tribunal.**
- **Challenge:**
 - The biggest challenge is that land **records have not been updated** for decades, especially in rural and semi-urban areas.
 - Land records are often in the name of the grandparents of the current owner, with **no proof of inheritance.**
 - Unless they are based on updated records, **conclusive land titles could create even more problems.**

IIT Council's Recommendations

Why in News

Recently, the **Institute of Technology (IIT) Council** has constituted four working groups to look at greater **autonomy for the IITs.**

- The decision is in line with the **National Education Policy** recommendation.
- The IITs are seeking autonomy **on the lines of what was granted to the Indian Institutes of Management (IIMs).**

Key Points

- **About:**
 - **Members and Head:**
 - The IIT Council is **headed by the Education Minister.**
 - It includes the **directors of all IITs**, and the chairs of each **IIT's Board of Governors (BoG).**
 - **Objective:**
 - It is meant to **advise** on admission standards, duration of courses, degrees and other academic distinctions.
 - It **lays down policy** regarding cadre, methods of recruitment and conditions of service of employees of all IITs.
- **Four Working Groups:**
 - **Group-1:** Graded Autonomy, Empowered & accountable BoG and Director.
 - **Group-2:** Grooming distinguished academics for directorship of IITs.
 - **Group-3:** Reform and restructuring of Academic Senate.
 - **Group-4:** Innovative funding mechanisms.
- **Other Recommendations:**
 - **Use of Technology:**
 - To constitute a **task force to review use of technology** at all IITs and also to accelerate deployment of digital tools,
 - Such as **Blockchain, AI (Artificial intelligence), ML (machine learning), and Cloud Computing.**

Note:



- **Reducing Staff:**
 - **Cutting IIT staff strength** to lower levels.
 - The IITs currently function so that for every ten students, there is one faculty member. And for **every ten faculty, they have pre-approval for 11 staff.**
- **Research and Development Fair:**
 - To organise an **IIT research and development fair** to showcase the quality research work being done by IITs to the industries.
- **Development Plans:**
 - Asked the IITs to **develop Institute Development Plans to improve the mobility of faculty between institution** and industry to promote research collaborations.
- **Need of Autonomy:**
 - **Better Decision Making:**
 - Administrative and financial autonomy helps institutes to take a **valuable decision for the benefit of students and the organisation.**
 - In the absence of autonomy, most decisions are taken by bureaucrats, who lack the technical knowledge needed to decide for technical institutes.
 - Constructive decisions can be taken only by academicians and experts, while **IITs do not enjoy complete autonomy, they have partial freedom.**
 - Recently, **an expert panel**, appointed to recommend measures to better implement reservations at IITs, has proposed that **IITs should be exempted from caste reservations for faculty appointments** as they are institutes of national importance.
 - **Improved Responsibility:**
 - **Lack of autonomy** not only permits interference, but also **creates divided responsibility**, which inevitably leads to maintenance of the status quo, which in today's India is not desirable.
 - With autonomy these institutes would **have full control on their policies and operations**, as well as **have full responsibility** for what value they provide.

National Urban Digital Mission

Why in News

The National Urban Digital Mission (NUDM) has been launched by the **Ministry of Housing and Urban Affairs (MoHUA)** along with the **Ministry of Electronics and Information Technology (MEITY).**

- Several other digital initiatives of MoHUA viz. **India Urban Data Exchange (IUDX)**, **SmartCode**, **Smart Cities 2.0 website**, and **Geospatial Management Information System (GMIS)** have also been launched.
- These initiatives will further the ongoing efforts of both Ministries to realise the vision of **Digital India** and **Atmanirbhar Bharat.**

Key Points

- **About the National Urban Digital Mission (NUDM):**
 - It will create a shared digital infrastructure for urban India, working across the three pillars of **people, process, and platform** to provide holistic support to **cities** and towns.
 - It will institutionalise a **citizen-centric and ecosystem-driven approach** to **urban governance** and service delivery in 2022 cities by 2022, and across all cities and towns in India by 2024.
- **Significance of the NUDM:**
 - The shared digital infrastructure will **consolidate and cross-leverage the various digital initiatives** of the Ministry of Housing and Urban Affairs, enabling cities and towns across India to benefit from holistic and diverse forms of support, in keeping with their needs and local challenges.
 - NUDM has articulated a set of governing principles, and inherits the technology design principles of the **National Urban Innovation Stack (NUIS).**
 - The principles in turn give rise to standards, specifications, and certifications, across the three pillars of people, process, and platforms.
 - **NUIS** will strengthen the capacity of the urban ecosystem to solve complex programs at speed and scale by unlocking the power of urban data.
- **India Urban Data Exchange (IUDX):**
 - It has been developed in partnership between the Smart Cities Mission and the Indian Institute of Science (IISc), Bengaluru.

Note:



- It serves as a **seamless interface for data providers and data users**, including **Urban Local Bodies (ULBs)**, to share, request, and access datasets related to cities, urban governance, and urban service delivery.
- It is an **open-source software platform** which facilitates the secure, authenticated, and managed exchange of data amongst various data platforms, 3rd party authenticated and authorised applications, and other sources.
- **SmartCode Platform:**
 - SmartCode is a platform that enables all ecosystem stakeholders to **contribute to a repository of open-source code for various solutions** and applications for urban governance.
 - It is designed to address the challenges that ULBs face in the development and deployment of digital applications to address urban challenges, by enabling cities to take advantage of existing codes and customising them to suit local needs, rather than having to develop new solutions from scratch.
- **Geospatial Management Information System (GMIS):**
 - GMIS is a web-based, spatially-enabled management tool, providing one-stop access to information.
 - GMIS integrates information from multiple sources and features search options by topic and geographic area.

Other Schemes

/ Programmes of MoHUA

- **Urban Learning and Internship Program (TULIP)**
- **India Cycles4Change Challenge** and **Nurturing Neighbourhoods Challenge**
- **Climate Smart Cities Assessment Framework (CSCAF)**
- **Ease of Living Index** and **Municipal Performance Index**
- **AMRUT**
- **Swachh Bharat Mission Urban**
- **Urban Transport**
- **Pradhan Mantri Awas Yojana**
- **Deendayal Antyodaya Yojana National Urban Livelihoods Mission**

PM Atmanirbhar Swasth Bharat Scheme

Why in News

Recently, the Prime Minister talked about the **need to address health issues in a holistic manner** and to adopt a **four-pronged strategy** for a healthy India that includes implementing the **PM Atmanirbhar Swasth Bharat** scheme.

Key Points

- **Four-Pronged Strategy for a Healthy India:**
 - **Prevention of illness and promotion of wellness** including measures such as **Swachh Bharat Abhiyan**, yoga and timely care and treatment of pregnant women and children,
 - Providing cheap and effective **treatment to the poorest of the poor**,
 - Increasing the **quality of health infrastructure** and healthcare professionals and
 - **Working on a mission mode** to overcome obstacles like **Mission Indradhanush** has been extended to the tribal and far-flung areas of the country.
- **PM Atmanirbhar Swasth Bharat Scheme:**
 - **About:**
 - Announced in the **Union Budget 2021-22**.
 - Aims to **develop capacities of primary, secondary,**

PM Atmanirbhar Swasth Bharat Yojana

A new Centrally Sponsored Scheme with an outlay of about ₹ 64,180 crore, over 6 years

Main Interventions :

- Support for 17,788 rural and 11,024 urban Health and Wellness Centers
- Setting up of :**
- Integrated public health labs in all districts and 3382 block public health units in 11 states
- Critical care hospital blocks in 602 districts and 12 central institutions
- 15 Health Emergency Operation Centers and 2 mobile hospitals
- A national institution for One Health, a Regional Research Platform for WHO South East Asia Region, 9 Bio-Safety Level III laboratories and 4 regional National Institutes for Virology

1/2

Note:

and tertiary care health systems even in the last miles of the nation.

- **Developing a modern ecosystem** for research, testing and treatment in the country itself.
- **Funding:**
 - **Centrally Sponsored Scheme** with an outlay of about Rs. 64,180 crores.
- **Duration:** 6 years.
- **Objectives:**
 - Supporting development of 17,788 **rural** and 11,024 **urban health and wellness centers** and setting up of **integrated public health labs** in all districts and 3,382 block public health units in 11 states.
 - Help in establishing **critical care hospital** blocks in 602 districts and 12 central institutions. Strengthening of the **National Centre for Disease Control (NCDC)**, its 5 regional branches and 20 metropolitan health surveillance units.
 - Expansion of the **Integrated Health Information Portal** to all States/UTs to connect all public health labs.
 - Help in rolling out the **Covid-19 vaccination program** as well as strengthen the delivery system and build better capability and capacity to combat any future pandemics.
- **Other Initiatives in Health Sector:**
 - **Ayushman Bharat Program.**
 - **National Health Mission.**
 - **Jan Aushadhi Yojana.**

President's Rule in Puducherry

Why in News

President's Rule has been imposed in the Union Territory of Puducherry, on the recommendation of the Lieutenant Governor, after the established government lost power during a **vote of confidence**.

- The President was satisfied that a situation had arisen in which the administration of the Union Territory of Puducherry could not carry on in accordance with the provisions of the **Government of Union Territories Act, 1963** (20 of 1963).

Key Points

- **Administration of Union Territories:**
 - **Article 239 to 242 under Part VIII** of the Indian Constitution deals with the administration of **Union Territories**.
 - Every union territory is **administered by the President acting through an administrator** appointed by him.
 - An **administrator** of a union territory is an agent of the President and not head of state like a governor.
 - The President can specify the designation of an administrator; it may be **Lieutenant Governor** or Chief Commissioner or Administrator.
 - The **Union Territories of Puducherry (in 1963), Delhi (in 1992) and Jammu and Kashmir (in 2019) are provided with a legislative assembly** and a council of ministers headed by a chief minister.
 - But, the establishment of such institutions in the union territories **does not diminish the supreme control of the President** and Parliament over them.
 - The **Parliament can make laws on any subject of the three lists** (including the State List) for the union territories.
- **Provision in Case of Failure of Constitutional Machinery (as per the 1963 Act):**
 - If the **President, on receipt of a report from the Administrator** of (the Union territory) or otherwise, is satisfied—
 - that a situation has arisen in which the **administration of the Union territory cannot be carried on** in accordance with the provisions of this Act, or
 - that **for the proper administration of the Union territory** it is necessary or expedient so to do,
 - The President may, **by order, suspend the operation of all or any of the provisions of this Act** for such period as he thinks fit, and
 - Make such incidental and consequential provisions as may appear to him to be necessary or expedient for administering the Union territory **in accordance with the provisions of Article 239.**
- **President's Rule in a State:**
 - **Meaning:**
 - President's Rule implies the suspension of a

Note:

state government and the imposition of direct rule of the Centre.

- It is also known as ‘State Emergency’ or ‘Constitutional Emergency’.
- **Constitutional Provisions:**
 - The President’s Rule is **imposed through the invocation of Article 356 of the Constitution** by the President on the advice of the Union Council of Ministers.
 - Under Article 356, President’s Rule is imposed if the President, upon receipt of the report from the Governor of the State or otherwise, is satisfied that a situation has arisen in which the government of the State cannot be carried on in accordance with the provisions of the Constitution.
- **Parliamentary Approval and Duration:**
 - A proclamation imposing President’s Rule **must be approved by both the Houses of Parliament within two months** from the date of its issue.
 - The approval **takes place through simple majority** in either House, that is, a majority of the members of the House present and voting.
 - **Initially valid for six months**, the President’s Rule **can be extended for a maximum period of three years** with the approval of the Parliament, every six months.
- **Consequences of President’s Rule:**
 - The state governor, on behalf of the President, carries on the state administration with the help of the chief secretary of the state or the advisors appointed by the President.
 - The President can declare that the powers of the state legislature are to be exercised by the Parliament.
 - The President either suspends or dissolves the state legislative assembly.
- **Revocation:**

- A proclamation of President’s Rule **may be revoked by the President at any time** by a subsequent proclamation. Such a proclamation **does not require parliamentary approval.**
- This happens, in case, the leader of a party produces letters of support from a majority of members of the Assembly, and stakes his claim to form a government.

Recommendations/Judgments on President’s Rule

- **The Administrative Reforms Commission (1968)** recommended that the report of the governor regarding the President’s rule has to be objective and also the governor should exercise his own judgment in this regard.
- The **Rajamannar Committee (1971)** recommended the deletion of Articles 356 and 357 from the Constitution of India. The necessary provisions for safeguards against arbitrary action of the ruling party at the Centre under Article 356 should be incorporated in the Constitution.
- **The Sarkaria Commission (1988)** recommended that Article 356 should be used in very rare cases when it becomes unavoidable to restore the breakdown of constitutional machinery in the State.
- **S.R. Bommai Judgment (1994).**
 - The Supreme Court enlisted the situations where the exercise of power under Article 356 could be proper.
 - One such situation is that of ‘Hung Assembly’, i.e. where after general elections to the assembly, no party secures a majority.
- **Justice V.Chelliah Commission (2002)** recommended that Article 356 must be used sparingly and only as a remedy of the last resort after exhausting all actions under Articles 256, 257 and 355.
- The **Punchhi commission (2007)** recommended that these Articles 355 & 356 be amended. It sought to protect the interests of the States by trying to curb their misuse by the Centre.



Note:

Economic Scenario

Highlights

- Blank-Cheque Company
- Saras Aajeevika Mela 2021
- Accredited Investors
- China: India's Top Trading Partner in 2020
- Media Platform Bill: Australia
- Securities Appellate Tribunal
- India Energy Outlook 2021: IEA
- Certified Jute Seeds
- Increased Foreign Portfolio Investments
- RBI Directives to HFCs
- Scheme of Fund for Regeneration of Traditional Industries
- Anti-Dumping Duty on Steel Imports from China
- Flexible Inflation Target

Blank-Cheque Company

Why in News

Recently, renewable energy producer 'ReNew Power' announced an agreement to merge with RMG Acquisition Corp II, a **blank-cheque company** or a **Special Purpose Acquisition Company (SPAC)**.

Key Points

- **About Blank-cheque Company:**
 - A SPAC, or a blank-cheque company, is an entity **specifically set up with the objective of acquiring a firm** in a particular sector.
 - The aim of this SPAC is **to raise money in an Initial Public Offering (IPO)**, and at this point in time, it **does not have any operations or revenues**.
 - Once the money is raised from the public, it is kept in an **escrow account**, which can be accessed while making the acquisition.
 - If the **acquisition is not made within two years of the IPO, the SPAC is delisted** and the money is returned to the investors.
- **Significance:**
 - These are attractive to investors, despite them essentially being **shell companies**, as the blank-cheque companies are people sponsoring.
 - It is a fresh way of thinking of how to structure and exit versus an expensive IPO. The **money is already raised** by somebody who specialises in that area, and is now picking those assets and building on them.

Shell Companies

- A shell company is a **firm that does not conduct any operations in the economy, but it is formally registered**, incorporated, or legally organized in the economy.
- These are **sometimes used illegitimately**, such as to disguise business ownership from law enforcement or the public.

Initial Public Offering

- IPO is the **selling of securities** to the public in the **primary market**.
 - Primary market deals with new securities being issued for the first time. It is also known as the **new issues market**.
 - It is different from the **Secondary market where existing securities** are bought and sold. It is also known as the **stock market or stock exchange**.
- It is when an unlisted company makes either a fresh issue of securities or an offer for sale of its existing securities or both for the first time to the public.
 - Unlisted companies are companies that are not listed on the stock exchange.

Escrow Account

- It is a legal concept **describing a financial instrument whereby an asset or escrow money is held by a third party** on behalf of two other parties that are in the process of completing a transaction.
- The third-party holds the funds until both parties have fulfilled their contractual requirements.
- Escrow is associated with real estate transactions, but it can apply to any situation where funds will pass from one party to another.

Note:



Saras

Aajeevika Mela 2021

Why in News

Recently, the Union Minister for Rural Development inaugurated **Saras Aajeevika Mela 2021** at Noida Haat.

- More than **300 rural self-help groups** and craftsmen from **27 states** are participating in the Mela.

Key Points

- **About:**
 - It is a programme to **transform rural India in general** and the **lives of rural women in particular**.
 - During the Mela, **workshops on product packaging and design, communication skills, social media publicity** and **Business to Business marketing** will be organised to educate the rural self-help groups and craftsmen.
- **Organiser:**
 - It is an initiative by the **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)** under the Ministry of Rural Development (MoRD) organised by the **Council for Advancement of People's Action and Rural Technology (CAPART)**.
 - **CAPART** is an **autonomous body** set up by the Ministry of Rural Development to interface between the government and **Non-governmental Organizations (NGOs)** that seek to improve the quality of life in India's rural areas.
- **Objective:**
 - To bring the rural women **Self Help Groups (SHGs)** under one platform so that they can showcase their skills, sell their products, and help them build linkages with bulk buyers.
 - Through participation in SARAS Aajeevika Mela, these rural SHG women will get vital **national level exposure** to understand the demand and taste of urban customers.
- **Significance:**
 - The Mela acts as an integrated approach towards women empowerment.
 - The Initiative is well aligned with the government's vision of **Atma Nirbhar Bharat**.

Accredited Investors

Why in News

Recently, the **Security and Exchange Board of India (SEBI)** sought comments on the proposal to introduce the concept of '**Accredited Investors**' in the Indian securities market.

- SEBI is a **statutory body established in 1992** in accordance with the provisions of the SEBI Act, 1992. Its headquarters is situated in **Mumbai**. One of its functions is to **protect the interests of investors** in securities and to **promote and regulate the securities market**.

Key Points

- **Background:**
 - Currently, the Indian markets **have the concept of Qualified Institutional Buyers (QIBs)**, which include mutual funds, insurance companies or foreign portfolio investors. These investors enjoy greater market access.
 - However, **an individual investor cannot obtain the QIB status**. The **concept of accredited investor will provide QIB-like status to individual investors**.
 - **Qualified Institutional Buyers:** They are those institutional investors who are generally perceived to possess expertise and the financial capacities to evaluate and invest in the capital markets.
- **About:**
 - Accredited investors, **also called qualified investors or professional investors**, are those **who have an understanding of various financial products** and the risks and returns associated with them.
 - They are able to **make informed decisions regarding their investments** and are recognised by many securities and financial market regulators globally.
 - Generally, they are allowed to **trade securities that may not be registered with financial authorities**.
 - They are entitled to this **privileged access by satisfying requirements** regarding their income, net worth, asset size, governance status or professional experience.
- **SEBI's Plan:**
 - SEBI has laid out **eligibility criteria for both Indian and non-resident Indians and foreign entities**.

Note:

- It has allowed the **validity of accreditation for a year** from the day it is granted.
- Such accreditation is to be carried out via '**Accreditation Agencies**' which may be the market infrastructure institutions or their subsidiaries.
- **Significance:**
 - The accredited investor concept may **offer benefits to investors and financial product/service providers** such as:
 - Flexibility in minimum investment amount.
 - Flexibility and relaxation in regulatory requirements.
 - Access to products/ services offered exclusively to accredited investors.

China: India's Top Trading Partner in 2020

Why in News

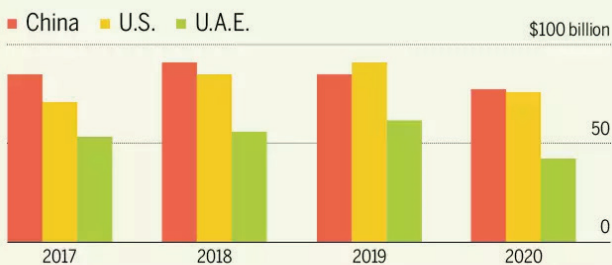
According to **provisional data from India's commerce ministry**, **China regained its position as India's top trade partner in 2020** despite **high border tensions** between the two countries.

Key Points

- **China as a Top Trading Partner:**
 - **Data:** The two-way trade between India and China **stood at USD 77.7 billion** for the year 2020.
 - Trade with China **was USD 85.5 billion total in the previous year** (2018-2019).
 - **Replaced USA:** Now, China is the largest commercial partner displacing the US bilateral trade at USD

Dragon Returns

China displaces the U.S. to regain India's top trade partner slot in 2020



75.9 billion amid reduced demand for goods in the middle of the **Covid-19 pandemic**.

- **Imports from China:** Total imports from China at USD 58.7 billion were more than India's combined purchases from the USA and the UAE, which are its second- and third-largest trade partners, respectively.
- **Exports to China:** India has only managed to increase its exports to China by about 11% from a year ago to USD 19 billion last year.
- **Trade Deficit:** Thus, a **bilateral trade gap** with China stood at almost **USD 40 billion in 2020**, making it India's largest.
 - Trade Gap/Deficit is the amount by which the cost of a country's imports exceeds the value of its exports.
- **Analysis:**
 - Emergence of China as the top trading partner is due to **increased import of Chinese medical supplies**.
 - Online shoppers **seem to prefer Chinese mobile phones and electronic gadgets** despite the environment of anti-China sentiments in the nation.
 - As per the Prime Day 2020 sale data of Amazon, an e-commerce giant, OnePlus, Oppo, Huawei's Honor and Xiaomi were among the top-selling smartphone brands in India.
 - Also, India **continues to rely heavily on Chinese-made heavy machinery**, telecom equipment and home appliances.
 - The increase in trade is despite the tense relations between the two countries and India's ambitions to bolster its manufacturing capabilities under **Atmanirbhar Bharat**.
- **Measures Taken to Reduce Import Dependence on China:**
 - **Recent Ban:** The **ban on more than 100 Chinese apps** citing national security reasons.
 - **Increased Scrutiny:** It has increased scrutiny of Chinese investments in many sectors, and is weighing a decision to keep Chinese companies out of **5G trials**.
 - **Curb Opportunistic Takeovers:** The government recently put import restrictions on tyres, while also making its prior **approval mandatory for foreign investments from countries that share**

Note:



land border with India to curb “opportunistic takeovers” of domestic firms - a move which will restrict FDI from China.

- **Focus on Self-Sufficiency:** The Ministry of Commerce and Industry has also **identified 12 sectors** - 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 - to make India a global supplier and cut import bill.
 - To **cut import dependency on China for APIs** (Active Pharmaceutical Ingredients), the government in March 2020 **approved a package** comprising four schemes with a total outlay of Rs. 13,760 crore to boost domestic production of bulk drugs and medical devices in the country along with their exports.

Media Platform Bill: Australia

Why in News

Australia has **reached out to India** among several countries, including Canada, France and the UK, in a move **to stitch a global coalition against tech giants Google and Facebook** amid a faceoff over compensation for sharing news content from media companies on their platforms.

- **Australia’s proposed law, News Media and Digital Platforms Mandatory Bargaining Code Bill 2020**, mandates a bargaining code that aims to force Google and Facebook to compensate media companies for using their content.
- The Bill is expected to **set a precedent in regulating social media** across geographies.

Key Points

- **Background:**
 - The **Australian Competition and Consumer Commission (ACCC)**, in its **2019 report**, Digital Platforms Inquiry, noted that there was a **fundamental imbalance in the power between news media and internet platforms**.
 - Specifically **mentioning Google and Facebook**, the report said these platforms had “**substantial bargaining power** in relation to many news media businesses.”

- It highlighted that **media regulation hardly applied to platforms**, though they have been increasingly playing much the same role as the media. The last two decades have also seen the **tremendous rise of the platforms and sharp decline of the traditional news media**.

- The **Australian government**, reportedly sensing **how important it was to have a strong and independent media environment in a democracy**, asked the ACCC to come up with a draft code, which it did in July 2020.

- After some changes, the **Treasury Laws Amendment (News Media and Digital Platforms Mandatory Bargaining Code) Bill** was introduced in December 2020.

➤ Australia’s Media Platform Bill:

- **Payment to News Outlets:** Big tech and social media giants like Facebook and Google will have to pay local news outlets for using their content.

- **Big Tech firms will have to negotiate** how much they pay local publishers and broadcasters for content that appears on their platforms.

- **Provision of Arbitration and Fine:** An arbiter is mandated to adjudicate if no agreement is reached and there are also **provisions of heavy fines** if agreements are not done.

➤ The Issue Involved:

- The **media industry is already benefiting from traffic routed to them by the digital platforms**, and that the proposed rules would **expose the Internet companies to “unmanageable levels of financial and operational risk”**.

- Journalism is a public good and a pillar of democracy. **Digital platforms piggyback on its content without sharing the associated costs**. The **subsequent diversion of advertising revenue** has undermined traditional media, particularly regional newspapers.

- **Paying for news feed in itself appears to be less of an issue** for the tech giants, given that **Google agreed to pay news publications in France**.

- **Google signed a deal with a group of French publishers** to make **digital copyright payments** for online news content.

- The **fight in Australia** is in fact, **centred on how much control these companies would be able to retain on their payout process** - operational aspects

Note:



such as deciding the quantum of payments for news feed sources, and having to reveal changes in their algorithms.

- **France has specifically linked payments to copyright**, without putting a forcing device into the agreements.
- **Australia's code**, on the other hand, is almost entirely focused on the bargaining power of news outlets vis-à-vis the tech majors, and has some coercive features as well.

➤ The Case of India:

- Policymakers have **so far focused on the dominance of intermediaries such as Google and Facebook**, which are positioned in a way that service providers cannot reach customers except through these platforms.
- A substantial **discussion on the impact of intermediary platforms on the health of news media outlets is yet to begin** in any meaningful way.
- According to a FICCI-EY report for 2020, there are **300 million users of online news sites**, portals and aggregators in the country.
 - It makes up approximately 46% of Internet users and 77% of smartphone users in India at the end of 2019.
 - With 282 million unique visitors, **India is the second largest online news consuming nation after China**.
- In India, **digital advertising spends in 2019 grew 24%** year-on-year to Rs. 27,900 crore, according to EY estimates, and are expected to grow to Rs. 51,340 crore by 2022.
- In India, the **news aggregators are not mandated to make payments to publishers**.
 - News aggregator is an online platform or a software device that collects news stories and other information as that information is published and organizes the information in a specific manner.

Securities Appellate Tribunal

Why in News

Recently, the **Securities Appellate Tribunal (SAT)** stayed the order passed by **Securities and Exchange Board of India (SEBI)** that had put a one-year ban on a retail

company Chairperson and some other promoters from the securities market.

Key Points

- **About:**
 - SAT is a **statutory body** established under the provisions of Section 15K of the **SEBI Act, 1992**.
- **Location:**
 - Mumbai
- **Composition:**
 - SAT consists of a **Presiding Officer** and **Two other members**.
 - The Presiding officer of SAT shall be **appointed by the Central Government** in consultation with the **Chief Justice of India** or his nominee.
- **Powers:**
 - It has the **same powers as vested in a civil court**. Further, if any person feels aggrieved by SAT's decision or order can appeal to the **Supreme Court**.
- **Functions:**
 - To **hear and dispose of appeals against orders passed by the SEBI** or by an adjudicating officer under the SEBI Act, 1992.
 - To hear and dispose of appeals against orders passed by the **Pension Fund Regulatory and Development Authority (PFRDA)**.
 - To hear and dispose of appeals against orders passed by the **Insurance Regulatory Development Authority of India (IRDAI)**.

Securities and Exchange Board of India

- **About:**
 - SEBI is a **statutory body** established in 1992 in accordance with the provisions of the **SEBI Act, 1992**.
 - Initially, SEBI was a non-statutory body. In April, **1988 the SEBI was constituted as the regulator of capital markets** in India under a resolution of the Government of India.
 - The term **capital market** refers to facilities and institutional arrangements through which long-term funds, both debt and equity are raised and invested.
- **Headquarters:**
 - The headquarters of SEBI is situated in **Mumbai**.

Note:

- The regional offices of SEBI are located in **Ahmedabad, Kolkata, Chennai and Delhi.**

➤ **Composition:**

- All decisions taken by SEBI are collectively taken by its Board that consists of a **Chairman and eight other members.**
- SEBI also **appoints various committees**, whenever required to look into the pressing issues of that time.

➤ **Function:**

- To protect the interests of investors in securities and to **promote and regulate the securities market.**
 - **Securities are tradable financial instruments used to raise capital** in public and private markets.
 - There are primarily **three types of securities: equity**—which provides ownership rights to holders; **debt**—essentially loans repaid with periodic payments; and **hybrids**—which combine aspects of debt and equity.
- **Registering and regulating the working of stock brokers, merchant bankers, underwriters, portfolio managers, investment advisers** and such other intermediaries who may be associated with securities markets in any manner.
- SEBI is a **quasi-legislative, quasi-judicial and quasi-executive body.**
 - It can **draft regulations, conduct inquiries, pass rulings and impose penalties.**

India Energy Outlook 2021: IEA

Why in News

Recently, the **International Energy Agency (IEA)** has released the **India Energy Outlook 2021 Report** which explores the opportunities and challenges ahead for India as it seeks to ensure reliable, affordable and sustainable energy for a growing population.

- The India Energy Outlook 2021 is a **new special report from the IEA's World Energy Outlook series.**

Key Points

- **Third Largest Energy Consumer by 2030:**

- India will **make up the biggest share of energy demand growth at 25%** over the next two decades, as it **overtakes the European Union as the world's third-biggest energy consumer by 2030.**

- Presently, **India is the fourth-largest** global energy consumer **behind China, the United States and the European Union.**

- India's **energy consumption is expected to nearly double** as the nation's **Gross Domestic Product (GDP)** expands to an estimated USD 8.6 trillion by 2040 under its current national policy scenario.

- **Prior to the global pandemic**, India's energy demand was **projected to increase** by almost **50% between 2019 and 2030**, but growth over this period is **now closer to 35%.**

➤ **Industrialisation is a Major Driving Force:**

- Over the last three decades, India accounted for about **10% of World Growth in Industrial Value-added** [in **Purchasing Power Parity (PPP)** terms].
- **By 2040**, India is set to account for almost **20% of Global Growth in Industrial value-added**, and to lead global growth in industrial final energy consumption, especially in steelmaking.

➤ **Reliance on Imports:**

- India's growing energy needs will make it **more reliant on fossil fuel imports** as its **domestic oil and gas production has been stagnant** for years despite government policies to promote petroleum exploration and production and renewable energy.
- Rising oil demand **could double India's oil import bill** to about USD 181 billion by 2030 and nearly treble it to USD 255 billion by 2040 compared with 2019.

➤ **Oil Demand:**

- India's **oil demand** is seen **rising by 74% to 8.7 million barrels per day by 2040** under the existing policies scenario.
- A **five-fold increase in per capita car ownership** will result in India leading the oil demand growth in the world.
- Its **net dependence on oil imports** - taking into account both the import of crude oil and the export of oil products - **increases to more than 90% by 2040 from the current 75%** as domestic consumption rises much more than production.

➤ **Gas Demand:**

Note:



- India will become the **fastest-growing market for Natural gas**, with demand **more than tripling by 2040**.
- Natural gas **import dependency** increased from **20% in 2010** to almost **50% in 2019** and is set to grow further to **more than 60% in 2040**.
- **Coal Demand:**
 - **Coal currently dominates India's electricity sector**, accounting for over 70% of overall generation.
 - **Coal demand** is seen **rising to 772 million tonnes in 2040** from the **current 590**.
- **Renewables Energy Resources Demand:**
 - India's share in the **growth in renewable energy** is the **second-largest** in the world, **after China**.

International Energy Agency

- The International Energy Agency is an **autonomous Intergovernmental Organisation** established in 1974 in Paris, France.
- IEA mainly focuses on its energy policies which include **economic development, energy security and environmental protection**. These policies are also known as the **3 E's of IEA**.
- India became an **Associate member of IEA in March 2017** but it was in engagement with IEA long before its association with the organization.
 - Recently, India has **inked a Strategic Partnership Agreement with the IEA** to strengthen cooperation in global energy security, stability and sustainability.
- **The World Energy Outlook Report** is released by the IEA annually.
- **IEA Clean Coal Centre** is dedicated to providing independent information and analysis on how coal can become a cleaner source of energy, compatible with the UN Sustainable Development Goals.

Certified Jute Seeds

Why in News

- The **Ministry of Textiles** has launched a **Certified Jute Seed Distribution Plan** under **Jute ICARE Program**.
- **Jute Corporation of India (JCI)** had in 2019, **signed an MoU** (Memorandum of Understanding) with **National Seeds Corporation** for **commercial distribution of 1,000 Metric Tonne certified jute seeds** for the year 2021-22.

Key Points

- **Certified Jute Seed Distribution Plan:**
 - It will **expand usage of certified seeds to over 55% area** under Jute Cultivation.
 - **Certified seed** shall be the progeny of foundation seed and its production shall be so handled as to maintain specific genetic identity and purity according to the standards prescribed for the crop being certified.
 - It will extend the benefit of certified seeds to nearly **5 lakh farmers**.
 - Usage of certified jute seeds has **resulted in improved quality of jute by 1 grade** and **enhanced productivity by 15%** thereby **increasing income of jute farmers by about Rs. 10,000/hectare**.
- **Jute ICARE Program:**
 - **Launch: Improved Cultivation and Advanced Retting Exercise for Jute (Jute ICARE)** was launched in **2015**.
 - The programme was **initiated by the National Jute Board (NJB)** in association with **Central Research Institute for Research in Jute and Allied Fibres (CRIJAF) & Jute Corporation of India (JCI)**.
 - **Aims:** At **mechanization** in jute farming in a farmer-friendly way and **accelerated retting using microbial consortium** for improved income for jute farmers.
 - **Following Inputs are Provided:**
 - **100% Certified Seeds** at subsidized rate.
 - Demonstration of **scientific jute cultivation practices** for adoption at farmers' fields with mechanical intervention distribution of seed drill / Nail Weeder/Cycle Weeder.
 - Demonstration of **Microbial retting using CRIJAF SONA**, a microbial consortium and also distribution to the farmers.
 - **Retting** is the process of extracting fiber from the stem of the plants.
 - So far, Government has **supported 2.60 lakhs farmers** under ICARE Program.
- **Other Steps Taken to Promote Jute Industry:**
 - **Increased in MSP:** The **Minimum Support Price (MSP)** for Jute has been increased from Rs. 2400 in 2014-15 to Rs. 4225 in 2020-21.
 - **Retting Tanks:** Construction of 46000 Retting Tanks has been approved for increasing productivity, quality and income of Jute Farmers, which will be

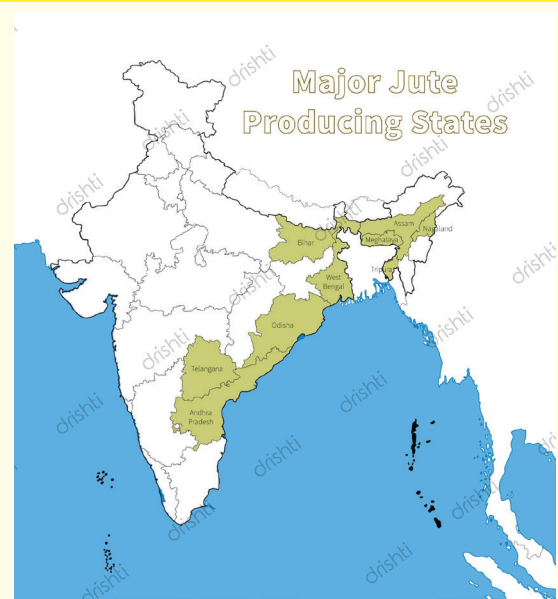
Note:

done by the convergence of Central Government Schemes like **MNREGA, PMKSY, RKVY** and ICARE.

- This will **reduce retting time by 7 days** and **generate 46 lakh man-days of employment** for the rural mass of Jute Growing States.
- **Jute Packaging Materials Act, 1987:** Through the **Jute Packaging Materials (JPM) Act**, the Government is protecting the interests of about 4 lakh workers and 40 lakh farm families.
 - The Act provides for the compulsory use of jute packaging material in the supply and distribution of certain commodities in the interests of production of raw jute and jute packaging material, and of persons engaged in the production thereof, and for matters connected therewith.
- **Jute Geo-Textiles (JGT):** The **Cabinet Committee on Economic Affairs (CCEA)** has approved a **Technical Textiles Mission** which includes Jute **Geo-Textiles**.
 - JGT is one of the most important diversified jute products. It can be applied in many fields like **civil engineering, soil erosion control, road pavement construction and protection of river banks**.
- **Jute SMART:**
 - It is an **e-government initiative** which was launched in December 2016 to promote transparency in the jute sector.
 - It provides an integrated platform for **procurement of sacking by Government agencies**.
- **Collaboration between the National Jute Board and the National Institute of Design, Ahmedabad:**
 - A **Jute Design Cell** for development of Jute Shopping Bags and Lifestyle Accessories has been set up at the Innovative Centre for Natural Fibres (ICNF) of National Institute of Design (NID), Ahmedabad.

Jute

- **Temperature:** Between 25-35°C.
- **Rainfall:** Around 150-250 cm.
- **Soil Type:** Well drained alluvial soil.
- **Production:**
 - India is the **largest producer of jute**.
 - It is **mainly concentrated in eastern India** because of the **rich alluvial soil of Ganga-Brahmaputra delta**.



- Major jute producing states include **West Bengal, Bihar, Odisha, Assam, Andhra Pradesh, Meghalaya and Tripura**.

➤ Uses:

- It is known as the **golden fibre**. It is used in making **gunny bags, mats, ropes, yarn, carpets and other artefacts**.

➤ Government Initiatives:

- **Golden Fibre Revolution and Technology Mission on Jute and Mesta** are two of the government initiatives to boost jute production in India.
 - Due to its **high cost**, it is **losing market to synthetic fibres and packing materials, particularly nylon**.

Increased Foreign Portfolio Investments

Why in News

The **Sensex** has risen 11.36%, post **Union Budget 2021-22** presentation, due to increased **Foreign Portfolio Investments (FPIs)**.

- **Sensex**, otherwise known as the S&P BSE Sensex index, is the **benchmark index of the Bombay Stock Exchange (BSE)** in India. It **comprises 30 of the largest and most actively-traded stocks** on the BSE, and is the oldest stock index in India.
- A **stock** is an investment that represents a share, or

Note:

partial ownership, of a company. Corporations issue (sell) stock to raise funds to operate their businesses.

Key Points

➤ Reasons for Inflow:

○ Increased Liquidity:

- **Stock market is responding to the Budget 2021-22** that has infused liquidity (money supply in market) in the Indian economy and been **pro-growth with privatisation gaining ground**.
- Several reforms aimed at **protecting shareholder rights** and **improving the ease of doing business** have also been a contributing factor.

○ Post Covid Recovery:

- India, with a recovering economy, is moving back to a higher nominal growth trajectory versus the western world (which continues to struggle with the second wave of Covid and related lockdowns) and looks as a credible destination for growth seeking developed world investors.

➤ Sectors Wise Investments:

○ Performing Sectors:

- Sectors like **private banks, Fast-Moving Consumer Goods (FMCG) and Information Technology (IT)** have seen foreign flows as Indian companies have exhibited resilience and demonstrated growth post lifting of the lockdown restrictions.
- In 2020, the **pharma sector** was a preferred choice and the sector did very well.
- The **Banking stocks underperformed due to potential Non-Performing Asset (NPA) concerns**. Now, the banking stocks are again sought after by the FPIs.

➤ Benefit:

○ Build Forex Reserve:

- Increased inflow of investments will conservatively allow to build **forex reserves** so that India has a buffer to maintain resilience in case of any future contagion from excessive liquidity and rising **fiscal deficits**.

Foreign Portfolio Investment

➤ Foreign Capital:

- **FPI and FDI** are both **important sources of funding** for most economies.

Differences Between FDI and FPI

Parameters	FDI	FPI
Definition	FDI refers to the investment made by foreign investors to obtain a substantial interest in the enterprise located in a different country.	FPI refers to investing in the financial assets of a foreign country, such as stocks or bonds available on an exchange.
Role of investors	Active Investor	Passive Investor
Type	Direct Investment	Indirect Investment
Degree of control	High Control	Very low control
Term	Long term investment	Short term investment
Management of Projects	Efficient	Comparatively less efficient
Investment has done on	Physical assets of the foreign country	Financial assets of the foreign country
Entry and exit	Difficult	Relatively easy
Leads to	Transfer of funds, technology, and other resources to the foreign country	Capital inflows to the foreign country
Risks Involved	Stable	Volatile

- A **Foreign Direct Investment (FDI)** is an investment made by a firm or individual in one country into business interests located in another country. **FDI lets an investor purchase a direct business interest** in a foreign country.

- **Example:** Investors can make FDI in a number of ways. Some common ones include **establishing a subsidiary** in another country, **acquiring or merging** with an existing foreign company, or **starting a joint venture partnership** with a foreign company.

- **Foreign portfolio investment (FPI)** consists of securities and other financial assets passively held by foreign investors. It **does not provide the investor with direct ownership of financial assets** and is relatively liquid depending on the volatility of the market.

- **Examples** of FPIs include **stocks, bonds, mutual funds, exchange traded funds, American Depositary Receipts (ADRs), and Global Depositary Receipts (GDRs)**.

➤ Other Details Related to FPI:

- FPI is part of a country's capital account and is shown on its **Balance of Payments (BOP)**.
 - The BOP measures the amount of money flowing from one country to other countries over one monetary year.

Note:

- The **Securities and Exchange Board of India (SEBI)** brought **new FPI Regulations, 2019**, replacing the erstwhile FPI Regulations of 2014.
- **FPI is often referred to as “hot money”** because of its tendency to flee at the first signs of trouble in an economy.
- **FPI is more liquid and less risky than FDI.**

RBI Directives to HFCs

Why in News

Recently, the **Reserve Bank of India (RBI)** issued directives to **Housing Finance Companies (HFCs)**.

- HFC is an **Non-Banking Financial Company (NBFC)** whose financial assets, in the business of providing finance for housing, constitute at least 60% of its total assets.
- The directions, which shall come into force with an **immediate effect**, are aimed at **preventing the affairs of any HFCs** from being conducted in a manner **detrimental to the interest of investors and depositors.**

Key Points

- **Liquidity Risk Management:**
 - All non-deposit taking HFCs with asset size of Rs. 100 crore and above and all deposit taking HFCs (irrespective of asset size) shall pursue **liquidity risk management.**
 - It should cover adherence to gap limits, making use of **liquidity risk monitoring tools** and adoption of stock approach to liquidity risk.
- **Liquidity Coverage Ratio (LCR):**
 - HFCs shall maintain a **liquidity buffer** in terms of **LCR**, which will promote their resilience to potential liquidity disruptions by ensuring that they have sufficient **High-Quality Liquid Asset (HQLA)** to survive any acute liquidity stress scenario lasting for 30 days.
- **Loan-To-Value (LTV) Ratio:**
 - HFCs lending **against the collateral of listed shares** shall maintain a **LTV ratio of 50%.**
 - For loans granted **against the collateral of gold jewellery**, HFCs shall maintain an LTV ratio **not exceeding 75%.**
- **Investment Grade Rating:**

- The RBI also **prevented HFC to accept or renew public deposits** unless it has obtained a minimum investment grade rating for fixed deposits from any one of the approved **credit rating agencies**, at least once a year.
- **Cover for Public Deposits:**
 - The RBI asked HFCs to ensure that at all times, there is full cover available for public deposits accepted by them.
 - In case an HFC **fails to repay** any public deposit or part thereof as per the terms, **it shall not grant any loan or other credit facility or make any investment or create any other asset** as long as the default exists.
 - It also barred HFCs from lending against their own shares.
- **Capital Adequacy Ratio (CAR):**
 - Every housing finance company **shall maintain a minimum CAR** on an ongoing basis.
 - It shall not be less than **13%** as on March, 2020, **14%** on or before March, 2021, and **15% on or before March, 2022.**
- **Lending Limit:**
 - An HFC also cannot lend to any single borrower exceeding **15% of its owned fund**, and any single group of borrowers exceeding 25% of its owned fund.
- **Investment in other Companies:**
 - It also cannot invest in the shares of another company exceeding **15% of its owned fund** and in shares of a single group of companies exceeding **25% of its owned funds.**
- **Market Exposure:**
 - The RBI said the aggregate exposure of an HFC to the capital market in all forms (both fund based, and non-fund based) **should not exceed 40% of its net worth** as on 31st March of the previous year.

Key Words

- **Liquidity:**
 - It is the ability of a firm, company, or even an individual to pay its debts without suffering catastrophic losses.
- **Liquidity risk:**
 - It stems from the **lack of marketability of an investment that can't be bought or sold quickly**

Note:

enough to prevent or minimize a loss. It is typically reflected in unusually wide bid-ask spreads or large price movements.

➤ **Liquidity Risk Management:**

- Liquidity risk management encompasses the processes and strategies a bank uses to:
 - Ensure a **balance sheet earns a desired net interest margin**, without exposing the institution to undue risks from the interest rate volatility.
 - Plan and structure a balance sheet with a proper mix of assets and liabilities, **to optimize the risk/return profile** of the institution going forward.
 - Assess its ability **to meet its cash flow and collateral needs** (under both normal and stressed conditions) without having a negative impact on day-to-day operations or its overall financial position.
 - Mitigate that risk by **developing strategies and taking appropriate actions** designed to ensure that necessary funds and collateral are available when needed.

➤ **Liquidity Coverage Ratio (LCR):**

- It refers to the proportion of highly liquid assets held by financial institutions, to ensure their ongoing ability to meet short-term obligations.

➤ **Loan-To-Value (LTV) Ratio:**

- It is a financial term used by lenders to express the ratio of a loan to the value of an asset purchased.

➤ **Liquidity Buffer:**

- It refers to the stock of liquid assets that a banking organization manages to enable it to meet expected and unexpected cash flows and collateral needs without adversely affecting the banking organization's daily operations.

➤ **Capital Adequacy Ratio (CAR):**

- It is the ratio of a bank's capital in relation to its risk weighted assets and current liabilities. It is also known as **Capital-to-Risk Weighted Asset Ratio (CRAR)**. It is decided by central banks to prevent commercial banks from taking excess leverage and becoming insolvent in the process.

Scheme of Fund for Regeneration of Traditional Industries

Why in News

The **Ministry of Micro, Small & Medium Enterprises (MSME)** inaugurated 50 artisan-based **SFURTI** clusters, spread over 18 States, to provide a boost to the MSME sector.

- The Ministry of MSME is implementing a **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)** with a view to organize traditional industries and artisans into clusters to make them competitive and increase their income.

Key Points

- The Ministry of MSME **launched this scheme in the year 2005** with the view to promote Cluster development.
 - **Khadi and Village Industries Commission (KVIC)** is the nodal Agency for promotion of Cluster development for Khadi as well as for Village Industries products.
- SFURTI clusters are of two types i.e., **Regular Cluster** (500 artisans) with Government assistance of up to Rs. 2.5 crore and **Major Cluster** (more than 500 artisans) with Government assistance up to Rs. 5 crore.
- The Ministry **supports various interventions** including setting up of infrastructure through Common Facility Centers (CFCs), procurement of new machineries, creating raw material banks, design intervention, improved packaging, improved skills and capacity development, etc.
- Besides, the scheme focuses on **strengthening the cluster governance systems** with the active participation of the stakeholders, so that they are able to gauge the emerging challenges and opportunities and respond to them.
 - It is done through building innovative and traditional skills, improved technologies, advanced processes, market intelligence and new models of public-private partnerships, so as to gradually replicate similar models of cluster- based traditional Industries.

Other Recent Initiatives to Promote MSME Sector

- **Udyog Aadhaar Memorandum (UAM):** It is a simple one-page registration form to promote ease of doing business for MSMEs in India.

Note:

- **A Scheme for Promoting Innovation, Rural Industry and Entrepreneurship (ASPIRE):** The scheme promotes innovation & rural entrepreneurship through rural Livelihood Business Incubator (LBI), Technology Business Incubator (TBI) and Fund of Funds for start up creation in the agro-based industry.
- **Credit Guarantee Fund Scheme:** To facilitate easy flow of credit, guarantee cover is provided for collateral free credit extended to MSMEs.
- **Prime Minister's Employment Generation Programme (PMEGP):** It is a credit linked subsidy scheme, for setting up of new micro-enterprises and to generate employment opportunities in rural as well as urban areas of the country.
- **Credit Linked Capital Subsidy Scheme (CLCSS) for Technology Upgradation:** CLCSS aims at facilitating technology upgradation of Micro and Small Enterprises (MSEs) by providing 15% capital subsidy for purchase of plant & machinery.

Anti-Dumping Duty on Steel Imports from China

Why in News

Recently, the Directorate General of Trade Remedies (DGTR) has initiated a probe to **review the need for continuing imposition of anti-dumping duty on certain types of steel products imported from China**, following complaints from domestic industry.

- The duty on the certain **steel products** was first imposed in February 2017 and is set to expire on 16th May 2021.

Directorate General of Trade Remedies

- It is the **apex national authority under the Ministry of Commerce and Industry** for administering all trade remedial measures including anti-dumping, countervailing duties and safeguard measures.
- It **provides trade defence support** to the domestic industry and exporters in dealing with increasing instances of trade remedy investigations instituted against them by other countries.

Key Points

- **About:**
 - Some of the major private domestic producers of

steel have filed an application before the DGTR for a **sunset review of anti-dumping duty** imposed on imports of seamless tubes, pipes and hollow profiles of iron, alloy or non-alloy steel from China.

- The applicants **have alleged that dumping of these products from China has continued even after imposition of anti-dumping duty**, and there has been a significant increase in the volume of imports.
- **DGTR would review the need for continued imposition of the duties** in force and examine whether the expiry of existing duties is likely to lead to continuation or recurrence of dumping and impact the domestic industry.
- **Anti-Dumping Duty:**
 - **About Dumping:**
 - Dumping is said to occur **when the goods are exported by a country to another country at a price lower than the price** it normally charges in its own home market.
 - This is an **unfair trade practice** which can have a distortive effect on international trade.
 - **Objective:**
 - **Imposition of Anti-dumping duty is a measure** to rectify the situation arising out of the dumping of goods and its trade distortive effect.
 - In the long-term, anti-dumping duties **can reduce the international competition of domestic companies** producing similar goods.
 - It is a **protectionist tariff** that a domestic government imposes on foreign imports that it believes are priced below fair market value.
 - The use of anti-dumping measures as an instrument of fair competition is **permitted by the World Trade Organisation**.
 - **Different From Countervailing Duties:**
 - An Anti-Dumping Duty (ADD) is a customs duty on imports providing a protection against the dumping of goods at prices substantially lower than the normal value whereas Countervailing duty is a customs **duty on goods that have received government subsidies** in the originating or exporting country.
- **WTO's Provisions Related to Anti-Dumping Duty:**
 - **Validity:** An anti-dumping duty is **valid for a period of five years** from the date of imposition unless revoked earlier.

Note:

- **Sunset Review:** It can be extended for a further period of five years through a sunset or expiry review investigation.
 - A **Sunset review/ expiry review** is an **evaluation of the need for the continued existence of a program** or an agency. It allows for an assessment of the effectiveness and performance of the program or agency.
 - Such a review **can be initiated suo moto or on the basis of a duly substantiated request** received from or on behalf of the domestic industry.

Flexible Inflation Target

Why in News

The **Reserve Bank of India (RBI)** in its **Currency and Finance (RCF) report** for the year 2020-21 has said that the **current inflation target band (4% +/-2%)** is **appropriate for next 5 years**.

Key Points

➤ Inflation Targeting:

- **Meaning:**
 - It is a **central banking policy** that revolves around **adjusting monetary policy to achieve a specified annual rate of inflation**.
 - The principle of inflation targeting is **based on the belief that long-term economic growth is best achieved by maintaining price stability**, and price stability is achieved by controlling inflation.
- **Strict inflation targeting** is adopted when the central bank is only concerned about keeping inflation as close to a given inflation target as possible, and nothing else.
- **Flexible inflation targeting** is adopted when the central bank is to some extent also concerned about other things, for instance, the stability of interest rates, exchange rates, output and employment.

➤ India's Flexible Inflation Target Framework:

- **Background:**
 - The central bank and the government **agreed in 2015 on a policy framework** that stipulated a primary objective of ensuring price stability while keeping in mind the objective of growth.

- The **Flexible Inflation Target (FIT) was adopted in 2016**. This has **put India on par with other nations in terms of flexible inflation targeting**.
- The **Reserve Bank of India Act, 1934 was amended to provide a statutory basis** for a FIT framework.
- The amended Act **provides for the inflation target to be set** by the Government, in consultation with the RBI, **once every five years**.
- **The FIT Framework:**
 - India **adopted a flexible inflation targeting mandate of 4 (+/-2) percent** and headline **consumer price inflation** was chosen as a **key indicator**.
 - **Purpose:** Inflation targeting is known to bring more stability, predictability, and transparency in deciding monetary policy.
 - This is because of the argument that rising prices create uncertainties and adversely affect savings and investments.
 - **Fixed Accountability:** The framework made the RBI more accountable to explain to the government if it fails to meet the inflation targets.
 - The flip side of this is such targets will restrain the RBI from taking any tight or accommodating monetary policy stance.
- **RBI's Stand (Findings of the RCF Report):**
 - The trend **inflation has fallen from above 9% before FIT to a range of 3.8-4.3 % during FIT**, indicating that **4% is the appropriate level of the inflation target** for the country.
 - An **inflation rate of 6% is the appropriate upper tolerance limit** for the inflation target.
 - On the other hand, **a lower bound above 2% can lead to actual inflation frequently dipping below the tolerance band**.
 - While, **a lower bound below 2% will hamper growth**, indicating that an **inflation rate of 2% is the appropriate lower tolerance bound**.
 - During the FIT period, **monetary transmission has been full and reasonably swift** across the money market (trading in very short-term debt instruments) but less than complete in the **bond markets**.
 - While there has been an improvement in transmission to lending and deposit rates of banks, **external benchmarks** across all categories of loans and deposits could improve transmission.

Note:



Monetary Policy

- It is the macroeconomic policy laid down by the central bank. It involves **management of money supply and interest rate** and is the demand side economic policy used by the government of a country to achieve macroeconomic objectives like inflation, consumption, growth and liquidity.
- In India, monetary policy of the Reserve Bank of India is **aimed at managing the quantity of money in order to meet the requirements of different sectors** of the economy and to increase the pace of economic growth.
- The RBI implements the monetary policy through **open market operations, bank rate policy, reserve system, credit control policy, moral persuasion** and through many other instruments.

Accommodative and Tight Monetary Policy

- To avoid inflation, most central banks alternate between the accommodative monetary policy and the tight monetary policy in varying degrees to encourage growth while keeping inflation under control.
 - **Accommodative monetary policy** is adopted when central banks expand the money supply to boost the economy.

- These measures are meant to make money less expensive to borrow and encourage more spending.
- A **tight monetary policy** is implemented to contract economic growth.
 - Converse to accommodative monetary policy, a tight monetary policy involves increasing interest rates to constrain borrowing and to stimulate savings.

Monetary Policy Committee

- It is a **statutory and institutionalized framework under the Reserve Bank of India Act, 1934**, for maintaining price stability, while keeping in mind the objective of growth.
 - The **Governor of RBI is ex-officio Chairman** of the committee.
- The MPC **determines the policy interest rate (repo rate)** required to achieve the **inflation target (4%)**.
 - An RBI-appointed committee led by the **then deputy governor Urjit Patel in 2014 recommended** the establishment of the Monetary Policy Committee.



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Note:

International Relations

Highlights

- CECPA: India & Mauritius
- Ceasefire Along Line of Control
- India-China Hotline
- FATF Retains Pakistan In Grey List
- India - Maldives
- Quad Meeting
- Transatlantic Alliance
- Boosting Cooperation in South Asia
- New York Convention
- World Trade Organisation
- IAEA - Iran Deal over Nuclear Inspections
- Senkaku Island Dispute

CECPA: India & Mauritius

Why in News

The Union Cabinet has approved signing of the **Comprehensive Economic Cooperation and Partnership Agreement (CECPA)** between India and Mauritius.

- The India-Mauritius CECPA is the **first trade agreement signed by India with a country in Africa.**

Key Points

- **About CECPA:**
 - It is a **kind of free trade pact** that aims to provide an institutional mechanism to encourage and improve trade between the two countries.
 - Under this agreement, countries reduce or eliminate the duties on the products. The countries also give relaxation in the norms to promote the services trade.



Types of Trade Agreements

➤ Free Trade Agreement (FTA):

- A free trade agreement is an agreement in which **two or more countries agree to provide preferential trade terms, tariff concession etc.** to the partner country.
- India has negotiated FTA with many countries e.g. Sri Lanka and various trading blocs as well e.g. **ASEAN.**

➤ Preferential Trade Agreement (PTA):

- In this type of agreement, two or more partners give **preferential right of entry to certain products.** This is **done by reducing duties** on an agreed number of tariff lines.
- Tariffs may even be reduced to zero for some products even in a PTA. **India signed a PTA with Afghanistan.**

➤ Comprehensive Economic Partnership Agreement (CEPA):

- Partnership agreement or cooperation agreement are **more comprehensive than an FTA.**
- CEPA covers negotiation on the trade in services and investment, and other areas of economic partnership.
- India has signed **CEPAs with South Korea and Japan.**

➤ Comprehensive Economic Cooperation Agreement (CECA):

- CECA generally covers **negotiation on trade tariff and TRQ (Tariff Rate Quotas) rates only.** It is **not as comprehensive as CEPA.** India has signed **CECA with Malaysia.**

Note:

➤ India-Mauritius CECPA:

○ About:

- It is a **limited agreement** that will cover only select sectors. It will cover Trade in **Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement**, etc.

○ Benefit to India:

- More than 300 domestic goods from agriculture, textiles, electronics and other sectors will **get market access at concessional customs duties** in Mauritius.
- **Indian service providers will have access to around 115 sub-sectors from the 11 broad service sectors**, such as professional services, computer related services, research & development, other business services, etc.

○ Benefit to Mauritius:

- It will benefit from **preferential market access into India for its 615 products**, including frozen fish, speciality sugar, biscuits, fresh fruits, juices, mineral water, beer, alcoholic drinks, soaps, bags, medical and surgical equipment, and apparel.
- **India has offered around 95 sub-sectors from the 11 broad services sectors**, including professional services, R&D, other business services, telecommunication, environmental, health, etc.

○ Negotiation on Automatic Trigger Safeguard Mechanism (ATSM):

- India and Mauritius have also agreed to negotiate an Automatic Trigger Safeguard Mechanism (ATSM) for some highly sensitive products within two years of the signing of the agreement.
- ATSM **protects the country from any sudden or dramatic increase in imports**.
- Under this mechanism, if the imports of a product are rising alarmingly, then after reaching a certain **threshold**, India can impose **safeguard duties** on imports from Mauritius automatically. The same provision applies to Mauritius as well against Indian imports.

➤ India-Mauritius Economic Relations:

- India had extended a '**Special Economic Package**' of USD 353 million to Mauritius in 2016. The **New Mauritius Supreme Court** building project is one

of the projects implemented under this package. This was jointly inaugurated by both the countries in 2020.

- India and Mauritius have jointly **inaugurated the Phase-I of the Metro Express Project** and the **100-bed state of the art ENT hospital project** in Mauritius, also built under the special economic package.
- According to the **International Trade Centre (ITC)**, in 2019, the **main import partners of Mauritius** were **India (13.85%), China (16.69%), South Africa (8.07%), and UAE (7.28%)**.
- The bilateral trade between India and Mauritius has registered a **growth of 233%** from **USD 206.76 million** in the Financial Year (FY) **2005-06** to **USD 690.02 million** in FY **2019-20**.
- **Mauritius** was the **second top source of Foreign Direct Investment (FDI)** into India in **2019-20**.

➤ Other Recent Developments:

- India and Mauritius signed a **USD 100 million Defence Line of Credit** agreement
- Mauritius would get a **Dornier aircraft and an Advanced Light Helicopter Dhruv on lease** which would build its **maritime security capabilities**.
- The two sides also **discussed the Chagos Archipelago dispute**, which was an issue of sovereignty and sustainable development before the **United Nations (UN)**.
 - In **2019**, **India voted at the UN General Assembly in support of the Mauritian position on the issue**. India was one of the 116 countries that voted demanding that the UK end its "colonial administration" from the group of islands.
- India **delivered 1,00,000 Covishield vaccines** to Mauritius.



Ceasefire Along Line of Control

Why in News

India and Pakistan have agreed to observe the **2003 ceasefire agreements** along the **Line of Control (LoC)** and all other sectors.

Note:



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- The agreement comes in the wake of over 5000 instances of Cross Fire Violations (CFVs) along the Line of Control (LoC) and other areas in Jammu and Kashmir, resulting in 46 fatal casualties in 2020.
- The decision was taken after discussion between the two **Director Generals of Military Operations (DGsMO)**.

Key Points

➤ 2003 Ceasefire Agreements:

- The **original ceasefire agreement was reached in November 2003**, four years after the **Kargil War (1999)**.
- The 2003 ceasefire agreement remains a milestone as it **brought peace along the LoC until 2006**. Between 2003 and 2006, not a single bullet was fired by the jawans of India and Pakistan.
- But since 2006, ceasefire violations have become the norm with increasing frequency.



➤ Backchannel Diplomacy:

- Several **signs indicate that back channel diplomacy led up to the talks** and helped produce a joint statement between the two sides, beginning with **Pakistan Army chief General's call for resolving the Kashmir issue "peacefully"** earlier in the month of February 2021.
- Pakistan **supported India's five proposals for collaboration at the South Asian** level on containing Covid-19.
- **India allowed the aircraft carrying Pakistan Prime Minister a clear passage to Sri Lanka**, where the Pakistani leader declared a USD 50 million defence line of credit for Colombo.
- However, during these apparent signs of back channel negotiations, **both sides have maintained their respective positions on the Kashmir issue**.
 - After the Pakistan government moved to provide **provisional provincial status for Gilgit Baltistan** in November 2020, India hit out saying Gilgit Baltistan was an "integral part of India".

➤ Significance of the Latest Re-commitment to the 2003 Agreement:

- The agreement **may contribute to an improvement of the security situation on the ground in Kashmir**.
- India has often alleged that many of the ceasefire violations were aimed at providing cover to infiltrating militants. **Infiltration attempts may now drop**, and go some way in **meeting a key Indian demand on cross-border terrorism**.

➤ India - Pakistan Recent Developments:

- The two sides **last connected at the highest level during the Christmas day of 2015**, when Indian Prime Minister landed in Lahore for an unannounced visit to meet Pakistani Prime Minister.
- Dialogue broke down soon thereafter because of the **Pathankot airbase attack** of 2nd January, 2016, which was **followed by the attack at the garrison in Uri** and the **Indian response with a surgical strike** along the border.
- Bilateral ties **continued to nosedive because of the Pulwama terror attack** of 14th February, 2019, and the **Balakot operation by India**.

Line of Control

- The Line of Control (LoC) **emerged from the 1948 ceasefire line negotiated by the United Nations (UN)** after the Kashmir War.
- It was designated as the LoC in 1972, **following the Shimla Agreement** between the two countries.
- LoC is **demarcated upto the Siachen Glacier (Point NJ9842)**- the world's highest battlefield.
- LoC is delineated on a map signed by the Director General of Military Operations (DGMO) of both armies and has the international sanctity of a legal agreement.

Back Channel Diplomacy

- The back channel diplomacy is **one of the diplomatic tactics practiced by states** to achieve the objectives of foreign policy in solving international disputes **outside official bureaucratic structures and formats**.
- It takes place away from the eyes and lenses of the media in order to ensure the confidentiality of information and keep them away from official and media trading until they reach the target.

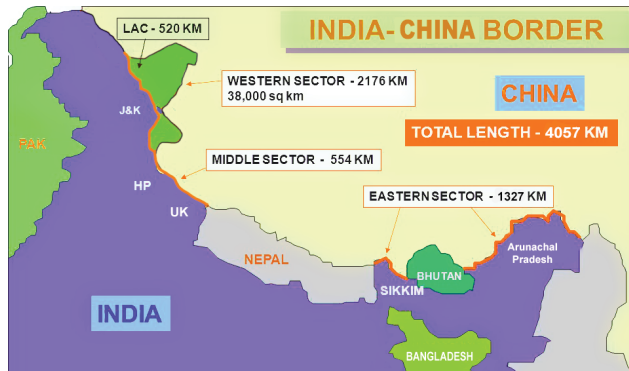
Note:



India-China Hotline

Why in News

Recently, India and China announced that both have agreed to establish a **Hotline**.



Key Points

- **Hotline:**
 - The decision to install a **Hotline** between the two countries was taken over a telephonic meeting between India's External Affairs Minister and China's Foreign Affairs Minister.
 - Hotline is a **direct telephone line** in constant operational readiness so as to facilitate immediate communication.
 - The Hotline will be helpful in timely communication and exchange of views between the two countries.
- **India's Stand:**
 - Reiterated the '**three mutuals**' (mutual respect, mutual sensitivity and mutual interests) as the approach to the relationship.
 - Disengagement, followed by de-escalation, will lead to peace along the **Line of Actual Control (LAC)**, and eventually normalisation of ties.
- **China's Stand:**
 - The boundary situation should not be placed at the front and centre of the relationship, but instead at a "proper place" in overall ties.
 - The indication was the **two sides should return to business as usual** while the issue is dealt with.
- **Recent Developments:**
 - **May 2020:** Chinese and Indian forces clashed at **Nathu La, Sikkim** (India).
 - After the Sikkim scuffles, tensions between the

two countries rose in Ladakh, with a multi-place mobilization of troops.

- **June 2020:** Indian and Chinese armies were engaged in the **standoff in Pangong Tso, Galwan Valley**, Demchok and Daulat Beg Oldie in eastern Ladakh which became the heart of the recent **LAC tensions**.
- **June 2020:** India banned **59 apps originating from China**.
- **November 2020:** India blocked 43 new mobile apps, **mostly Chinese**.
 - The ban has been enforced under **Section 69A of the Information Technology Act, 2000**.
- **February 2021:** India and China decided to finally reach an **agreement on disengagement at Pangong Lake**.

FATF Retains Pakistan In Grey List

Why in News

The **Financial Action Task Force (FATF)** has decided to retain Pakistan on the "greylist" till the next review of its performance on its recommendations during the June Plenary session.

Key Points

- **Background:**
 - During the **October-2020 Plenary**, due to the **Covid-19 pandemic**, Pakistan was given an **extension** for full compliance with the 27-point action plan till February 2021.
 - It had then not fully complied with 6 of the 27 directives.
 - The **FATF had issued the 27-point action plan** after placing **Pakistan on the 'Grey List' in June 2018**. The action plan pertains to curbing **money laundering** and terror financing.
- **About:**
 - FATF **acknowledged Pakistan's significant progress in combating terrorism**, however it was **still to fully comply with three of the 27-point action plan**.
 - The **three points** pertain to **effective steps in terms of financial sanctions and penalties** against the terror funding infrastructure and the entities involved.

Note:

- After assessing the measures taken during the June 2021 session, the FATF would verify the implementation and test the sustainability of reforms undertaken by Pakistan, to review its inclusion or exclusion on the grey list.
- **Significance:**
 - In Pakistan's case, the **FATF has taken cognisance of the inaction against several banned organisations** involved in raising funds for terror activities and those linked to global terrorists like Jaish-e-Mohammed chief Masood Azhar and **Lashkar-e-Taiba's** Hafiz Saeed and its operations chief Zaki-Ur Rahman Lakhvi.
 - On several occasions, India has also raised the involvement of elements within Pakistan in a number of terror cases, including the **26/11 Mumbai** and **Pulwama attacks**.
 - Perpetual containment of Pakistan on the grey list of FATF would further pressurise Pakistan to take adequate measures to prevent such terrorist attacks on India from its soil.

Financial Action Task Force

- **About:**
 - It is an inter-governmental body established in 1989 during the **G7 Summit** in Paris.
 - The FATF assesses the strength of a country's anti-money laundering and anti-terror financing frameworks, however it does not go by individual cases.
- **Objectives:**
 - To set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.
- **Headquarters:**
 - Its Secretariat is located at the **Organisation for Economic Cooperation and Development (OECD)** headquarters in **Paris**.
- **Member Countries:**
 - The FATF currently has **39 members** including two regional organisations — the European Commission and **Gulf Cooperation Council**. **India** is a member of the FATF.
- **Lists under FATF:**

- **Grey List:**
 - Countries that are considered **safe haven for supporting terror funding and money laundering** are put in the FATF grey list.
 - This inclusion serves as a warning to the country that it may enter the blacklist.
- **Black List:**
 - Countries known as **Non-Cooperative Countries or Territories (NCCTs)** are put in the blacklist.
 - These countries support terror funding and money laundering activities.
 - The FATF revises the blacklist regularly, adding or deleting entries.
- **Sessions:** The **FATF Plenary** is the decision making body of the FATF. It meets **three times per year**.

India - Maldives

Why in News

- Recently, India and the Maldives have signed a **defence Line of Credit agreement worth USD 50 million**.
- The agreement was **signed during the visit by the External Affairs Minister of India to Maldives**.

Key Points

- **Defence Line of Credit:**
 - It was **signed pursuant to the request by the Government of Maldives in April 2013 for India's support and cooperation** in enhancing the capability of the Maldives Defence Forces in maritime surveillance, and subsequent requests in October 2015 and March 2016.
 - It is seen as key to India's and Maldives' strategic interests, particularly **given China's increasing footprint in the Indian Ocean Region**.
- **Assistance to Build Dockyards:**
 - A dockyard will be developed at the **Uthuru Thila Falhu (UTF) Naval Base** with Indian assistance, a few miles northwest of Male, which will strengthen the Maldivian defence capabilities.
 - The agreement is **part of the defence action plan signed in 2016** by then Maldivian President Abdulla Yameen Abdul Gayoom during a visit to India.

Note:



- Indicating deepening security cooperation, an agreement to develop, support and maintain a **Maldives National Defence Force Coast Guard**



Harbour at Sifavaru was also signed.

- India will also support development of other infrastructure needed for the harbour, support the development of communications resources and radar services, and provide training.
- **Countering Terrorism:**
 - Agreed to convene the first meeting of the Joint Working Group on Counter Terrorism, countering Violent Extremism and **De-radicalisation** at the earliest.
- **Review of Infrastructure Projects:**
 - A number of India-backed infrastructure projects including the National College of Policing and Law Enforcement Studies.
- **Collaboration at Multilateral Bodies:**
 - Discussed collaboration at multilateral bodies like the General Assembly and Security Council of the **United Nations Organisation**.
 - The Maldivian side **assured India of its support for permanent membership of India** at the “expanded and reformed” UN Security Council.
 - **India has also extended support for the candidature of the Maldives** for the Presidency of the 76th session of the General Assembly.
- **Cooperation for Police Reforms:**
 - Noted progress on institutionalising linkages between the police organisations to support collaboration and cooperation in training management and exchange of trainers and trainees.

India - Maldives Relations

- **Geo-Strategic Importance of Maldives to India:**
 - **Maldives, a Toll Gate in Indian Ocean:**
 - Located at the southern and northern parts of this island chain lies the two important **sea lanes of communication (SLOCs)**.
 - These SLOCs are critical for maritime trade flow between the Gulf of Aden and Gulf of Hormuz in West Asia and the Strait of Malacca in Southeast Asia.

- Nearly 50% of India’s external trade and 80% of its energy imports transit these SLOCs in the Arabian Sea.

- **Part of Important Groupings:** Besides, Maldives is a member of the **South Asian Association for Regional Cooperation (SAARC)** and the **South Asia Subregional Economic Cooperation (SASEC)**.
- **Cooperation Between India & Maldives:**
 - **Security Cooperation:** Through the decades, India has rushed emergency assistance to the Maldives, whenever sought.
 - In 1988, when armed mercenaries attempted a coup against President Maumoon Abdul Gayoom, India sent paratroopers and Navy vessels and restored the legitimate leadership under **Operation Cactus**.
 - India and Maldives conduct the **joint military exercise ‘Ekuverin’**.
 - **Disaster Management:** The 2004 tsunami and the drinking water crisis in Male a decade later were other occasions when India rushed assistance.
 - The Maldives has been one of the biggest beneficiaries of the Covid-19 assistance and **vaccines delivered** by India among India’s all of neighbouring countries.
 - When the world supply chains were blocked because of the pandemic, India continued to provide crucial commodities to the Maldives under **Mission SAGAR**.
 - **People To People Contact:** Maldivian students attend educational institutions in India and patients fly here for superspeciality healthcare, aided by a **liberal visa-free regime extended by India**.
 - **Economic Cooperation:** Tourism is the mainstay of Maldivian economy. The country is now a major tourist destination for some Indians and a job destination for others.
 - Given the geographical limitations imposed on the Maldives, India has exempted the nation from export curbs on essential commodities.
- **Irritants in Relations:**
 - **Political Instability:** India’s major concern has been the impact of political instability in the neighbourhood on its security and development.
 - The February 2015 arrest of Maldives’ opposition leader Mohamed Nasheed on terrorism charges

Note:

and the consequent political crisis have posed a real diplomatic test for India's neighbourhood policy.

- **Radicalisation:** In the past decade or so, the number of Maldivians drawn towards terrorist groups like the Islamic State (IS) and Pakistan-based madrassas and jihadist groups has been increasing.
 - Political instability and socio-economic uncertainty are the main drivers fuelling the rise of Islamist radicalism in the island nation.
 - This gives rise to the possibility of Pakistan based terror groups using remote Maldivian islands as a launch pad for terror attacks against India and Indian interests.
- **China Angle:** China's strategic footprint in India's neighbourhood has increased. The Maldives has emerged as an important 'pearl' in China's "**String of Pearls**" construct in South Asia.
 - Given the uncertain dynamics of Sino-Indian relation, China's strategic presence in the Maldives remains a concern.
 - Also, the Maldives have started using the China card to bargain with India.

Quad Meeting

Why in News

Recently, **India joined Australia, Japan and the United States** for a ministerial meeting under the **Quadrilateral grouping** (Quad) and discussed issues across Indo-Pacific and the **military takeover in Myanmar**.

Key Points

- **Meeting Highlights:**
 - Discussed contemporary challenges, especially the **impact of Covid-19** and agreed to enhance access to affordable vaccines, medicines and medical equipment.
 - Discussed countering **disinformation, counter-terrorism, maritime security**, and the "priority of **strengthening democratic resilience** in the broader region".
 - Emphasised their commitment to **upholding a rules-based international order**, underpinned by **respect for territorial integrity and sovereignty**, rule of law, transparency, **freedom of navigation**

in the international seas and peaceful resolution of disputes.

- Reiterated their "common vision for a free, open and inclusive Indo-Pacific region, with clear support for **ASEAN** cohesion and centrality", and noted that the **Indo-Pacific concept** had "gathered growing international support, including in Europe".
- Discussed **climate change** and cooperation in **humanitarian assistance and disaster relief and supply chain resilience**.
- Agreed on **holding ministerial meetings of the Quad at least once a year** and meetings at senior and working levels on a regular basis to bolster cooperation on advancing a free and open Indo-Pacific.
- **Significance:**
 - The meeting, held in the backdrop of the ongoing **withdrawal of Chinese forces from positions** along the Line of Actual Control, underlines that India's interest in the Quad is not tactical but profoundly strategic.
 - **For India**, the Quad is also about **addressing the growing power imbalance with China** that has manifold consequences for India's security and prosperity as well its regional and international standing.
 - It signalled the **new USA administration's commitment to the Quad** as a key formation in the Indo-Pacific.
 - The momentum behind the Quad picked up in 2020 in the wake of the **Covid-19 crisis**, **China's growing assertiveness**, and deterioration of **China's bilateral relations with all Quad partners**.
 - **Chinese officials** have likened the **Quad to a "mini NATO"** and said its activities are aimed at **targeting third parties**, a charge rejected by the four members of the group.
 - **NATO (North Atlantic Treaty Organisation)** is a **political and military alliance** whose primary goals are the collective defence of its members and the maintenance of a democratic peace in the North Atlantic area.

Quad

- Quadrilateral Security Dialogue (Quad) is an **informal strategic dialogue between India, USA, Japan and Australia** with a shared objective to ensure and support a "free, open and prosperous" Indo-Pacific region.

Note:



- The idea of Quad was first mooted by former Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it, apparently due to Chinese pressure.
- In December 2012, Shinzo Abe again floated the concept of Asia's "Democratic Security Diamond" involving Australia, India, Japan and the USA to safeguard the maritime commons from the Indian Ocean to the western Pacific.
- In November 2017, India, the USA, Australia and Japan gave shape to the long-pending "Quad" Coalition to develop a new strategy to keep the critical sea routes in the Indo-Pacific free of any influence (especially China).
- In 2020, all four Quad Countries - Japan, India, Australia and the USA took part in the Malabar exercise.
 - Malabar exercise is an annual trilateral naval exercise between the navies of India, Japan, and the USA which is held alternately in the Indian and Pacific Oceans.

- However, this historic, long-established friendship between the world's two largest economies has become strained in recent years.
- **Transatlantic Trade and Investment Partnership (T-TIP):**
 - T-TIP is an ambitious, comprehensive, and high-standard trade and investment agreement being negotiated between the United States and the European Union (EU).
 - The TTIP negotiations were launched in 2013 and ended without conclusion at the end of 2016.
 - T-TIP will be a cutting edge agreement aimed at providing greater compatibility and transparency in trade and investment regulation, while maintaining high levels of health, safety, and environmental protection.

➤ Reason for Strained Relations:

- The Donald Trump (former) administration flaunted its foreign policy through an "America First" lens.
- The former American president not only attacked the North Atlantic Treaty Organization (NATO) - the fundamental structure of transatlantic alliance but also withdrew from virtually all multinational agreements recently championed by the European Union (EU), such as the Iran nuclear deal and the Paris climate agreement.
- The USA and the EU appear to be at odds with each other currently regarding their China interests, particularly on the economic and trade front.

➤ Significance of the Latest Declaration:

- A boost to multilateralism.
- Concerned with maintaining its global strategic primacy, the USA was once equivocal about European defence and strategic autonomy. But as power has shifted eastward, subsequent USA governments have been keen to devote as much attention, money, and military muscle as possible to the Indo-Pacific.
- The Alliance can lead to development of an EU-USA carbon border adjustment mechanism, and can help in averting most catastrophic impacts of climate change.
- On Iran, Europeans can anticipate renewed negotiations on a revamped nuclear deal aimed at de-escalating tensions across the region.

Transatlantic Alliance

Why in News

The USA President Joe Biden in his first address to the annual Munich Security Conference declared that the 'transatlantic alliance is back' and stressed the need to defend democracy around the world.

- The USA President intended to improve the strained relationship between the USA and other European allies.
- The Munich Security Conference is an annual conference on international security policy that has taken place in Munich, Bavaria (Germany) since 1963.

Key Points

- **About:**
 - The Transatlantic Alliance has been the cornerstone of the post-World War II world order.
 - It is a real-world expression of West - of a sense that both sides of Atlantic are in it together.
 - It is the foundation on which the collective security and shared prosperity of the USA and Europe are built.

Note:



North Atlantic Treaty Organization

- **Establishment:** North Atlantic Treaty Organization (NATO) was **established by the North Atlantic Treaty (also called the Washington Treaty)** of 4th April, 1949, by the United States, Canada, and several Western European nations to provide collective security against the Soviet Union.
 - NATO provides a **unique transatlantic link** for political and security cooperation.
- **Headquarters:** Brussels, Belgium.
- **Functioning:**
 - NATO is a **political and military alliance** whose primary goals are the collective defence of its members and the maintenance of a democratic peace in the North Atlantic area.
 - NATO has an **integrated military command structure** but very few forces or assets are exclusively its own.
 - Most forces remain under full national command and control until member countries agree to undertake NATO-related tasks.
 - All 30 allies have an equal say, the Alliance's decisions must be unanimous and consensual, and its members must respect the basic values that underpin the Alliance, namely democracy, individual liberty and the rule of law.
- **Members:** As of 2020, there are **30 member states**, with **North Macedonia (2020) becoming the latest member** to join the Alliance.
 - Member Countries: Albania, Belgium, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, the United Kingdom, Montenegro, North Macedonia and the United States.

- Germany's Merkel spoke about the **need of a transatlantic policy towards Russia**.

Boosting Cooperation in South Asia

Why in News

Recently, the Prime Minister **suggested that**

neighbouring countries should consider creating a special visa scheme for doctors and nurses, so that they could travel quickly within the region during health emergencies, on the request of the receiving country.

- This suggestion was made during a workshop on **'Covid19 Management: Experience, Good Practices and Way Forward'** hosted by India with **nine neighbouring nations, including Pakistan**.
- The eight members of the **South Asian Association for Regional Cooperation (SAARC)** and **Mauritius and Seychelles** participated in the workshop.
- **SAARC** comprises the following **member States**: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Key Points

- **Measures Proposed by India in the Workshop:**
 - Creating a **special visa scheme** for doctors and nurses.
 - The **civil aviation ministries** should coordinate on a **regional air ambulance agreement** for medical contingencies.
 - Creating a **regional platform** for collating, compiling and studying data about the **effectiveness of Covid-19 vaccines** among populations.
 - A **regional network** for promoting technology assisted epidemiology **for preventing future pandemics**.
 - **Sharing of successful public health policies** and schemes.
 - From India, **Ayushman Bharat** and **Jan Arogya schemes** may be useful case-studies for the region.
- **Other Highlights:**
 - Barring Pakistan, which hasn't requested vaccines from India, the other participating **countries thanked India for supplies of vaccines**, medicines and equipment amid the pandemic.
 - **South Asia was among the first regions** to come together in recognising the threat (Covid-19) and committing to fight it together.
 - The countries in the region created a **Covid-19 emergency response fund** and shared resources, equipment and knowledge.
 - The region shares many **common challenges** – climate change, natural disasters, poverty, illiteracy, and social and gender imbalances, and also **share**

Note:



the power of centuries-old cultural and people-to-people linkages.

- **Significance:**
 - The participation of all the SAARC members including Pakistan has opened **an opportunity to resolve the issues among its members** and restart the regional development cooperation initiatives such as South Asian Free Trade Area (SAFTA).
- **SAARC Issues:**
 - **Lack of Unanimity:**
 - Consensus building continues to be a challenge on major decisions. For e.g. During the 18th SAARC Summit in Kathmandu in 2014, the signing of the **SAARC motor vehicle agreement (MVA)** had to be stalled as Pakistan declined to it.
 - **Tussle Between Countries:**
 - Most of the smaller states and external players believe that the **India-Pakistan conflict** has undermined SAARC.
 - Pakistan's use of terror as an instrument of foreign policy has made normal business impossible. Therefore, India pulled out of the summit that was to be held in Pakistan in 2016 in the aftermath of the Uri terror attack.
 - **Dispute between Pakistan and Afghanistan over the Durand line**, is also a reason for tussle within SAARC.
 - **Domination by India:**
 - India's economic position vis-a vis other SAARC countries, has often been the subject of criticism that India acts as a big brother rather than a strategic partner.
 - **Marginalisation by Other Organisations:**
 - SAARC has become almost marginal to the regions' collective consciousness and other organisations such as the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** came into the forefront.

New York Convention

Why in News

Recently, **Cairn Energy** has filed a case, in accordance with the **New York Convention**, in the USA district court to enforce a USD 1.2 billion arbitration award it **won in a tax dispute against India**.

Key Points

- **About:**
 - The **Convention on the Recognition and Enforcement of Foreign Arbitral Awards**, also known as the "**New York Arbitration Convention**" or the "**New York Convention**", is one of the key **instruments in international arbitration**.
 - **Arbitration** is a procedure in which a dispute is submitted, by agreement of the parties, to one or more arbitrators (an independent person/body) who make a binding decision on the dispute.
 - It applies to the **recognition and enforcement of foreign arbitral awards** and the **referral by a court to arbitration**.
 - The Convention was adopted by the **United Nations (UN)** following a diplomatic conference held in May and June 1958 at the UN Headquarters in New York, and entered into force on **7th June, 1959**.
- **Parties to Convention:**
 - The Convention has **166 state parties** (Countries).
 - **India** is a party to the Convention.
- **Aim:**
 - The Convention's principal aim is that **foreign and non-domestic arbitral awards should not be discriminated against by courts** asked to enforce them.
 - It obliges Contracting States to ensure foreign awards are recognised and generally capable of enforcement in their jurisdiction in the same way as domestic awards.
 - To require courts of Contracting States to **uphold valid arbitration agreements and stay court proceedings** in respect of matters which the parties have agreed should be resolved by arbitration.
 - By signing up to the Convention, a **state agrees that its courts will respect and enforce parties' agreements to arbitrate, and to recognise and enforce any resulting arbitral award in its jurisdiction** subject to only very limited grounds for refusal.

World Trade Organisation

Why in News

Nigeria's **Ngozi Okonjo-Iweala** was appointed as **Director-General** of the **World Trade Organisation (WTO)**, the leading international trade body.

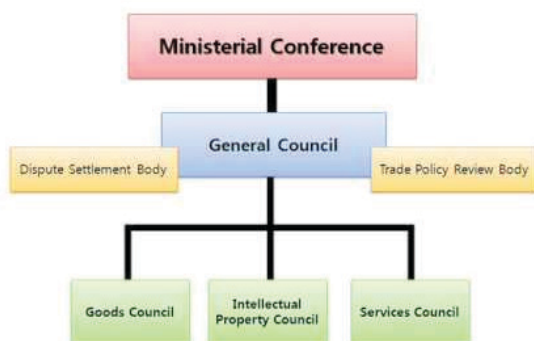
Note:

- **Ngozi Okonjo-Iweala** is the **first African official** and the **first woman** to hold the position.

Key Points

- **Origin of WTO:**
 - The WTO is the successor to the **General Agreement on Tariffs and Trade (GATT)**, which was created in 1947.
 - The **Uruguay Round (1986-94)** of the GATT led to the WTO's creation. WTO began operations on 1st January, 1995.
 - The Agreement Establishing the WTO, commonly known as the **"Marrakesh Agreement"**, was signed in Marrakesh, Morocco in 1994.
- **About:**
 - WTO is an **international organization** dealing with the rules of trade between nations.
 - Main difference between GATT and WTO was that **GATT mostly dealt with trade in goods, the WTO and its agreements could not only cover goods but also trade in services and other intellectual properties** like trade creations, designs, and inventions.
 - **Headquarters:** Geneva, Switzerland.
- **Members:**
 - The WTO has **164 members** (including **European Union**) and **23 observer governments** (like Iran, Iraq, Bhutan, Libya etc).
 - **India is a founder member** of the 1947 GATT and its successor, the WTO.
- **Governing Structure:**
 - **Ministerial Conference:**
 - Structure of the WTO is dominated by its highest authority, the Ministerial Conference, **composed**

Structures of WTO



of representatives of all WTO members, which is required to **meet at least every two years** and which can take decisions on all matters under any of the multilateral trade agreements.

- **General Council:**
 - It is **composed of all WTO members** and is **required to report to the Ministerial Conference**.
- **Dispute Settlement Body and Trade Policy Review Body:**
 - General Council convenes in two particular forms:
 - **Dispute Settlement Body:** To oversee the dispute settlement procedures.
 - **Trade Policy Review Body:** To conduct regular reviews of the trade policies of individual WTO members.

Objectives:

- To set and **enforce rules for international trade**.
- To provide a **forum for negotiating and monitoring** further trade liberalization.
- To **resolve trade disputes**.
- To **increase the transparency** of decision-making processes.
- To **cooperate with other major international economic institutions** involved in global economic management.
- To **help developing countries** benefit fully from the global trading system.

Achievements of WTO:

- **Global Facilitation of Trade:**
 - By **building binding rules for global trade** in goods and services, WTO has facilitated dramatic growth in cross-border business activity.
 - The WTO has not only **enhanced the value and quantity of trade but has also helped in eradicating trade and non-trade barriers**.
- **Improved Economic Growth:**
 - Since 1995, the value of **world trade has nearly quadrupled**, while the **real volume of world trade has expanded by 2.7 times**.
 - Domestic reforms and market-opening commitments have resulted in the lasting boost to national income of nations.
- **Increased Global Value Chains:**
 - The predictable market conditions fostered by the WTO, have combined with improved

Note:

communications to **enable the rise of global value chains**, trade within these value chains today accounts for almost 70% of total merchandise trade.

○ **Upliftment of Poor Countries:**

- The least-developed countries receive extra attention in the WTO. All the WTO agreements recognize that they must benefit from the greatest possible flexibility, and **better-off members must make extra efforts to lower import barriers on least-developed countries' exports.**

➤ **Recent Challenges:**

○ **China's State Capitalism:**

- China's state-owned enterprises present a major challenge to the free-market global trading system and the rulebook of the WTO is inadequate for addressing these challenges.
- It is due to this that **USA-China** are also engaged in **Trade war**.

○ **Institutional Issues:**

- The **Appellate Body's operations have effectively been suspended** since December 2019, as the USA's blocking of appointments has left the body without a quorum of adjudicators needed to hear appeals.
- The **crisis with the dispute settlement function of the WTO** is closely linked to the breakdown in its negotiation function.

○ **Lack of Transparency:**

- There is a problem in WTO negotiations as **there is no agreed definition of what constitutes a developed or developing country** at the WTO.
- Members can currently self-designate as developing countries to receive 'special and differential treatment' – a practice that is the subject of much contention.

○ **E-commerce & Digital Trade:**

- While the global trade landscape has changed significantly over the past 25 years, WTO rules have not kept pace.
- In 1998, realizing that **e-commerce** would play a growing role in the global economy, WTO members established a WTO e-commerce moratorium to examine all trade-related issues relating to global electronic commerce.

- Recently, however, the moratorium has been called into question by developing countries because of its implications for collecting revenue.

○ **Agriculture and Development:**

- **Agreement on agriculture** is facing issues due to food security and development requirements for developing countries like India.

IAEA - Iran Deal over Nuclear Inspections

Why in News

Iran and the **International Atomic Energy Agency (IAEA)** have agreed to temporary measures to offset Iran's decision to restrict access to inspectors.

- In December 2020, Iran's Parliament passed the law demanding a suspension of some inspections if the USA failed to lift sanctions.

Key Points

➤ **About:**

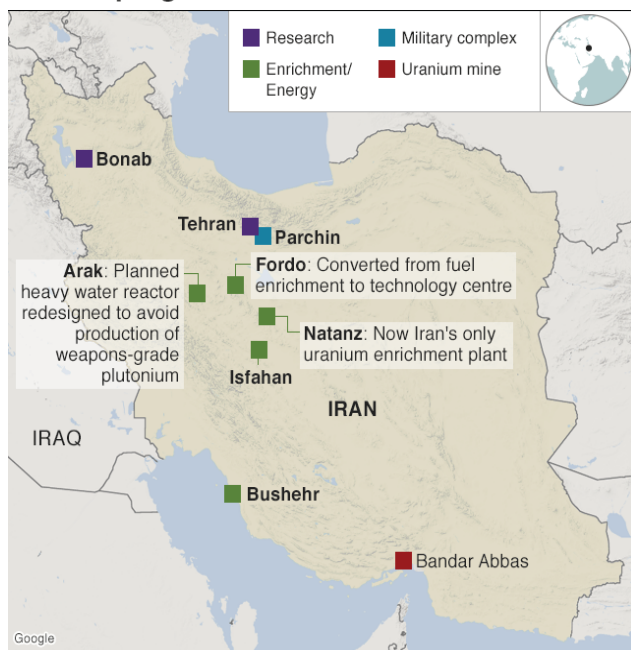
- Iran will **stop the implementation of the voluntary measures** as envisaged in the **2015 nuclear deal**, as of 23rd February 2021.
- However, Iran will **continue to implement** fully and without limitation its **Comprehensive Safeguards Agreement with the IAEA as before**.
- Under a **comprehensive safeguards agreement**, the IAEA has the right and obligation to ensure that safeguards are applied on all nuclear material in the territory, jurisdiction or control of the State for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive.
- No access will be given to the IAEA beyond safeguards of the **Non-Proliferation Treaty**.
- Iran would **deny the IAEA real-time access to footage from surveillance cameras** installed at some sites and, if sanctions are not lifted within three months, delete it.
- **Significance of the Deal:**
 - It certainly seems likely to **defuse a mounting sense of crisis surrounding Iran's nuclear activities** and efforts to **breathe new life into the 2015 nuclear deal**.

Note:



- It **significantly reduces the impact of a new Iranian law**, passed in 2020, which would have seriously hampered the IAEA's ability to do its work.
- **2015 Nuclear Deal:**
 - In 2015, Iran with the **P5+1** group of world powers - the USA, UK, France, China, Russia, and Germany agreed on a long-term deal on its nuclear programme.
 - The deal was named as **Joint Comprehensive Plan of Action (JCPOA)** and in common parlance as Iran Nuclear Deal.
 - Under the deal, Iran agreed to curb its nuclear activity in return for the lifting of sanctions and access to global trade.
 - The agreement allowed Iran to accumulate small amounts of uranium for research but it **banned the enrichment of uranium**, which is used to make reactor fuel and nuclear weapons.
 - Iran was also required to **redesign a heavy-water reactor** being built, whose spent fuel could contain plutonium suitable for a bomb and to **allow international inspections**.
- **USA Abandoning the Deal in 2018:**
 - In May 2018, the USA abandoned the deal criticising it as flawed and reinstated and tightened its sanctions.

Changes agreed under Iran deal to limit nuclear programme



- Since sanctions were tightened, Iran has been steadily breaking some of its commitments to pressure the remaining signatories to find a way to provide sanctions relief.
- The USA held that it would attempt to force all countries to stop buying Iranian oil and put pressure on Iran to negotiate a new nuclear accord.
- **IAEA's Stand:**
 - In 2018, an International Atomic Energy Agency's report concluded that Iran's stockpile of uranium and heavy water, as well as its implementation of additional protocols, were "in compliance" with the agreement.

International Atomic Energy Agency

- **About:**
 - Widely known as the world's "**Atoms for Peace and Development**" organization within the **United Nations** family, the IAEA is the international centre for cooperation in the nuclear field.
- **Establishment:**
 - The IAEA was created in 1957 in response to the deep fears and expectations generated by the discoveries and diverse uses of nuclear technology.
- **Headquarter:** Vienna, Austria.
- **Objective:**
 - The Agency works with its Member States and multiple partners worldwide to promote safe, secure and peaceful use of nuclear technologies.
 - In 2005, it was awarded the **Nobel Peace Prize** for their work for a safe and peaceful world.
- **Functions:**
 - It is an **independent international organization** that reports annually to the **United Nation General Assembly**.
 - When necessary, the IAEA also reports to the UN Security Council in regards to instances of members' non-compliance with safeguards and security obligations.

Senkaku Island Dispute

Why in News

Recently, China called the **Japan-USA mutual security pact** a product of the **Cold War** following USA's criticism of the presence of Chinese coast guard vessels in Japanese-claimed territorial waters.

Note:

Key Points

➤ About:

- The 1960 Japan-USA mutual security treaty **assures the USA would come to Japan's aid in the event of an outside attack on Japanese** forces or territory.
- The USA criticized China as the Chinese ships have been **repeatedly encroaching the Japanese territorial waters** surrounding the **Senkaku island**.
- Whereas China has long accused the USA of maintaining a **"Cold War mentality"** due to which it tries to bring Japan in its Bloc against China.



➤ The Senkaku Island Dispute:

○ About:

- The Senkaku Island dispute concerns a territorial dispute over a group of uninhabited islands known as:
 - **Senkaku Islands** in Japan,
 - **Diaoyu Islands** in China, and
 - **Tiaoyutai Islands** in Taiwan.

- Both Japan and China claim ownership of these islands.

○ Location:

- Eight uninhabited islands lie in the **East China Sea**. They have a total area of about 7 sq km and lie **northeast of Taiwan**.

○ Strategic Importance:

- Islands are close to strategically important shipping lanes, offer rich fishing grounds and are thought to contain oil deposits.

○ Japan's Claim:

- After **World War II**, Japan renounced claims to a number of territories and islands including Taiwan in the **1951 Treaty of San Francisco**.
- But under the treaty, the Nansei Shoto islands came under USA trusteeship and were then returned to Japan in 1971.
- Japan says that **Senkaku islands are part of the Nansei Shoto islands** and hence they also belong to Japan.
 - Recently, **a local council in southern Japan has approved a bill** to change the name of an area containing Senkaku Islands from Tonoshiro to Tonoshiro Senkaku.
- Besides, **China raised no objections to the San Francisco deal**. Only since the 1970s, when the issue of oil resources in the area emerged, Chinese and Taiwanese authorities began pressing their claims.

○ China's Claim:

- These Islands have been part of its territory since ancient times, serving as important fishing grounds administered by the province of Taiwan.
- When Taiwan was returned in the **Treaty of San Francisco**, China said the islands – as part of it – should also have been returned.



Note:

Science and Technology

Highlights

- Epilepsy
- Genetically Modified Organisms as Imported Food Crops
- Airline Mapping of Ocean Floor
- National Technology Awards 2020
- NASA's Mars 2020 Mission
- Bhuvan Portal
- Sandes: Government Instant Messaging System
- Bhuvan Portal
- Beema Bamboo Crash Barrier
- Silver Antimony Telluride: A Material to Tap Waste Heat

Epilepsy

Why in News

Recently, a major drugmaker has developed the **Active Pharmaceutical Ingredient (API)** and the finished dosage formulation of Brivanext, a drug for **epilepsy**.

Key Points

- **Epilepsy:**
 - Epilepsy is a central nervous system (neurological) disorder in which brain activity becomes abnormal, causing seizures or periods of unusual behavior, sensations, and sometimes loss of awareness.
 - Epilepsy is the fourth most common neurological disorder and affects people of all ages.
 - Anyone can develop epilepsy, but it's more common in young children and older adults. It occurs slightly more in males than in females.
- **Symptoms:**
 - Alterations to sense of taste, smell, sight, hearing, or touch, dizziness, tingling and twitching of limbs, Staring blankly, unresponsiveness, performing repetitive movements.
 - It may or may not involve loss of awareness or consciousness.
- **Cure:**
 - There's **no cure for epilepsy**, but the disorder can be managed with medications and other strategies.
- **Initiative to Raise Awareness:** In 2019, a report **Epilepsy, a public health imperative** was released by the **World Health Organization**.

- It is the first global report on epilepsy summarizing the available evidence on the burden of epilepsy and the public health response required at global, regional and national levels.

Active Pharmaceutical Ingredients (APIs)

- APIs, also called bulk drugs, are significant **ingredients in the manufacture** of drugs. The Hubei province of China is the hub of the API manufacturing industry.
- India is heavily import-dependent for APIs from China. India's API imports stand at around \$3.5 billion per year, and around 70%, or \$2.5 billion, come from China.

Genetically Modified Organisms as Imported Food Crops

Why in News

The **Food Safety and Standards Authority of India (FSSAI)** in a recent order has set 1% threshold for **Genetically Modified Organisms (GMO)** in food crops imported into India.

- Earlier in August 2020, FSSAI had issued the order that 24 food crops the country imports would need a '**non-GM-origin-cum-GM-free certificate**' issued by a competent authority.

Key Points

- **Genetically Modified Organisms (GMOs):**
 - These are **living organisms whose genetic material has been artificially manipulated** in a laboratory through **genetic engineering**.

Note:

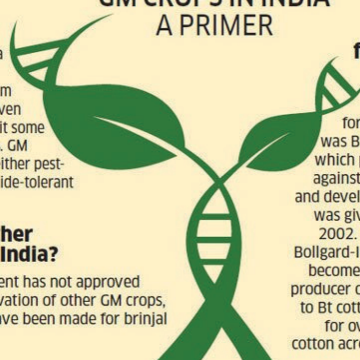


**GM CROPS IN INDIA
A PRIMER**

What is a GM crop?
A crop which has a gene artificially inserted into it from another species, even unrelated, to give it some desired properties. GM crops are mostly either pest-resistant or herbicide-tolerant

When did India get its first GM crop?
The first GM crop variety approved for commercialisation was Bt cotton. Bollgard-I, which provided immunity against the pink bollworm and developed by Monsanto, was given the go ahead in 2002. Monsanto released Bollgard-II in 2006. India has become the world's largest producer of cotton partly due to Bt cotton, which accounts for over 90% of the total cotton acreage in the country

Are there other GM crops in India?
No, the government has not approved commercial cultivation of other GM crops, though efforts have been made for brinjal and mustard



- This creates combinations of plant, animal, bacteria, and virus genes that do not occur in nature or through traditional crossbreeding methods.
- **Genetically Modified Crops:**
 - Conventional plant breeding involves crossing of species of the same genus to provide the offspring with the desired traits of both parents.
 - Genus is a class of items such as a group of animals or plants with similar traits, qualities or features.
 - **Bt cotton** is the only Genetically Modified (GM) crop that is allowed in India. It has alien genes from the soil bacterium *Bacillus thuringiensis* (Bt) that allows the crop to develop a protein toxic to the common pest **pink bollworm**.
 - **Herbicide Tolerant Bt (Ht Bt) cotton**, on the other hand is derived with the insertion of an additional gene, from another soil bacterium, which allows the plant to resist the common herbicide glyphosate.
 - In **Bt brinjal**, a gene allows the plant to resist attacks of fruit and shoot borers.
 - In **DMH-11 mustard**, genetic modification allows cross-pollination in a crop that self-pollinates in nature.
- **Legal Position of GM crops in India:**
 - In India, the **Genetic Engineering Appraisal Committee (GEAC)** is the apex body that allows for commercial release of GM crops.
 - Use of the unapproved GM variant can attract a jail term of 5 years and fine of Rs. 1 lakh under the **Environment Protection Act, 1986**.
- **Regulation of Imported Crops:**
 - The task of regulating GMO levels in **imported consumables** was **initially with the Genetic Engineering Appraisal Committee (GEAC)**.

- Its role was diluted with the enactment of the **Food Safety and Standards Act, 2006** and **FSSAI** was asked to take over approvals of imported goods.

Airline Mapping of Ocean Floor

Why in News

The **Indian National Centre for Ocean Information Services (INCOIS)** is planning to conduct **airline mapping of Andaman and Nicobar Islands and Lakshadweep** to get a better picture of the ocean floor.

- **Lakshadweep Islands** are located in the Arabian Sea. These are **coral islands** located off the coast of Kerala. The **Andaman and the Nicobar Islands** lie to the southeast of the Indian mainland in the Bay of Bengal.

Key Points

- **About ICOIS:**
 - INCOIS is an **autonomous organization** under the **Ministry of Earth Sciences (MoES)**.
 - It is located in **Hyderabad** & was established in 1999.
 - It is a unit of the **Earth System Science Organization (ESSO)**, New Delhi.
 - The ESSO operates as an **executive arm of the Ministry of Earth Sciences (MoES)** for its policies and programmes.
 - **Mandate of INCOIS:** To provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvement through systematic and focused research.
- **Recent Initiative:**
 - The INCOIS is planning to take the help of the **National Remote Sensing Centre (NRSC)** to conduct '**bathymetric**' study of Andaman and Nicobar Islands and Lakshadweep.
 - **NRSC:** It is one of the primary centres of **Indian Space Research Organisation (ISRO)**, Department of Space (DOS).
 - **Bathymetry:**
 - It is the study of the "beds" or "floors" of water bodies, including the ocean, rivers, streams, and lakes.
 - The term "bathymetry" originally referred to the ocean's depth relative to sea level,

Note:

although it has come to mean “submarine topography,” or the depths and shapes of underwater terrain.

- NRSC has already done a similar high resolution topographic **Airborne Laser Terrain Mapping (ALTM)** for entire coastal areas of the country.
 - ALTM is an active remote sensing technology that employs **Light Detection and Ranging (LIDAR)** to measure topography at high spatial resolution over large areas.
 - ALTM pulses a laser to measure the range between an airborne platform and the Earth’s surface at many thousands of times per second.
 - Using a rotating mirror or other scanning mechanism inside the laser transmitter, the laser pulses can be made to sweep through an angle, tracing out a line or other patterns on the reflecting surface.
- The scientists are in the **process of integrating the data for a 3D multi-hazard mapping of both the east and west coastline** for a more precise picture of the ocean floor.
- **Significance:**
 - Such a study has become imperative **in view of the recent tsunamis warning.**
 - Recently, at Indonesian coasts, where more than the quake related high waves, **damage was due to landslides that had under the sea beds** causing sudden wave surge leading to much damage without giving sufficient time to alert people.
- **Other Initiatives:**
 - It had also **identified ‘gaps’ across the coast of Andhra Pradesh and Odisha** for installing more tide gauges for better monitoring of the sea and more accurate prediction of impending disasters like **cyclones.**
 - The INCOIS scientists in association with their counterparts in the **Chennai-based National Institute of Ocean Technology (NIOT)** and an United States independent scientific agency, **Massachusetts-based Woods Hole Oceanographic Institute (WHOI)**, have been mining the data recorded by a unique **‘Flux Buoy’** retrieved from the Bay of Bengal off the Kolkata coast.
 - The buoy was dropped off into the sea to monitor the temperatures, pressures, salinity, radiation and geo-chemical changes at various

depths in a high resolution scale, compared to other buoys in the seas.

➤ **Similar Global Initiative:**

- **Seabed 2030** is a collaborative project between the Nippon Foundation of Japan and the General Bathymetric Chart of the Oceans (GEBCO).
- The project **aims to bring together all available bathymetric data to produce the definitive map of the world ocean floor by 2030** and make it available to all.

National Technology Awards 2020

Why in News

A total of 12 companies have been selected for the National Technology Awards 2020 for successful commercialization of innovative indigenous technologies.

Key Points

- The awards are conferred by the **Technology Development Board (TDB).**
- Every year TDB seeks applications for prestigious National awards for commercialization of technologies under three categories - **Indigenous technologies, MSME, and Startups.**
 - **Category 1: National Award For Successful Commercialization of Indigenous Technology:**
 - This award is given to an industrial concern which has successfully developed & commercialized an indigenous technology.
 - In case, the technology developer / provider and the company commercializing the technology are two different organizations, each is eligible for award of Rs. 25 Lakh and a trophy.
 - **Category 2: National Award For MSMEs:**
 - The award of Rs. 15 lakhs each in this category is given to selected MSMEs that have successfully commercialized the product based on indigenous technology.
 - **Category 3: National Award For Technology Start-ups:**
 - This award is given to a technology start-up for promising new technology with potential for commercialization.

Note:



- The award in addition to the trophy includes a cash award of Rs. 15 Lakh.
- These awards conferred to various industries **provide a platform of recognition to Indian industries and their technology provider**, who have worked as a team, to bring innovation to the market and contributed to the vision of “**Atmanirbhar Bharat**”.

Technology Development Board

- The Technology Development Board is a **statutory body** of the Government of India functioning under the **Department of Science of Technology**. It was established in 1996.
- It provides financial assistance to companies working for commercialization of indigenous technologies and adaptation of imported technologies for domestic applications.
- The **National Technology Day (11th May)** is organised every year by the TDB.

NASA's Mars 2020 Mission

Why in News

National Aeronautics and Space Administration (NASA's) Perseverance Rover has landed on Mars.

- This was one of the most crucial aspects of the **Mars 2020 Mission**.

Key Points

- **About:**
 - The mission is designed to better understand the **geology of Mars** and seek **signs of ancient life**.
- **Objectives:**
 - Assess **ancient habitability**.
 - **Demonstrate technology** for future robotic and human exploration.
- **Duration:** At least one Mars year (about 687 Earth days).
- **Mission Steps:**
 - **Collect:** Perseverance will collect rock and soil samples in cigar-sized tubes. The samples will be collected, the canisters will be sealed, and left on the ground.
 - **Fetch:** A **Mars Fetch Rover (provided by the European Space Agency)** will land, drive, and

collect all samples from the different locations, and return to the lander.

- **Transfer:** These samples will be transferred to the **Mars Ascent Vehicle** which will meet with an Orbiter.
- **Return:** The **Orbiter** will carry the samples back to Earth.

Perseverance Rover

➤ About:

- Perseverance is the most advanced, most expensive and most sophisticated mobile laboratory sent to Mars.
- It is **different from previous missions** because it is capable of drilling and collecting core samples of the most promising rocks and soils, and setting them aside in a “cache” on the surface of Mars.



- **Launch:** 30th July, 2020

- **Landing:** 18th February, 2021

➤ Landing Site:

- **Jezero Crater** (an ancient river delta that has rocks and minerals that could only form in water).

➤ Power Source:

- A Multi-Mission Radioisotope Thermoelectric Generator (MMRTG) which converts heat from the natural **radioactive decay of plutonium (Plutonium Dioxide) into electricity**.

- **Instruments:** It carries seven instruments, two microphones and 23 cameras in total in order to conduct unprecedented science and test new technology on Mars. Few important **instruments** are:

- **Mars Oxygen In-Situ Resource Utilisation Experiment (MOXIE):**

- This will use power to produce oxygen using atmospheric carbon dioxide.
- If successful, it can be scaled up to provide the **two very critical needs** of humans: oxygen for breathing, and rocket fuel for the trip back to Earth.

- **Radar Imager for Mars' Subsurface Experiment (RIMFAX):**

- RIMFAX will provide high resolution mapping and also look for subsurface water on Mars.

Note:

- **Mars Helicopter:**
 - It is actually a small drone to test whether the helicopter can fly in the sparse atmosphere on Mars. The low density of the Martian atmosphere makes the odds of actually flying a helicopter or an aircraft on Mars very low.
- **Mastcam-Z:**
 - An advanced camera system with panoramic and stereoscopic imaging capability will help determine mineralogy.
- **SuperCam:**
 - It can provide imaging, chemical composition analysis, and mineralogy at a distance.
- **Planetary Instrument for X-ray Lithochemistry (PIXL):**
 - An X-ray fluorescence spectrometer and high-resolution imager that will provide capabilities that permit more detailed detection and analysis of chemical elements than ever before.
- **Scanning Habitable Environments with Raman & Luminescence for Organics and Chemicals (SHERLOC):**
 - A spectrometer that will provide fine-scale imaging and uses an ultraviolet (UV) laser to map mineralogy and organic compounds.
 - SHERLOC will be the **first UV Raman spectrometer** to fly to the surface of Mars and will provide complementary measurements with other instruments in the payload.
- **Mars Environmental Dynamics Analyzer (MEDA):**
 - Sensors that will provide measurements of temperature, wind speed and direction, pressure, relative humidity, and dust size and shape.

Mars

➤ Size and Distance:

- It is the **fourth planet from the Sun** and the **second-smallest planet** in the Solar System.
- Mars is about half the size of Earth.

➤ Similarity to the Earth (Orbit and Rotation):

- As Mars orbits the Sun, it completes one rotation every 24.6 hours, which is very similar to one day on Earth (23.9 hours).
- Mars' axis of **rotation is tilted 25 degrees** with respect to the plane of its orbit around the Sun. This is similar with Earth, which has an axial tilt of 23.4 degrees.

- Like Earth, Mars has distinct seasons, but they last longer than seasons on Earth since Mars takes longer to orbit the Sun (because it's farther away).
- Martian days are called sols—short for '**solar day**'.

➤ Surface:

- It has colors such as brown, gold and tan. The reason Mars looks reddish is due to oxidation or rusting of iron in the rocks, and dust of Mars. Hence it is also called **Red Planet**.
- Mars has the **largest volcano in the solar system i.e. Olympus Mons**. It's three times taller than Earth's Mt. Everest with a base the size of the state of New Mexico.

➤ Atmosphere:

- Mars has a thin atmosphere made up mostly of carbon dioxide, nitrogen and argon gases.

➤ Magnetosphere:

- Mars has no magnetic field till date, but areas of the Martian crust in the southern hemisphere are highly magnetized, indicating traces of a magnetic field.

➤ Moons:

- Mars has two small moons, **Phobos and Deimos**, that may be captured asteroids.

➤ Previous Mars Missions:

- The **Soviet Union in 1971** became the first country to carry out a Mars landing, Mars 3.
- The second country to reach Mars's surface is the **United State of America (USA)**. Since 1976, it has achieved 8 successful Mars landings, the latest being the '**InSight**' in 2019.
- **European Space Agency** has been able to place their spacecraft in Mars's orbit through the **Mars Express Mission**.

➤ India's Mars Orbiter Mission (MOM) or Mangalyaan:

- It was launched from the Satish Dhawan Space Centre in Andhra Pradesh by **Indian Space Research Organisation** in November 2013.
- It was launched on board a PSLV C-25 rocket with aim of studying Martian surface and mineral composition as well as scan its atmosphere for methane (an indicator of life on Mars).

➤ Reasons for Frequent Missions to Mars: There are **two primary** reasons:

Note:



- **Similar to Earth:**
 - First, Mars is a planet where life may have evolved in the past. Conditions on early Mars roughly around 4 billion years ago were very similar to that of Earth.
 - It had a thick atmosphere, which enabled the stability of water on the surface of Mars.
 - If indeed conditions on Mars were similar to those on Earth, there is a real possibility that microscopic life evolved on Mars.
- **Most Suitable among Other Planets:**
 - Mars is the only planet that humans can visit or inhabit in the long term. Venus and Mercury have extreme temperatures – the average temperature is greater than 400 degree C. All planets in the outer solar system starting with Jupiter are made of gas – not silicates or rocks – and are very cold.
 - Mars is comparatively hospitable in terms of temperature, with an approximate range between 20 degrees C at the Equator to minus 125 degrees C at the poles.

Bhuvan Portal

Why in News

Recently, **Indian Space Research Organisation (ISRO)** and **MapmyIndia** have partnered to come up with an **indigenous geospatial portal** known as 'Bhuvan'.

- This is in line with the above discussed new **guidelines for the Geo-Spatial Sector** in India.

Key Points

- **Geospatial Portal (Bhuvan):**
 - It is a type of web portal **used to find and access geographic information** (geospatial information) **and associated geographic services** (display, editing, analysis, etc.) **via the Internet.**
- **The Collaboration:**
 - **MapmyIndia's database** will be connected with **ISRO's high-end satellite catalogue and earth observation data**, which it generates through a constellation of its satellites.
 - The collaboration will enable them to jointly identify and build a holistic **geospatial portal**

utilising earth observation datasets, **Navigation in Indian Constellation (NavIC)**, Web Services and **APIs** (application programming interface) available in MapmyIndia.

- **API is a software intermediary** that allows two applications to talk to each other.
- It is a computing interface that defines **interactions between multiple software intermediaries**

➤ Significance of the Portal:

○ True Maps:

- Its services will **reflect the true borders of the country** as per the information available from Government of India.

○ Protects Privacy:

- By using MapmyIndia maps and applications instead of the foreign map apps, **users can better protect their privacy.**
- As foreign search engines and companies claim to offer 'free' maps, but in reality, they make money by targeting the same users with advertising, by **invading the user's privacy and auctioning private location and movement data.** However there is no such provision of advertisement in MapmyIndia.

- **Atma Nirbhar Bharat:** Being an Indian platform, it is well aligned with the government's Mission of **Atma Nirbhar Bharat.**

➤ MapmyIndia:

○ About:

- It is an **Indian technology company** that builds digital map data, telematics services, Global Information System and **Artificial Intelligence** services.
- It is an alternative to **Google Map**, which covers as many as 7.5 lakh Indian villages and 7,500 cities.

○ Database:

- The database has a road network connected by 63 lakh km and the organisation claims to consist of the most exhaustive digital map database of the country.

○ Use:

- Almost all the vehicle manufacturers in India who come with built-in navigation systems are using MapmyIndia.

Note:



- **Other Products:**
 - App called 'Move' that provides **real-time traffic updates and navigation.**

Navigation in Indian Constellation (NavIC)

➤ About:

- It is an **Indian Regional Navigation Satellite System (IRNSS)**, developed by the Indian Space Research Organization (ISRO).
 - IRNSS consists of **eight satellites**, three satellites in geostationary orbit and five satellites in geosynchronous orbit.
- It works just like the established and popular **U.S. Global Positioning System (GPS)** but within a 1,500-km radius over the sub-continent.
- It has been **certified by the 3rd Generation Partnership Project (3GPP)**, a **global body for coordinating mobile telephony standards.**

➤ Objective:

- The main objective is to **provide reliable position, navigation and timing services** over India and its neighbourhood.

➤ Potential Uses:

- Terrestrial, aerial and marine navigation;
- Disaster management;
- Vehicle tracking and fleet management (especially for mining and transportation sector);
- Integration with mobile phones;
- Precise timing (as for ATMs and power grids);
- Mapping and geodetic data capture.

➤ Other Global Navigational Systems:

- **BeiDou / BDS** (China)
- **Galileo** (Europe)
- **GLONASS** (Russia)
- **Quasi-Zenith Satellite System (QZSS)** (Japan)

Sandes: Government Instant Messaging System

Why in News

The **National Informatics Centre (NIC)** has launched an **instant messaging platform** called **Sandes** on the lines of WhatsApp.

- NIC is under the aegis of the **Ministry of Electronics and**

Information Technology. It provides network backbone and e-Governance support to the Central Government, State Governments and UT Administrations.

Key Points

➤ Sandes App:

○ About:

- It is a **Government Instant Messaging System (GIMS)** that can be used for official or casual use by any Government employee or public user having a valid Mobile No./Email ID.

○ Features:

- It offers features such as group making, broadcast message, message forwarding and emojis.
- Although there is **no option to transfer the chat history between two platforms**, the **chats on GIMS can be backed up** to a users' email.
- The **user will have to re-register as a new user** in case they wish to change their registered Email Id or phone number on the App.
- It **allows a user to mark a message as confidential**, which will allow the recipient to be made aware the message should not be shared with others.

➤ Significance:

○ Ensures Secure Communication:

- The **Computer Emergency Response Team (Cert-In)** and the **Ministry of Home Affairs** in April, 2020 had **issued an advisory to all government employees to avoid using platforms like Zoom** for official communication over safety and privacy concerns.

○ Promoting Indigenous Products:

- The launch of the App is also a **part of the government strategy to push for use of India-made software** so as to build an ecosystem of indigenously developed products.

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- **Objective:**
 - To **provide reliable position, navigation and timing services** over India and its neighbourhood.
- **Potential Uses:**
 - Terrestrial, aerial and marine navigation;
 - Disaster management;
 - Vehicle tracking and fleet management (especially for mining and transportation sector);
 - Integration with mobile phones;
 - Precise timing (as for ATMs and power grids);
 - Mapping and geodetic data capture, etc.
- **Other Global Navigational Systems:**
 - **BeiDou / BDS** (China).
 - **Galileo** (Europe).
 - **GLONASS** (Russia).
 - **Quasi-Zenith Satellite System (QZSS)** (Japan).

Note:

Beema Bamboo Crash Barrier

Why in News

Experts from the Visvesvaraya National Institute of Technology (VNIT), Nagpur, are working on the design of crash barriers made of beema bamboo and coir.

- These are being developed as a **low-cost alternative to steel barriers** to reduce accident deaths on highways.

Key Points

- **Background:**
 - **Road Accidents:**
 - Around **1.5 lakh people die every year** in close to **5 lakh road accidents** in India. Over a third of those accidents happen on the highways.
 - Currently, India is engaged in a project to remove accident-prone “**black spots**” and **rectify road designs on highways** with loans to the tune of **Rs. 14,000 crore** from the **Asian Development Bank** and **World Bank**.
 - **Cost of Conventional Crash Barriers:**
 - Crash barriers are typically meant to prevent vehicles from going off highways and should there be an accident, the barrier will cushion the impact and minimise the chance of fatality to the extent possible.
 - **Conventional crash barriers made of metal and alloy may cost around Rs. 2,000 per metre.** Around **5% of the cost** of the entire bouquet of work involved in making India’s highways go into road furniture.
- **About Beema Bamboo Crash Barrier:**
 - **Crash Barrier:**
 - There will be five feet fencing of the bamboo installed deep into concrete slabs and held together by strong coir ropes.
 - The **beema bamboo barrier cost is estimated to be one-third** of conventional metal barriers.
 - **Beema Bamboo:**
 - **Beema or Bheema bamboo** is a type of bamboo engineered to be a **stronger, durable, fast-growing and tall clone of the traditional bamboo** found in the Indian subcontinent, especially the **North-East**. This variety of Bamboo grows well in **southern India**.

- It is the **local product of mainly Karnataka and adjoining areas**.

- **Coir:**
 - Coir, or coconut fibre, is a **natural fibre extracted from the outer husk of coconut** and used in products such as floor mats, doormats, brushes and mattresses.
 - The name **Coir** comes from *kayar*, the **Tamil and Malayalam word for cord or rope**.
- **Significance:**
 - **Tensile Strength:**
 - Bamboo has higher tensile strength than steel because its fibers run axially.
 - **Fire Resistance:**
 - Capability of bamboo to resist fire is very high and it can withstand temperatures up to 400 degree Celsius.
 - **Elasticity:**
 - Bamboo is widely preferred in earthquake prone regions due to its elastic features.
 - **Weight of Bamboo:**
 - Bamboos due to their low weight are easily displaced or installed making it very easy for transportation and construction.

Silver Antimony Telluride: A Material to Tap Waste Heat

Why in News

Scientists at the **Bengaluru-based Jawaharlal Nehru Centre for Advanced Scientific Research**, have found a new material, **Silver Antimony Telluride (AgSbTe₂)**, that can help in tapping waste heat produced by all kinds of domestic and industrial appliances, and use it to accomplish other useful work.

- Basically, the material will **exploit the benefits of thermo-electric effect**. The thermo-electric effect involves the process by which heat is transformed to electrical energy.

Key Points

- **Background:**
 - Traditionally, the **thermo-electric effect has been demonstrated** and utilised by using **two different metals** joined together, and **by mechanically**

Note:



maintaining two different temperatures at the ends. But **such materials do not offer efficient or economical solutions.**

- Further, most materials that conduct electricity, also happen to be good conductors of heat. That means that **there would not be any significant temperature difference between the two ends** of the material for very long.
 - To date, the most efficient thermoelectric materials **use lead as a major constituent element**, but lead has very **adverse environmental impacts** such as air pollution and also causes human health issues.
- **About Silver Antimony Telluride:**
- It is a **nanomaterial** compound synthesised from **Silver, Copper and Tellurium.**
 - A crystalline solid, it has free electrons that help in conduction of electricity but its lattices (arrangement

of atoms) are rather inflexible, and vibrate quite slowly thereby inhibiting the propagation of heat.

- Thus, it is a **good conductor of electricity but a bad conductor of heat**, a property **important for Thermo-electric effect.**
 - There are a **variety of potential applications.** Industrial processes and power plants, along with all kinds of domestic appliances, produce ample amounts of waste heat that can be utilised to do significant amounts of work.
 - The heat from the laptop, for example, can be used to charge a mobile phone. Or, that from the phone can be used to charge a small watch.
- **Challenge:**
- The energy conversion is not a very efficient process. Typically, **not more than 15 to 20% of the waste heat can be utilised.**



drishti

Note:



drishti

Environment and Ecology

Highlights

- *NGT Suggests National River Rejuvenation Mechanism*
- *Migratory Birds and Chilika Lake*
- *Sitanadi-Udanti Tiger Reserve: Chhattisgarh*
- *Report on Winter Pollution: CSE*
- *Olive Ridley Turtles*
- *Making Peace with Nature: UNEP Report*
- *Karlapat Wildlife Sanctuary, Odisha*
- *Gangetic River Dolphin*
- *Mandarin Duck*
- *Pollution from Coal Burning: IEACCC*
- *Coelacanth*
- *World's Smallest Reptile*
- *Greenpeace Analysis on Economic Cost of Air Pollution*
- *Hyderabad: Tree City of the World*
- *Black-Necked Crane*
- *State of Environment Report 2021: CSE*

NGT Suggests National River Rejuvenation Mechanism

Why in News

Recently, the **National Green Tribunal (NGT)** directed the Ministry of **Jal Shakti** to devise an appropriate **National River Rejuvenation Mechanism** for effective monitoring of steps to curb pollution and for rejuvenation of all polluted river stretches across the country.

Key Points

- **Background:**
 - **Assessment of the CPCB:**
 - **Findings:**
 - According to the 2016-17 assessment of the **Central Pollution Control Board (CPCB)**, the **number of polluted stretches of the country's rivers has increased to 351** from 302 two years ago, and the number of critically polluted stretches — where water quality indicators are the poorest — has gone up to 45 from 34.
 - Among them, **117 such river stretches are in the States of Assam, Gujarat, and Maharashtra.**
 - **Basis of the CPCB Assessment:**
 - The CPCB, since the 1990s, has a programme to monitor the quality of rivers primarily by measuring **Biochemical Oxygen Demand (BOD)**,

which is a proxy for organic pollution — the higher it is, the worse the river.

- The CPCB considers a BOD **less than 3 mg/l** an indicator of a healthy river.

○ Initiative Taken:

- The **NGT had constituted a Central Monitoring Committee to prepare and enforce a national plan** to make over 350 river stretches across the country pollution free as it has caused serious threat to safety of water and environment.

➤ About the Latest Direction:

○ Observation:

- There has been **deterioration in the quality of water in rivers in spite of the Water Act** which was enacted way back in 1974 which was intended to bring about improvement.

○ Establishment of NRRM:

- NGT suggested the mechanism could be called '**National River Rejuvenation Mechanism (NRRM)**'. NRRM may consider setting up a **National, State or district environment data grid** at appropriate levels as an effective monitoring strategy.

○ Expansion in the Scope of NRRM:

- The process of **rejuvenation of rivers need not be confined to only 351 stretches** but may be applicable to all small, medium and big polluted rivers, including those dried up.

○ Implementation:

- Effective measures should be taken by **Chief**

Note:



Secretaries of all States and UTs in terms of action plans for abatement of pollution and rejuvenation of rivers.

- The Chief Secretaries are also required to **personally monitor progress at least once every month and the NRRM every quarter.**
- The **accountability** for failure to comply with the direction **for payment of compensation** will be **of the Chief Secretaries concerned.**

➤ **Causes of Polluted River Stretches:**

- Rapid **urbanisation** and lack of efficient **waste disposal** systems.
- **Industrial Cities** on the banks of rivers.
- Run-off from **agricultural activities**, etc.

➤ **Impact of Pollution:**

- The World Bank estimates that the **health costs of water pollution in India equal three percent of India's GDP.**
 - It has also been suggested that **eighty percent of all illnesses in India and one-third of deaths can be attributed to water-borne diseases.**

- The danger Ganga's polluted water poses is not only to the humans but **also to the animals.** Some of the important threatened species include, more than 140 fish species, 90 amphibian species, reptiles such as the **Gharials**, and mammals such as the **South Asian River Dolphin.**

➤ **Related Constitutional Provisions:**

- **Article 21:** The **fundamental right to clean the environment**, and further, pollution-free water, has been protected under the broad rubric of the **right to life.**
- **Article 51-A (g):** It mandates as a **fundamental duty** of every citizen of India to protect and improve the natural environment including forests, lakes, **rivers and wildlife.**

➤ **Initiatives to Tackle Water Pollution:**

- **National Water Policy (2012):**
 - It aims to take cognizance of the existing situation, to propose a framework for creation of a system of laws and institutions and for a plan of action with a unified national perspective.
 - Started by the Ministry of Water Resources, it highlights the importance of water for human existence as well as for economic development related activities.

- It suggests frameworks to conserve water resources through optimal, economical, sustainable and equitable means.

- **National Water Mission (2010):** It ensures integrated water resource management leading to water conservation, less wastage, equitable distribution forming better policies.

- **National Mission for Clean Ganga (NMCG)** which envisages a **five-tier structure at national, state and district level** to take measures for prevention, control, and abatement of environmental pollution in river Ganga.

- It aims to ensure continuous adequate flow of water so as to rejuvenate the river Ganga.

- **Namami Gange Project:** It integrates the efforts to clean and protect the Ganga River in a comprehensive manner.

Migratory Birds and Chilika Lake

Why in News

Migratory birds in and around Chilika lake and Bhitarkanika National Park have started leaving earlier (in February) than other years, as temperatures in Odisha (in and around **Chilika lake**) began to soar.

- The birds usually arrive in the region in November and migrate back around mid-March or early April when the temperature hovers around 39 degree Celsius.

Key Points

- **Migratory Species:** Every year in winter, **migratory birds** arrive at the water bodies around **Chilika Lake**, Asia's largest salt-water lagoon and **Bhitarkanika**, the second-largest mangrove forest in India (the **largest being the Sunderbans**, West Bengal).

- They flew in from places as far off as **Siberia, Afghanistan, Iran, Iraq, the Himalayan region and central Europe.**

➤ **Reasons for Early Departure:**

- **Warming of the Region:** The average temperature of Bhubaneswar (located 35 kilometers from Chilika) recorded for the month of February was 34-35 degrees Celsius between 2015 and 2019.

Note:



- **Decreasing Water Levels:** Rising temperature coupled with the **decreasing water levels** in the lake also contributed to this early migration.
- **Chilika Lake:**
 - Chilika is Asia's largest and world's second largest lagoon.
 - It is the **largest wintering ground for migratory birds** on the Indian sub-continent and is home to a number of threatened species of plants and animals.
 - In 1981, Chilika Lake was designated the **first Indian wetland of international importance** under the **Ramsar Convention**.
 - Major attraction at Chilika is **Irrawaddy dolphins** which are often spotted off Satpada Island.
 - The **large Nalabana Island (Forest of Reeds)** covering about 16 sq km in the lagoon area was declared a bird sanctuary in 1987.
 - **Kalijai Temple** - Located on an island in the Chilika Lake.
- **Bhitarkanika National Park:**
 - Bhitarkanika National Park is **one of Odisha's finest biodiversity hotspots** and is famous for its mangroves, migratory birds, turtles, estuarine crocodiles, and countless creeks.
 - The Bhitarkanika is **represented by 3 Protected Areas**, the Bhitarkanika National Park, the Bhitarkanika Wildlife Sanctuary and the Gahirmatha Marine Sanctuary.
 - Bhitarkanika is **located in the estuary of Brahmani, Baitarani, Dhamra, and Mahanadi river systems**.

Migratory Species in India

- India is a temporary home to several migratory animals and birds.
- The important among these include **Amur Falcons, Bar-headed Geese, Black-necked cranes, Marine turtles, Dugongs**, Humpback Whales, etc.
- The Indian sub-continent is also part of the major bird flyway network, i.e, the **Central Asian Flyway (CAF)** that covers areas between the Arctic and Indian Oceans.
- India has also **launched the National Action Plan** for the conservation of migratory species under the Central Asian Flyway as India is a party to **Convention on Migratory Species (CMS)**.

- It is said to **house 70% of the country's estuarine or saltwater crocodiles**, conservation of which was started way back in 1975.

Sitanadi-Udanti Tiger Reserve: Chhattisgarh

Why in News

Thousands of **tribals** living in villages located in the **core areas of Sitanadi Udanti Tiger Reserve** are protesting and demanding the recognition of their **Community Forest Resource rights**.

- Community Forest Resource (CFR) rights are given under the **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA)**.
- The **tiger reserves are constituted on a core/buffer strategy**. The core areas have the legal status of a national park or a sanctuary, whereas the buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple use area.

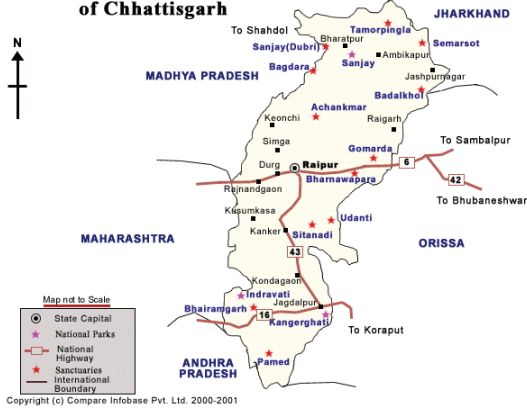
Key Points

- **Provisions of the Forest Rights Act (FRA):**
 - **About:**
 - The Forest Rights Act (FRA) 2006 recognizes and vest 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.
 - 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.
 - **Individual Rights:** Encompasses Rights of Self-cultivation and Habitation.
 - **Community Rights:** Such as Grazing, Fishing and access to Water bodies in forests, Habitat Rights for **Particularly Vulnerable Tribal Groups (PVTGs)**, right to protect, regenerate or conserve or manage any **community forest resource** for sustainable use etc.

Note:



National Parks & Sanctuaries of Chhattisgarh



- **Community Forest Resource Rights:** These are rights of Adivasi and OTFDs over customary common forest land within the traditional or customary boundaries of the village or seasonal use of landscape in the case of pastoral communities.

- These can be recognised over any forest land including reserved forests, protected forests and protected areas such as **Sanctuaries and National Park**.

➤ **About Sitanadi-Udanti Tiger Reserve:**

- **Establishment:**
 - Sitanadi-Udanti Tiger Reserve **came into existence in the year 2008-09**, are two separate reserves (Udanti & Sitanadi Wildlife Sanctuaries) combined together.
- **Location:** It is located in the **Gariaband district, Chhattisgarh**.
- **Ecological Diversity:**
 - It contains various types of **forest crop** mixed with **Sal forest**.
 - **Asiatic Wild Buffalo** is the key endangered species found in the Core Area.
 - Apart from the tiger, other endangered and rare species are Indian Wolf, **Leopard, Sloth Bear** and Mouse Deer.
- **Rivers:**
 - **Sitanadi River** originates in the middle of Sitanadi Wildlife sanctuary.
 - **Udanti River** flows from the west to east covering a major part of the Udanti Wildlife sanctuary.

➤ **Other Tiger Reserves in Chhattisgarh:**

- **Achanakmar Tiger Reserve.**
- Indravati Tiger Reserve.

Report on Winter Pollution: CSE

Why in News

Recently, the **Centre for Science and Environment (CSE)** reported that the **levels of PM 2.5, worsened in 43 out of 99 cities** whose winter air was compared for two years, 2020 and 2019.

- **PM 2.5** refers to **fine particulate matter smaller than 2.5 micrometers** in diameter. It causes respiratory problems and also reduces visibility. It is an **endocrine disruptor** that can affect insulin secretion and insulin sensitivity, thus contributing to diabetes.
- **CSE** is a public interest research and advocacy organisation based in New Delhi. It researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable.

Key Points

➤ **Findings:**○ **Worst Performers:**

- The cities with the worst pollution spikes in 2020 over 2019 include Gurugram, Lucknow, Jaipur, Visakhapatnam, Agra, Navi Mumbai, and Jodhpur. Kolkata is the only mega city in this group.
- When ranked from the most to the least polluted cities, **23 of the most polluted cities are from north India**.
- **Ghaziabad is the most polluted city in the northern belt**.

➤ **Best Performers:**

- **Only 19 registered "substantial improvement"** in PM 2.5 levels, one of these was **Chennai**.
- There are only **four cities** (Satna, Mysuru, Vijaypura and Chikkamagaluru) that have met the **national 24-hour standard (60 µg/m³)** during the winter season.
- **Satna and Maihar** in Madhya Pradesh, and **Mysuru** in Karnataka, are the **cleanest cities** in the country.

➤ **Seasonal Peak Levels:**

- In 37 cities that are otherwise showing stable or declining seasonal averages, their peak pollution levels have **risen significantly during winter**.
 - These include Aurangabad, Indore, Nashik, Jabalpur, Rupnagar, Bhopal, Dewas, Kochi, and Kozhikode.

Note:

- In North India, other cities, including **Delhi**, have **experienced the reverse**, that is, an increase in the seasonal average but decline in the seasonal peak.
- **Causes of Spike in Winter Pollution:**
 - **Lockdown and Regional Factors:** In the aftermath of the lockdown, several cities reported improved pollution levels but by winter, when lockdowns were significantly eased, pollution levels had clawed back to pre-**Covid-19** levels.
 - This underlines the significant **contribution of local and regional factors** to a city's pollution levels.
 - **Calm Weather:** During winter, cool and calm weather traps and spikes daily pollution, particularly in north Indian cities located in the Indo Gangetic Plain.
 - In 2020, the average level of PM 2.5 during the summer and monsoon months was considerably lower than the previous year due to the summer lockdown.
 - However, the winter PM 2.5 concentration has risen compared to the 2019 winter in many cities across regions.
- **Basis of Analysis:**
 - **Data from Pollution Control Board:** The analysis is **part of the air pollution tracker initiative** of CSE. It's based on publicly available granular real time data from the **Central Pollution Control Board (CPCB)**.
 - **CAAQMS Data:** The data is captured from 248 official stations under the **Continuous Ambient Air Quality Monitoring System (CAAQMS)** spread across 115 cities in 22 States and Union Territories.
 - CAAQMS **facilitates in measuring a real time monitoring of Air Pollution**, including particulate matter, all round the year.
 - It also **displays digitally, other viral statistics of weather**, to include wind speed, direction, ambient temperature, relative humidity, solar radiation, barometric pressure and rain gauge.
- **Significance:**
 - Emphasised that **rather than mega cities, it was the smaller and upcoming cities** that were emerging as **pollution hotspots**.
 - The report findings call for quicker reforms and **action in key sectors of pollution** - vehicles, industry, power plants and waste management to control winter pollution and bend the annual air pollution curve.

- **Initiatives to Control Air Pollution:**
 - **The Commission for Air Quality Management in National Capital Region (NCR) and Adjoining Areas.**
 - **Bharat Stage (BS) VI norms.**
 - **Dashboard for Monitoring Air Quality.**
 - **National Clean Air Programme.**
 - **National Air Quality Index (AQI).**
 - **Air (Prevention and Control of Pollution) Act, 1981.**
 - **Pradhan Mantri Ujjwala Yojana (PMUY).**

Olive Ridley Turtles

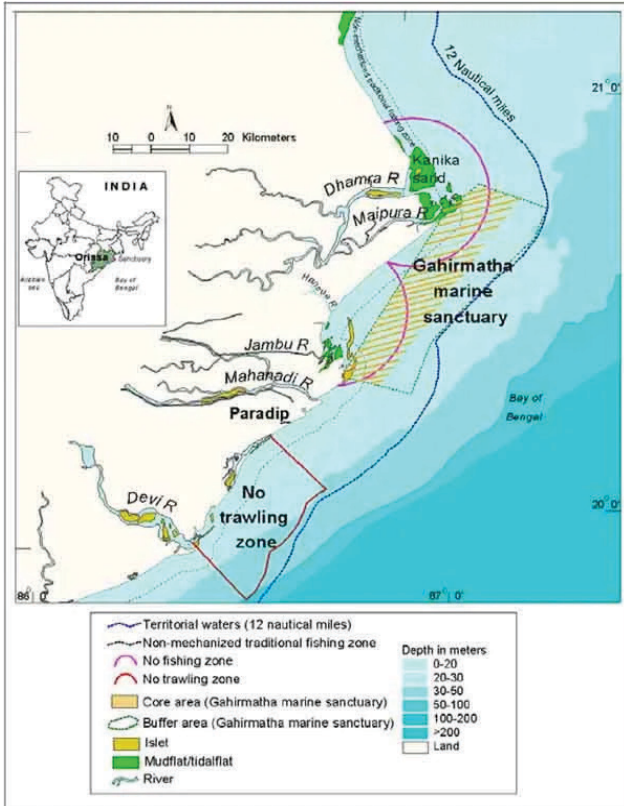
Why in News

The Orissa High Court has taken suo motu cognisance of the death of around 800 **Olive Ridley sea turtles** due to negligence by Odisha's forest and fisheries departments.

Key Points

- **Features of Olive Ridley Turtles:**
 - The Olive ridley turtles are the smallest and most abundant of all sea turtles found in the world.
 - These turtles are carnivores and get their name from their olive colored carapace.
- **Protection Status:**
 - **Wildlife Protection Act, 1972:** Scheduled 1
 - **IUCN Red List:** Vulnerable
 - **CITES:** Appendix I
- **Habitat:**
 - They are found in warm waters of the Pacific, Atlantic and Indian oceans.
 - The Odisha's **Gahirmatha Marine Sanctuary** is known as the world's largest rookery (colony of breeding animals) of sea turtles.
- **Arribada (Mass Nesting):**
 - They are best known for their **unique mass nesting called Arribada**, where thousands of females come together on the same beach to lay eggs.
 - They lay their eggs over a period of five to seven days in conical nests about one and a half feet deep which they dig with their hind flippers.
- **Threats:**
 - **Marine pollution and waste**
 - **Human Consumption:** They are extensively poached for their meat, shell and leather, and eggs.

Note:



- **Plastic Garbage:** An ever-increasing debris of plastics, fishing nets, discarded nets, polythene and other garbage dumped by tourists and fishing workers.
- **Fishing Trawlers:** Overexploitation of marine resources by use of trawlers often violates the rule to not fish 20 kilometres within a marine sanctuary.
 - There were injury marks on many dead turtles indicating they could have been trapped under trawls or gill nets.

Gahirmatha Marine Sanctuary

- Gahirmatha is the mass nesting spot in Indian Ocean region and the only turtle sanctuary in Odisha.
- It is the **world's largest nesting beach** of Olive Ridley Sea Turtles.
- Gahirmatha was declared a **turtle sanctuary in 1997** by the Odisha government after considering its ecological importance and as part of efforts to save the sea turtles.
- Gahirmatha Marine Sanctuary is one of the three parts of the Bhitarkanika National Park. The other two includes the area of Bhitarkanika National Park and the Bhitarkanika Wildlife Sanctuary.

Making Peace with Nature: UNEP Report

Why in News

The **United Nations Environment Programme (UNEP)** has released the 'Making Peace with Nature' report, ahead of the fifth session of the UN Environment Assembly (UNEA-5).

- The Report explains how **climate change, biodiversity loss and pollution add up to three self-inflicted planetary emergencies** that are closely interconnected and put the well-being of current and future generations at unacceptable risk.

Key Points

Findings:

○ Planetary Emergencies:

- **Climate Change:** Climate change is **increasing the chances of the Arctic Ocean being ice-free** in summer, further disrupting ocean circulation and Arctic ecosystems.
 - Climate change **drives changes in wildfires** and water stress and combines with biodiversity loss to **degrade land and enhance drought** in some regions.
- **Biodiversity Loss:**
 - More than one million of the estimated 8 million plant and animal species are increasingly at risk of extinction.
 - **Coral reefs are particularly vulnerable to climate change** and are projected to decline to 10-30% of their former cover at 1.5°C of warming and to less than 1% at 2°C of warming, compromising food provision, tourism and coastal protection.
- **Pollution:**
 - Every year, nine million people die prematurely due to pollution.
 - Up to **400 million tons of heavy metals, solvents, toxic sludge and other industrial wastes** enter the world's waters annually.
- **Widening Inequalities:**
 - Human prosperity is strained by widening inequalities, whereby the **burden of environ-**

Note:

mental decline weighs heaviest on the poor and vulnerable and looms even larger over today's youth and future generations.

- Inequity in economic growth has left 1.3 billion people poor.
- Performance over SDGs:
 - Current and projected changes in climate, biodiversity loss and pollution make achieving the **Sustainable Development Goals (SDGs)** even more challenging.
 - The current mode of development **degrades the Earth's finite capacity** to sustain human well-being.
- Performance over Different Targets:
 - Society is **failing to meet most of its commitments to limit environmental damage**.
 - Society is not on course to achieve **land degradation neutrality, Aichi Targets** and targets of the **Paris Agreement**.
- Suggestions:
 - **Human knowledge, ingenuity, technology and cooperation** can transform societies and economies and secure a sustainable future.
 - Given the interconnected nature of climate change, loss of biodiversity, land degradation, and air and water pollution, it is essential that these problems are **tackled together**.
 - Governments must **scale up and accelerate** action to meet the **Paris Agreement** goals and limit dangerous climate change.
 - **Economic and financial systems** can and must be transformed to lead and power the shift toward sustainability.
 - **Moving to circular economic systems** that reuse resources, reduce emissions and weed out the chemicals and toxins that are causing millions of premature deaths – all while creating jobs.

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.

United Nations Environment Assembly

➤ The United Nations Environment Assembly (UNEA) is the **governing body of the UN Environment Programme**.

➤ It is the world's highest-level decision-making body on the environment.

➤ It **meets biennially** to set priorities for global environmental policies and develop international environmental law.

➤ It was **created in June 2012**, during the United Nations Conference on Sustainable Development, also referred to as RIO+20.

Karlapat Wildlife Sanctuary, Odisha

Why in News

Recently, **six elephants died of Haemorrhagic Septicaemia (HS) in Karlapat Wildlife Sanctuary** located in Odisha's Kalahandi district.

Key Points

➤ Haemorrhagic septicaemia (HS)

○ About:

- It is a disease which infects animals that come in contact with contaminated water or soil by a **contagious bacteria (*Pasteurella multocida*)**.
- In this disease the respiratory tract and lungs of the animals are affected, leading to **severe pneumonia**.

○ Affected Animals:

- It mainly affects water buffalo, cattle and bison with a high mortality rate in infected animals.
- Recently, around 40 buffaloes had succumbed to the infection in Odisha's Kendrapara.

○ Season:

- The disease generally spreads in the period right before and after the **monsoons**.

Note:



Karlapat Wildlife Sanctuary

- **Location:** It is spread over 175 square kilometre area in Odisha's Kalahandi district.
- **Vegetation:** Dry Deciduous Forest.
- **Fauna:**
 - **Mammals:** **Elephant, Leopard, Gaur, Sambar,** Barking deer, Indian wolf, **Malbar giant squirrel, Pangolin,** etc.
 - **Birds:** Peacock, **Hornbill,** Red jungle fowl, etc.
 - **Reptilians:** **Mugger,** crocodile, monitor lizard etc.
- **Flora:** Sal, Bija, Bamboo, medicinal plants, etc.
- **Water Body:** Phurlijharan waterfall is located within the sanctuary.

Major Protected Areas in Odisha

- **National Parks:**
 - **Bhitarkanika National Park:** It is home to the largest congregation of the endangered **SaltWater Crocodile** in the country.
 - **Simlipal National Park:** It derives its name from the **abundance of Semul or red silk cotton trees** that bloom abundantly in the locality.
- **Wildlife Sanctuaries:**
 - **Badrama WLS:** It is characterized by the presence of **Moist Sal Forests**.
 - **Chilika (Nalaban island) WLS:** Asia's largest and world's second-largest lagoon. Recently, direct sightings of school of Irrawaddy dolphins has been reported here.
 - **Hadgarh WLS:** **Salandi river passes** through it which is home to mugger crocodiles.
 - **Baisipalli WLS:** It is a sal dominated forest with a significant number of tigers, leopards, elephants, herbivores like **Chousingha**.
 - **Kotagarh WLS:** It consists of dense deciduous forests with grasslands.
 - **Nandankanan WLS:** First in the world to breed White tiger and Melanistic tiger.
 - **Lakhari Valley WLS:** The Lakhari Valley Sanctuary is a dwelling place of a large number of elephants.
 - **Gahirmatha (Marine) WLS:** It is a mass nesting spot in Indian Ocean region and the only turtle sanctuary in Odisha. **The Olive Ridley turtles** travel across the South Pacific to breed on the coast of Gahirmatha.

Gangetic River Dolphin

Why in News

Recently, a **Gangetic Dolphin** was beaten to death in Pratapgarh, Uttar Pradesh.

- Killing the Gangetic River Dolphin is a punishable offence under the **Wildlife Protection Act, 1972**.



Key Points

- **About:**
 - **Scientific Name:** *Platanista gangetica*
 - The Ganges River Dolphin was **officially discovered in 1801**.
 - Ganges river dolphins live in the **Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh**.
 - The Ganges river dolphin can **only live in freshwater** and is essentially blind.
 - They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to "see" an image in their mind. They are also called '*susu*'.
 - Population of Gangetic river Dolphin is **1200-1800**.
- **Significance:**
 - It is a **reliable indicator** of the **health of the entire river ecosystem**.
 - It was recognised as the **National Aquatic Animal** in 2009, by the Government of India.
- **Threats:**
 - **Bycatch:** These dolphins and people both favor areas of the river where fish are plentiful and the water current is slower. This has led to fewer fish for people and more dolphins dying as a result of accidentally being caught in fishing nets, also known as bycatch.

Note:



drishti

- **Pollution:** Industrial, agricultural, and human pollution is another serious cause of habitat degradation.
- **Dams:** Construction of dams and other irrigation-related projects make them susceptible to inbreeding and more vulnerable to other threats because they cannot move to new areas.
 - Dolphins below a dam are threatened by heavy pollution, increased fishing activities and vessel traffic. They also have less food because dams disturb the migration, breeding cycles and habitat of fish and other prey.
- **Conservation Status:**
 - **Indian Wildlife (Protection), Act 1972: Schedule I.**
 - **International Union for the Conservation of Nature (IUCN): Endangered.**
 - **Convention on International Trade in Endangered Species (CITES): Appendix I** (most endangered).
 - **Convention on Migratory Species (CMS): Appendix II** (migratory species that need conservation and management or would significantly benefit from international co-operation).
- **Steps Taken:**
 - **Project Dolphin:** The Prime Minister announced the government's plan to launch a Project Dolphin in his Independence Day Speech 2020. It will be on the lines of **Project Tiger**, which has helped increase the tiger population.
 - **Dolphin Sanctuary: Vikramshila Ganges Dolphin Sanctuary** has been established in Bihar.
 - **Conservation Plan:** The Conservation Action Plan for the Ganges River Dolphin 2010-2020, which "identified threats to Gangetic Dolphins and impact of river traffic, irrigation canals and depletion of prey-base on Dolphins populations".
 - **National Ganga River Dolphin Day:** The **National Mission for Clean Ganga** celebrates **5th October** as National Ganga River Dolphin Day.

Wildlife Protection Act, 1972

- This Act provides for the **protection of the country's wild animals, birds, and plant species**, in order to ensure environmental and ecological security. Among other things, the Act lays down restrictions on hunting many animal species. The **Act was last amended in the year 2006.**

- The Act **created six schedules** which gave varying degrees of protection to classes of flora and fauna.
 - **Schedule I and Schedule II** get absolute protection, and offences under these schedules attract the maximum penalties.
 - **Schedule 5** includes **species that may be hunted.**

Related Constitutional Provisions

- **Article 48A:**
 - It directs the State to protect and improve the environment and safeguard wildlife and forests. This Article was added to the Constitution by the **42nd amendment** in 1976.
- **Article 51A:**
 - Article 51A imposes certain **fundamental duties** for the people of India. One of them is to protect and improve the natural environment including forests, lakes, rivers, and wildlife and to have compassion for living creatures.

Mandarin Duck

Why in News

Recently, **Mandarin ducks** have been sighted in the **Maguri-Motapung beel in Assam's Tinsukia district** after a century.

Key Points

- **Scientific Name:** *Aix galericulata*
- **Discovery**
 - Mandarin duck was **first identified by Swedish** botanist, physician and zoologist **Carl Linnaeus in 1758.**
- **Characteristics:**
 - It is **considered the most beautiful duck** in the world.
 - **Male mandarins** have elaborate plumage (feathers) with orange plumes on their cheeks, orange 'sails' on their back, and pale orange sides; **females are dull in comparison**, with grey heads, brown backs and white eyestripe.
- **Diet:**
 - These birds may feed on seeds, acorns, small fruit, insects, snails, and small fish.



Note:

➤ Habitat:

- These birds inhabit temperate forests near wetlands including rivers, streams, bogs, marshes, swamps, and freshwater lakes.
- It is native to East Asia but has established populations in Western Europe and America too.
 - It breeds in Russia, Korea, Japan and northeastern parts of China.

➤ Presence in India:

- The duck rarely visits India as it does not fall in its usual migratory route.
- It was recorded in 1902 in the Dibru river in the Rongagora area in Tinsukia (Assam).
- More recently, it was sighted in Manipur's Loktak Lake in 2013, and in Saatvoini Beel in Manas National Park and Tiger Reserve in Assam's Baksa district in 2014.

➤ Status on IUCN Red List : Least Concern.

➤ Maguri-Motapung Beel:

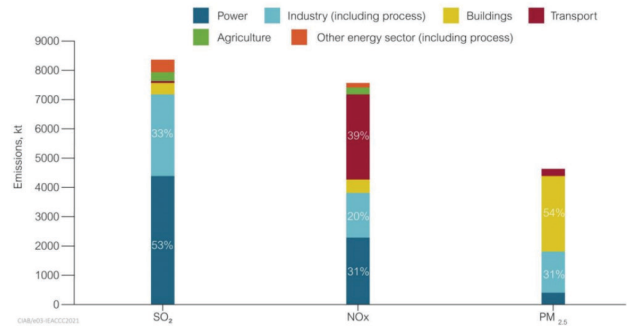
- The Maguri Motapung wetland, an Important Bird Area as declared by the Bombay Natural History Society is located close to the Dibru Saikhowa National Park in Upper Assam.
- In May 2020, the Beel was adversely affected by a blowout and fire at an Oil India Limited-owned gas well.
 - The resulting oil spill killed a number of fish, snakes as well as an endangered Gangetic dolphin.

Pollution from Coal Burning: IEACCC

Why in News

A study by the International Energy Agency's Clean Coal Centre (IEACCC) has stated that coal burning is responsible for heavy air pollution in India.

- Recently, a Delhi-based think tank Centre for Science and Environment (CSE) has also discussed the measures to reduce carbon dioxide (CO₂) footprints of India's coal-based power sector and cautioned the Union Ministry of Environment, Forest and Climate Change (MoEF&CC) against extending the deadline of meeting emission norms for coal-based thermal power plants in the country.



Key Points

➤ Findings:

- **Pollution from Coal-Based Thermal Power Stations:**
 - Coal-based thermal power stations contribute over half sulphur dioxide (SO₂), 30% oxides of nitrogen (NO_x), about 20% particulate matter (PM), etc.
 - Persistent burning of coal in thermal power stations and a delay in implementation of latest carbon capture storage technology are among major reasons of air pollution in India.
- **Pollution from Other Sectors:**
 - Transport and other industrial sectors stand second to coal-based thermal power stations as a contributor to air pollution.

➤ Suggestions:

- **Retirement of Old Fleet of Power Stations:**
 - To limit pollution and improve the fleet efficiency by adopting clean coal technology.
- **Investment in Cleaner and Advanced Technology:**
 - The most new advanced technology plants in India - such as Mundra and Sassan in Gujarat are struggling financially, causing stakeholders to lose confidence in investing in cleaner and advanced technology.
- **Launch More Ambitious Schemes:**
 - The current energy efficiency schemes, including performance and achieve trade scheme, efficiency standards scheme and carbon pricing schemes, are not ambitious enough to drive significant improvement.
- **Adopting Carbon Capture, Utilization, and Storage (CCUS):**
 - It is equally important to reduce emissions. It suggested India to include it as a part of its climate commitment.

Note:

- CCUS is the **process of capturing waste CO₂, transporting it to a storage site** and depositing it where it will not enter the atmosphere.

Coal Burning and Pollution

➤ Coal Formation:

- Formed deep underground over thousands of years of heat and pressure, **coal is a carbon-rich black rock** that releases energy when burned.

➤ Air Pollution:

- When coal is burned, it releases a number of airborne toxins and pollutants.
- They include **mercury, lead, sulfur dioxide, nitrogen oxides, particulates,** and various other **heavy metals.**
- Health impacts can range from **asthma and breathing difficulties, to brain damage, heart problems, cancer, neurological disorders, and premature death.**

➤ Water Pollution:

- The coal-fired power plants **produce more than 100 million tons of coal ash** every year.
 - More than half of that waste ends up in **ponds, lakes, landfills, and other sites where, over time,** it can **contaminate waterways and drinking water supplies.**
- Other water impacts include **acid rock drainage** from coal mines, the destruction of mountain streams and valleys by mountaintop removal mining, and the energy-water collisions that occur when coal plants rely too heavily on local water supplies.

➤ Climate Change:

- Coal is a large contributor to **Global Warming.**

➤ Initiatives to Control Emissions from Power Plants:

○ Exploring CCUS:

- India is exploring its potential, as a plant at the industrial port of Tamil Nadu's Tuticorin has begun **capturing CO₂ from its own coal-powered boiler and using it to make baking soda.**

○ Emission Standard:

- India has issued orders for **thermal power plants to comply with emissions standards for installing Flue Gas Desulphurization (FGD) units** that cut emissions of toxic sulphur dioxide.

○ Graded Action Plan:

- The Ministry of Power has proposed a **"graded action plan,"** whereby areas where plants are located would be graded according to the severity of pollution, with Region 1 referring to critically polluted areas, and Region 5 being the least polluted.

International Energy

Agency's Clean Coal Centre

➤ About:

- It is a **technology collaboration programme,** organised under the **International Energy Agency.**

➤ Members:

- It has **17 members,** made up of **contracting parties and sponsoring organisations.**
- India's **Bharat Heavy Electricals Limited (BHEL)** is a sponsoring organisation.

➤ Location:

- Based in **London** with a team of engineers, scientists and other experts.

➤ Support:

- It is supported financially by **national governments** (contracting parties) and by **corporate industrial organisations.**

➤ Mission:

- To provide independent information and analysis on how coal can become a cleaner source of energy, compatible with the **United Nations Sustainable Development Goals.**
- To **address the role of coal in the energy trilemma** and the need to balance security of supply, affordability and environmental issues.
- To **focus on reducing emissions of CO₂ and other pollutants** from coal use through **High Efficiency, Low Emissions (HELE) technologies.**

Coelacanth

Why in News

Recently, a group of palaeontologists have **discovered fossils of coelacanth, a giant fish regarded as an iconic example of a "living fossil."**

- The **discovered fossil** of Coelacanth is **believed to be 66 million years old** belonging to the **Cretaceous era.**

Note:





Key Points

- **About:**
 - Coelacanths are **elusive, deep-sea creatures**, living in depths up to 2,300 feet below the surface.
 - These were **thought to have gone extinct with the dinosaurs 65 million years ago**. But its **discovery in 1938** started a debate about how this lobe-finned fish fits into the evolution of land animals.
- **Two Species:**
 - There are only two known species of coelacanths: one that lives near the **Comoros Islands** off the east coast of Africa, and one found in the waters off **Sulawesi**, Indonesia.
- **Living Fossil:**
 - Living Fossil is an organism that has remained unchanged from earlier geologic times and whose close relatives are usually extinct. Other than Coelacanth, **Horseshoe crab** and **ginkgo trees** are examples of living **fossils**.
 - However, in their new study, palaeontologists have found that Coelacanths gained 62 new genes through encounters with other species 10 million years ago. This suggests that they are actually evolving, albeit slowly.
- **Protection Status:**
 - **IUCN Status:** Critically Endangered
 - **Sulawesi Coelacanth** is listed as '**vulnerable**'.
 - **CITES Status:** Appendix I

World's Smallest Reptile

Why in News

Scientists believe they may have discovered the

smallest reptile on earth - a Chameleon subspecies that is the size **of a seed**.

- Two of the tiny lizards were discovered by a **German-Madagascan** expedition team in **Madagascar**.

Key Points

- **About the Discovery:**
 - The team found **one male and one female of the species, named *Brookesia nana***, during an expedition in 2012.
 - The **Male *Brookesia Nana*, or *Nano-Chameleon***, has a body of just **13.5 mm**. Its length from top to tail is 22 mm. The **female** is far **bigger** at around **29 mm**.
 - According to the **Bavarian State Collection of Zoology in Munich, *Nano-Chameleon* is the smallest of about 11,500 known species** of reptiles.
 - Previously, the chameleon species ***Brookesia micra*** was thought to be the smallest. The average length of adults of this species is **16 mm (29 mm with tail)**, while the **smallest adult male** has been recorded at **15.3 mm**.
 - The **longest**, the **reticulated python**, at 6.25 m is almost as long as 289 *Brookesia nanas*.
 - The New Chameleon is only known from a degraded **Montane Rainforest in Northern Madagascar** and might be threatened by extinction.
 - Nano-chameleons have **previously suffered deforestation**, but their habitat is now protected.
 - In their report, scientists recommended that the chameleon be listed as Critically endangered in the **International Union for Conservation of Nature's (IUCN) Red List of Threatened Species** to help protect it and its habitat.
- **About Chameleons:**
 - **Chameleons (family Chamaeleonidae)** are a distinctive and highly specialized **Clade of Old World Lizard** with 202 species described as of June 2015. **Madagascar is home to nearly two-thirds** of all chameleon species.
 - Chameleons are adapted for climbing and visual hunting. They live in warm habitats that range



Note:

from **Rainforest** and **Desert** Condition. They are best known for their ability to change body colour.

- The Indian chameleon is found in India, Pakistan, and Sri Lanka.

Greenpeace

Analysis on Economic Cost of Air Pollution

Why in News

According to a **Greenpeace Southeast Asia** (non-governmental organisation) analysis of cost to the economy due to air pollution, **PM 2.5 air pollution** claimed approximately 54,000 lives in Delhi in 2020.

- **PM 2.5** refers to **fine particulate matter smaller than 2.5 micrometers** in diameter. It causes **respiratory problems** and also reduces visibility. It is an **endocrine disruptor** that can affect insulin secretion and insulin sensitivity, thus contributing to diabetes.

Key Points

➤ Report on Indian Cities:

- **Delhi:**
 - In July 2020, Greenpeace found out that of the 28 global cities studied, **Delhi bore the highest economic cost of air pollution** with an estimated loss of 24,000 lives in the first half of 2020 despite a strict **Covid-19 lockdown**.
 - In 2020, air pollutant levels in Delhi **remained almost six times above the prescribed WHO (World Health Organisation) limits of 10 µg/m³ annual mean**.
 - The **estimated air pollution-related economic losses** were USD 8.1 billion, which **amounts to 13% of Delhi's annual Gross Domestic Product (GDP)**.
- **Mumbai:**
 - An estimated **25,000 avoidable deaths in Mumbai** in 2020 have been attributed to air pollution from PM 2.5 and Nitrogen Dioxide (NO₂).
- **Other Cities:**
 - Damage due to air pollution is equally worrying in other cities - **Mumbai, Bengaluru, Chennai, Hyderabad and Lucknow** - featured in the global analysis.

- Bengaluru, Chennai and Hyderabad estimated an approximate 12,000, 11,000, and 11,000 avoidable deaths respectively due to polluted air.

➤ Global Scenario:

- Globally, **approximately 1,60,000 deaths** have been attributed to PM 2.5 air pollution in the **five most populous cities** — Delhi (India), Mexico City (Mexico), São Paulo (Brazil), Shanghai (China) and Tokyo (Japan).
- In 2020, the estimated **economic cost of PM 2.5 air pollution exceeded USD 5 billion in 14 cities** included in the analysis.
- **Tokyo (Japan):**
 - Of the included cities, the **highest estimated total financial cost** from air pollution was recorded in Tokyo, which suffered approximately 40,000 avoidable deaths and an economic loss of USD 43 billion due to PM 2.5 air pollution in 2020.
- **Los Angeles (USA):**
 - It recorded the **highest per capita financial cost of PM 2.5 air pollution** of all cities on the estimator, at approximately USD 2,700 per resident.

➤ Indicators Used in Measurement:

- **PM 2.5 Measurements:**
 - Real-time ground-level PM 2.5 measurements were collected from different places and combined together in **IQAir's database**.
 - IQAir is an air quality technology company.
 - Using Algorithms, such data was applied to scientific risk models in combination with population and public health data to estimate the health and economic costs of air pollution exposure.
- **Willingness To Pay:**
 - To show the impact of air pollution-related deaths on the economy, the approach used by Greenpeace is called '**willingness-to-pay**' — a lost life year or a year lived with disability is converted to money by the amount that people are willing to pay in order to avoid this negative outcome.
- **Cost Estimator:**
 - The '**Cost Estimator**', an online tool that estimates the real-time health impact and economic cost from fine particulate matter (PM 2.5) air

Note:



pollution in major world cities, was deployed in a collaboration between Greenpeace Southeast Asia, IQAir and the **Centre for Research on Energy and Clean Air (CREA)**.

➤ **Fatality of Air Pollution:**

○ **Globally:**

● **WHO:**

- According to WHO, toxic air is now the biggest environmental risk of early death, responsible for one in nine of all fatalities.
- **It kills 7 million people a year**, far more than HIV, tuberculosis and malaria combined.

● **World Bank:**

- According to a 2016 World Bank report, the lost lives and ill health caused are also a colossal economic burden: USD 225bn is lost labour income in 2013, or USD 5.11tn per year (about \$1m a minute), if welfare losses are also added.

○ **In India:**

- **Overall:** Long-term exposure to outdoor and **household (indoor) air pollution** contributed to over **1.67 million annual deaths** from stroke, heart attack, **diabetes**, lung cancer, chronic lung diseases, and **neonatal diseases**, in India in 2019.
- **Infant Related Data:** High PM contributed to the deaths of more than 1,16,000 Indian infants who did not survive their first month.
 - Infants in the first month of life are already at a vulnerable stage and a growing body of scientific evidence-supported studies in India indicates that particulate air pollution exposure during pregnancy is linked to low birth weight and preterm birth.

➤ **Initiatives to Control Air Pollution In India:**

- **The Commission for Air Quality Management in National Capital Region (NCR) and Adjoining Areas:** It coordinates efforts of state governments to curb air pollution, and will lay down the parameters of air quality for the region.
- **Bharat Stage (BS) VI norms:** These are emission control standards put in place by the government to keep a check on air pollution.
- **Dashboard for Monitoring Air Quality:** It is a National Air Quality Monitoring Programme (NAMP) based dashboard, built on data from the **Central**

Pollution Control Board's National Ambient Air Quality Monitoring (NAAQM) Network which was started in 1984-85 and covers 344 cities/towns in 29 states and 6 UTs.

- **National Clean Air Programme:** Launched in 2019, it is a comprehensive pan-India air pollution abatement scheme for 102 cities.
- **National Air Quality Index (AQI):** It focuses on health effects one might experience within a few hours or days after breathing polluted air.
- **National Ambient Air Quality Standards:** They are the standards for ambient air quality with reference to various identified pollutants notified by the Central Pollution Control Board under the **Air (Prevention and Control of Pollution) Act, 1981**.
- **Breathe:** It is a 15 point action plan to fight air pollution by **NITI Aayog**.
- **Pradhan Mantri Ujjwala Yojana (PMUY):** It aims at providing clean-cooking fuel to the poor households and bringing in qualitative changes in the living standards.

Hyderabad: Tree City of the World

Why in News

Hyderabad city (Telangana's Capital) has been recognised as a '**2020 Tree City of the World**' by the **Arbor Day Foundation** and the **Food and Agriculture Organisation** of the United Nations (FAO).

- Hyderabad has **earned recognition in the Foundation's second year of the programme along with 51 other cities** in the world (during 2020 & cumulative 120 cities from 63 countries).
 - Most of the cities were from countries – USA, UK, Canada, Australia etc.
- It is the **only City in India to get this recognition so far**.

Key Points

- **Tree Cities of the World Programme:**
 - **About:**
 - It is an international effort to **recognize cities and towns** committed to ensuring that their **urban forests and trees are properly maintained, sustainably managed, and duly celebrated**.

Note:

Arbor Day Foundation

- The Arbor Day Foundation is a nonprofit conservation and education organization founded in 1972 in Nebraska, United States, by John Rosenow.
 - It is the largest nonprofit membership organization dedicated to tree planting.
 - Its vision is to help others understand and use trees as a solution to many of the global issues we face today, including air quality, water quality, a changing climate, deforestation, poverty, and hunger.
- At the **2018 World Forum on Urban Forests in Mantova, Italy**, world leaders issued the **Mantova Green Cities Challenge** and a call-for-action that included joining the Tree Cities of the World programme.
 - The programme intends to connect cities around the world in a new network dedicated to sharing and adopting the most successful approaches to managing community trees and forests.
- **Organisations Involved:**
 - It is a programme **partnership between the Arbor Day Foundation and the FAO.**
 - **5 Standards for Evaluation:**
 - A city is evaluated on five standards - **Establish Responsibility, Set the Rules, Know What You Have, Allocate the Resources, and Celebrate the Achievements.**
- **Hyderabad's Recognition:**
 - Hyderabad is the **only city in India** to have been selected for this recognition in response to its commitment to growing and maintaining **urban forestry** through **Haritha Haram programme** and **Urban Forest Parks.**
 - **Haritha Haram programme:**
 - **Aim:** Haritha Haram is a **flagship programme** of the Telangana government to increase the **green cover** of the State from the present 25.16 to 33% of the total geographical area.
 - **Approach:** The objective is sought to be achieved by a multi-pronged approach of rejuvenating degraded forests, ensuring more effective protection of forests **against smuggling, encroachment, fire, grazing and intensive soil and moisture conservation** measures following the **watershed approach.**

- **Urban Forest Parks (UFP):** The Forest blocks in and around cities are developed into Urban Forest Parks (UFP) under this programme.
 - These Urban Forest Parks will not only provide the whole some healthy living environment but also contribute to the growth of smart, clean, green, sustainable and healthy cities in the state.

Black-Necked Crane

Why in News

Recently, a group of **Buddhist** monks in Tawang district has opposed the Arunachal Pradesh government's renewed push for **hydropower projects.**



- The proposed projects would not only affect the **nesting grounds of the endangered Black-Necked Crane** but also threaten several holy Buddhist pilgrimage sites in the region.

Key Points

- **About:**
 - Both the sexes are almost of the same size but **male is slightly bigger than female.**
 - The upper long neck, head, primary and secondary flight feathers and tail are completely black and **body plumage is pale gray/whitish.**
 - A conspicuous **red crown** adorns the head.
- **Special Significance:**
 - The bird is **revered by the community of Monpas** (major Buddhist ethnic group of Arunachal Pradesh) as an **embodiment of the sixth Dalai Lama** (Tsangyang Gyatso).
 - **Monpas** inhabit the West Kameng and Tawang districts, are essentially Buddhists who follow the **Mahayana sect.**
- **Habitat and Breeding Grounds :**
 - The **high altitude wetlands** of the Tibetan plateau, Sichuan (China), and eastern **Ladakh** (India) are the **main breeding ground of the species**, the birds spend winter at lower altitudes.
 - In Bhutan and **Arunachal Pradesh**, it only comes **during the winters.**

Note:

- In Arunachal Pradesh, it can be seen in three areas:
 - **Sangti valley** in West Kameng district.
 - **Zemithang** in Tawang district.
 - **Chug valley** in Tawang district.
- **Threats:**
 - **Damage to the eggs and chicks**, caused by feral dogs.
 - **Loss of habitat** due to human pressure (Development Projects) on the wetlands.
 - Increased grazing pressure on the limited pastures near the wetlands.
- **Steps for their Conservation:**
 - **World Wide Fund for Nature-India** (WWF-India) in collaboration with the Department of Wildlife Protection, Jammu & Kashmir, has been working towards conservation of high altitude wetlands, with **black-necked cranes as a priority species in Ladakh region**.
 - In Arunachal Pradesh, WWF is working for the conservation of the small wintering population.
- **Protection Status:**
 - **IUCN Red List:** Near Threatened
 - **CITES:** Appendix I
 - **Indian Wildlife (Protection) Act, 1972:** Schedule I

State of Environment Report 2021: CSE

Why in News

Recently, the **State of Environment Report, 2021** was released by the **Centre for Science and Environment (CSE)**.

- **CSE is a public interest research and advocacy organisation** based in New Delhi. It researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable.

Key Points

- **Findings:**
 - **Pandemic Generation:**

- **India is all set to usher in a 'pandemic generation'**, with 375 million children (from newborns to 14-year-olds) likely to **suffer long-lasting impacts**, ranging from being underweight, **stunting** (low height-for-age) and increased child mortality, to **losses in education and work productivity**.

- **Increased School Dropouts:**

- Due to the **Covid-19 pandemic**, over 500 million children were forced out of school globally and India accounted for more than half of them.

- **Rise in Extreme Poverty:**

- Covid-19 has made the world's poor poorer. Over **115 million additional people** might get pushed into extreme poverty by the pandemic and most of them live in South Asia.

- **Pollution Levels Worsened:**

- India's air, water and land have become more polluted between 2009 and 2018.
- Of 88 major **industrial clusters** in the country, according to the **Central Pollution Control Board**, 35 showed overall environmental degradation, 33 pointed to worsening air quality, 45 had more polluted water and in 17, land pollution became worse.

- **Tarapur in Maharashtra** emerged as the **most polluted cluster**.

- **Regarding Sustainable Development Rankings:**

- **India ranked 117 among 192 nations** in terms of **sustainable development** and was now behind all South Asian nations except Pakistan.

- **States' Performance In Sustainable Development Goals:**

- **Best Performing States:** Kerala, Himachal Pradesh, Andhra Pradesh, Tamil Nadu and Telangana.
- **Worst Performers:** Bihar, Jharkhand, Arunachal Pradesh, Meghalaya and Uttar Pradesh.

- **Other Similar Reports:**

- **UN Report on the Impact of Covid-19 on Children.**
- **Report on Winter Pollution: CSE.**



Note:

History

Highlights

- *Maharaja Suheldev*
- *Pagri Sambhal Movement*
- *Mannathu Padmanabhan*

Maharaja Suheldev

Why in News

The Prime Minister has laid the foundation stone of a **Maharaja Suheldev memorial** and the **development work of Chittaura lake** in Uttar Pradesh's Bahraich district.

Key Points

- **About Maharaja Suheldev:**
 - He was the **erstwhile ruler of Shravasti** in Uttar Pradesh's (UP) Bahraich district, who ruled in the 11th century.
 - He is known in history for waging **guerrilla warfare against Mahmud Ghazni's large army**.
 - Suheldev was deeply moved by the loot and destruction of the magnificent Somnath temple by invader Mahmud Ghazni that he decided to **gather heads of different communities like Tharu and Banjara** as well as small kings to block the invasion.
 - His army defeated and **killed Ghazi Salar Masud**, the nephew of Mahmud Ghazni, at Bahraich.
 - Raja Suheldev finds **mention in 'Mirat-i-Masudi'**, a 17th century Persian-language historical account.
 - 'Mirat-i-Masudi' is the **biography of Salar Masud**, written by Abd-ur-Rahman Chishti during the reign of the Mughal emperor Jahangir (1605–1627).
 - In local folklore, Suheldev is **said to be a Rajbhar**.
 - He is **popular as a caste icon** among the **Rajbhars (OBC)** and the **Pasis** (second largest Dalit caste in UP), both of whom have been competing for his legacy and are predominantly found in central and eastern UP.
- **Chittaura Lake:**

- The Chittaura Jheel is located in the Bahraich District near the village Chittaur in Uttar Pradesh.
- **Teri Nadi**, a small river originates from this lake which is a home to many migratory birds.
- Being a Hindu pilgrimage site, many fairs are held near this lake during Kartik Purnima and Vasant Panchami.
- There is an ashram where **Muni Ashtwarka** used to live and this site also **witnessed the epic fight between Ghazi Salar Masud and Raja Suheldev** in the year 1033.
- There is a **temple complex with the statue of Raja Suheldev** and **temple dedicated to Goddess Durga** situated here.

Pagri Sambhal Movement

Why in News

The Samyukta Kisan Morcha (SKM) is celebrating **23rd February** as **Pagri Sambhal Diwas**, honouring the **memory of Ajit Singh** - founder of the **Pagri Sambhaal Movement of 1907**.

- Farmer unions part of the ongoing protests in Delhi claim that **farm laws** passed by Parliament will ultimately force them to sell their land to corporates. It was a similar complaint that fueled the farm protests in 1907.

Key Points

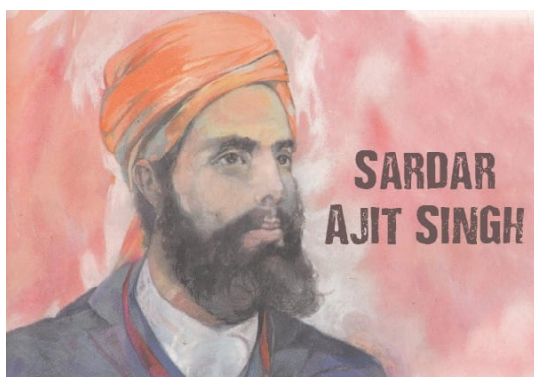
- **Pagri Sambhal Movement:**
 - **About:**
 - It was a successful farm agitation that **forced the British government to repeal three laws** related to agriculture back in 1907.
 - The **Punjab Land Alienation Act 1900**, the **Punjab Land Colonisation Act 1906** and the **Doab Bari Act 1907**.

Note:

- These acts would **reduce farmers from owners to contractors of land**, and **gave the British government the right to take back the allotted land** if the farmer even touched a tree in his field without permission.
- **Slogan:**
 - The slogan, Pagdi Sambhal Jatta, the name of the movement, was **inspired by the song by Banke Lal, the editor of the Jang Sayal newspaper.**
- **Protest:**
 - The protests were **violent** and the protestors ransacked government buildings, post offices, banks, overturning telephone poles and pulling down telephone wires.
- **Leader of the Agitation:**
 - **Bhagat Singh's** uncle **Ajit Singh** was the force behind this agitation.
 - He wanted to **channel people's anger over the farm laws to topple the colonial government.**
 - Bhagat Singh's father Kishan Singh and uncle Ajit Singh, with their revolutionary friend Ghasita Ram, formed **Bharat Mata Society**, aiming to mobilise this unrest into a revolt against the British government.
 - Many young revolutionaries like Sufi Amba Prasad, Zia-ul-Haq, Lal Chand Falak, Din Dayal Banke, Kishan Singh and Lala Ram Saran Das were among the **members of Bharat Mata Society.**

➤ **Sardar Ajit Singh:**

- **Birth:**
 - Born on **23rd February, 1881** he was an **Indian revolutionary**, an Indian dissident and a **nationalist** during the colonial era.



Pagri Sambhal Jatta Movement

- He was an **inspiration to Indian revolutionaries** and his nephew Bhagat Singh.
- **Work:**
 - He **openly criticised the colonial government** and was amongst the early protests in Punjab.
 - With his brother Kishan Singh, **worked among the people** in famine-stricken regions like Barar (Madhya Pradesh) and Ahmedabad and in flood-and-earthquake-affected areas of Srinagar and Kangla in **1905.**
 - He launched the **Bharat Mata Book Agency (part of Bharat Mata Society)**, which, because of its strident anti-government, propagandist publications, **attracted the attention of the British government.**
 - He built a **network of solidarity** with people who were struggling for India's liberation in different parts of Europe. He also founded in this period the **Indian Revolutionary Association (Bharatiya Krantikari Sangh).**
- **Exile:**
 - In May 1907, Sardar Ajit Singh along with **Lala Lajpat Rai** was **exiled to Mandalay in Burma.**
 - However, due to great public pressure and apprehension of unrest in the Indian Army, **both of them were released in October 1907.**
- **Escape:**
 - In 1909, Sardar Ajit Singh along with Sufi Amba Prasad **escaped to Iran and lived in a self-imposed exile for 38 years.**
- **Death:**
 - In March 1947, he returned to India and **died on 15th August 1947, the day India gained independence at Dalhousie, Punjab.**

Note:

- During the medieval period, **only noblemen were allowed to wear a turban** but during the **Sikh revolution in the 17th century, Guru Gobind Singh declared it as a symbol of defiance.**
 - He subverted the selectiveness of a turban, providing the common man with a **way to claim and assert their own self-esteem.**
 - Pagri (Turban) represents the **dignity of the common man.**
- In **1907**, Pagri Sambhal Jatta was a call to not let the Pagri fall, literally and figuratively.

Note:



drishti

Mannathu Padmanabhan

Why in News

Recently, the Prime Minister paid tributes to **Mannathu Padmanabhan** on his **Punya Tithi** (Death Anniversary).

Key Points

➤ Birth:

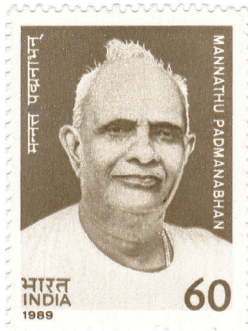
- He was born on **2nd January 1878** in Perunna, **Kottayam district of Kerala**.

➤ About:

- He was an Indian **social reformer** and **freedom fighter** from the south-western state of Kerala.
- Sardar K M Panicker called him '**Madan Mohan Malaviya** of Kerala.
- He began his career as a **teacher in 1893** in a Government primary school.
- In **1905** he changed his profession and **started practicing law**, in the Magistrates Courts.

➤ Political and Social Contribution:

- He took part in the **Vaikom (1924)** and **Guruvayoor (1931)** temple-entry Satyagrahas and the anti-untouchability agitations.
 - **Vaikom Satyagraha** was a movement in Travancore (modern-day Kerala) for **temple entry of the depressed classes**. It took place near the Shiva Temple at Vaikom, Kottayam district,



Kerala during 1924-25. Vaikom was at that time a part of the princely state of Travancore.

- **Guruvayur Satyagraha** was a Satyagraha (non-violent protest) to allow entry for untouchables into the **Guruvayur Temple** in present Thrissur district, which was then part of Ponnani Taluk of Malabar district, now part of **Kerala**.

- He is regarded as the reformer and moral guide of the members of **Nair community**. He inspired the **Nair community** members to end practicing bad and orthodox customs.
- He led the Nairs to demand temple entry for all castes and to put an end to **untouchability**.
- In 1914 he established the **Nair Service Society**.
- He became a member of the **Indian National Congress in 1946** and took part in the agitation against Sir C. P. Ramaswamy Iyer's administration in Travancore.
- He was arrested for the **Indian Freedom Movement** on 14th June 1947.
- In 1949, Padmanabhan became a **member of the Travancore Legislative Assembly**.
- In 1964 he was instrumental in the formation of **Kerala Congress**, the **first regional party in India**.

➤ Awards & Recognition:

- He received **Padma Bhushan** in 1966.
- He was honoured with the title **Bharata Kesari** by the President of India.

➤ Death:

- He died on **25th February 1970** at the age of 92.
- **Mannam memorial (or Samādhi)** is located at NSS Headquarters Changanacherry which is a municipal town in **Kottayam district**, Kerala.



Note:



drishti

Art & Culture

Highlights

- Vijayanagar King Krishnadevaraya
- Ancient Buddhist Monastery Found in Jharkhand
- Khwaja Monuddin Chishti
- Guru Ravidas Jayanti

Vijayanagar King Krishnadevaraya

Why in News

The **first-ever epigraphical reference (an inscription) to the date of death of Vijayanagar king Krishnadevaraya** has been **discovered at Honnenahalli in Tumakuru district, Karnataka.**

- Normally, the death of kings was not recorded in the inscriptions and this was one of those rare records.

Key Points

- **Findings:**
 - As per the inscription, Krishnadevaraya, one of the greatest emperors of India who ruled from the South, died on 17th October, 1529 (Sunday).
 - Incidentally, this day was marked by a **lunar eclipse.**
 - The inscription is **engraved on a slab** kept on the north side of the **Gopalakrishna temple** at Honnenahalli in Tumakuru district.
 - The inscription **also registers the gift of village Honnenahalli in Tumakuru** for conducting worship to the god **Veeraprasanna Hanumantha** of Tumakuru.
 - The inscription is **written in Kannada.**
- **Krishnadevaraya:**
 - He was the ruler of the **Tuluva dynasty of Vijayanagar empire** (1509-29 AD).
 - His rule was characterised by expansion and consolidation.
 - He is credited with building some fine temples and **adding impressive gopurams** to many important south Indian temples.
 - He **also founded** a suburban township near Vijayanagar called **Nagalapuram** after his mother.

- He composed a work on statecraft in Telugu known as the **Amuktamalyada.**
- **Vijayanagara Empire:**
 - Vijayanagara or “city of victory” was the name of both a city and an empire.
 - The empire **was founded in the fourteenth century** (1336 AD) by **Harihara and Bukka** of the Sangama dynasty.
 - They **made Hampi the capital city.** In 1986, Hampi was declared a **World Heritage site by UNESCO.**
 - It stretched from the **river Krishna** in the north to the extreme south of the peninsula.
 - Vijayanagar Empire was **ruled by four important dynasties** and they are:
 - Sangama
 - Saluva
 - Tuluva
 - Aravidu

Ancient Buddhist Monastery Found in Jharkhand

Why in News

The **Archeological Survey of India (ASI)** has unearthed a **Buddhist** monastery, believed to be at least 900 years old, buried under a mound in a village near Juljul Pahar of Sitagarhi Hills in Jharkhand.

- Earlier an ancient Buddhist shrine, buried under a similar mound was found, close to this site.

Key Points

- **Artifacts Unearthed:**
 - Four statues of **deity Tara in Varad Mudra** (gesture of hand showing dispensing of boons).

Note:

- **Nagri Script on Tara Statue:** Nagri was a **previous version of Devnagri script** and the words indicate Buddhist religious affiliation.
- Six statues of the **Buddha in Bhumisparsha Mudra** (gesture of hand showing five fingers of right hand towards the earth symbolising the Buddha's enlightenment).
- A **sculpture** which appears to be that of **Shaivite deity Maheswari** - with a coiled crown and chakra - indicating cultural assimilation in the area.



➤ **Significance of the Findings:**

- The findings are significant since the **monastery is on the old route to Varanasi, 10 km from Sarnath**, where the Buddha gave his first sermon.
- The presence of statues of deity Tara shows **possible proliferation of Vajrayana form of Buddhism** in this region.

Vajrayana

- Vajrayana means "The Vehicle of the Thunderbolt", also known as **tantric Buddhism**.
- This Buddhist school **developed in India around 900 CE**.
- It is **grounded on esoteric elements and a very complex set of rituals** compared with the rest of the Buddhist schools.

Khawaja Monuddin Chishti

Why in News

Recently a 'Chadar' was offered on behalf of Prime Minister at the Ajmer Sharif Dargah of **Sufi Saint Khawaja Moinuddin Chishti** on the occasion of 809th Urs.

- The Urs festival is an annual festival held at Ajmer in

Rajasthan which commemorates the death anniversary of Sufi saint Moinuddin Chishti.

Key Points

➤ **About Sufism:**

- Sufism is a **mystical form of Islam**, a school of practice that focuses on the spiritual search for God and shuns materialism.
- It is a form of Islamic mysticism which **stresses on asceticism**. There is a lot of emphasis on devotion towards God.
- In Sufism, **self discipline** is considered an essential condition to gain knowledge of God by sense of perception.
- Unlike orthodox Muslims which emphasise on external conduct, the Sufis **lay stress on inner purity**.
- Sufis believe **service to humanity** is tantamount to service to God.

➤ **Etymology:**

- The term 'Sufi' is probably derived from the Arabic 'suf' word which means 'one who wears wool'. This is because woollen clothes were generally associated with ascetics. Another possible origin of the word is 'safa' which means purity in Arabic.

➤ **Khawaja Moinuddin Chishti:**

- Moinuddin Hasan Chishti was **born in Sijistan (modern-day Sistan) in Iran** in 1141-42 CE.
- After Muizuddin Muhammad bin Sam of Ghor had already defeated Prithviraj Chauhan in the Second Battle of Tarain (1192) and established his rule in Delhi, **Khawaja Moinuddin Chishti started living and preaching in Ajmer**.
- His instructive discourses, full of spiritual insights, soon drew the local populace as well as kings and nobles and peasants and the poor from far and wide.
- **His shrine in Ajmer** has been visited by rulers like Muhammad bin Tughlaq, Sher Shah Suri, Akbar, Jahangir, Shah Jahan, Dara Shukoh and Aurangzeb.

➤ **Chishti Order (Chishtiya):**

- Chishtiya Order was founded in India by Khawaja Moin-Uddin Chishti.
- It emphasised the doctrine of the unity of being with God (wahdat al-wujūd) and members of the order were also pacifists.
- They **rejected all material goods** as distractions from the contemplation of God.

Note:

- They **abstained from connection with the secular state.**
- Recitation of the names of God, both aloud and silently (dhikr jahri, dhikr khafi), formed the cornerstone of Chishti practice.
- The Chishty teachings were carried forward and popularized by **disciples of Khwaja Moin-Uddin Chishti** like Khwaja Qutbuddin Bakhtiyar Kaki, Fareeduddin Ganj-e-Shakar, Nizam uddin Auliya and Naseeruddin Charagh.
- **Other Major Sufi Orders:**
 - **Suhrawardi Order:**
 - It was **founded by Sheikh Shahabuddin Suhrawardi Maqtul.**
 - The Suhrawardis, unlike the Chishtis, accepted maintenance grants from the Sultans.
 - **Naqshbandi Order:**
 - It was **founded by the Khwaja Baha-ul-din Naqsh band.**
 - In **India**, this order was **established by Khwaja Bahauddin Naqshbandi.**
 - From the beginning, the mystics of this Order **stressed on the observance of the Shariat.**
 - **Qadiriyya Order:**
 - It was **popular in Punjab.**
 - **Sheikh Abdul Qadir of Badaun** founded it in the 14th century.
 - They were **supporters of the Mughals** under Akbar.

Guru Ravidas Jayanti

Why in News

Guru Ravidas Jayanti is celebrated on Magh Purnima (27th February 2021), the full moon day in the month of Magh according to the Hindu lunar calendar.

Key Points

- **About Guru Ravidas:**
 - He was a **14th century saint and reformer of the Bhakti movement** in North India.
 - It is believed that he was **born in Varanasi** in a cobbler's family.
 - He gained prominence due to his **belief in one God** and his unbiased religious poems.
 - He dedicated his whole life to the **abolition of the caste system** and openly despised the notion of a Brahminical society.
 - His devotional songs made an instant impact on the Bhakti Movement and his poems were included in '**Guru Granth Sahib**', the religious text of the Sikhs.
- **Bhakti Movement:**
 - The development of the Bhakti movement took place in Tamil Nadu between the **seventh and ninth centuries.**
 - It was reflected in the emotional poems of the **Nayanars** (devotees of Shiva) and **Alvars** (devotees of Vishnu).
 - These saints looked upon religion not as a cold formal worship but as a loving bond based upon love between the worshipped and worshipper.
 - In course of time, the ideas of the South moved up to the North but it was a very slow process.
 - A more effective method for spreading the Bhakti ideology was the **use of local languages.**
 - The Bhakti saints composed their verses in local languages.
 - They also translated Sanskrit works to make them understandable to a wider audience.
 - Examples include Jnanadeva writing in Marathi, Kabir, Surdas and Tulsidas in Hindi, Shankaradeva popularising Assamese, Chaitanya and Chandidas spreading their message in Bengali, Mirabai in Hindi and Rajasthani.



Note:

Geography

Highlights

- Declining Rainfall in Cherrapunji
- Nathu La, Sikkim

Declining Rainfall in Cherrapunji

Why in News

A recent study that looked at the rainfall pattern in the past 119 years found a decreasing trend at Cherrapunji (Meghalaya) and nearby areas.

- The village of Mawsynram in East Khasi Hills district of Meghalaya has beaten Cherrapunji to become the wettest place in the world. Mawsynram receives over 10,000 millimetres of rain in a year.
- Mawsynram is located around 81 km by road from Cherrapunji, however the straight line distance between the two is 15.2 km.

Key Points

- **Reduction in Rainfall:**
 - The annual mean rainfall for the period 1973–2019 showed decreasing trends of about 0.42 mm per decade.
 - It was statistically significant along seven stations (Agartala, Cherrapunji, Guwahati, Kailashahar, Pasighat, Shillong and Silchar).
- **Reasons:**
 - **Rising Temperature:**
 - The changes in the Indian Ocean temperature have a huge effect on the rainfall in the region.
 - Increasing sea surface temperatures in the tropical Indian Ocean region was pointed out by the first climate change assessment report published by the Union Ministry of Earth Sciences in June 2020.
 - **Increased Human Activities:**



- The satellite data showed that there was a reduction in the vegetation area in northeast India in the past two decades, implying that human influence also plays an important role in the changing rainfall patterns.
 - The traditional way of cultivation known as Jhum cultivation or shifting cultivation is now decreased and being replaced by other methods.
 - There is sizable deforestation in the region. The study saw the decrease in vegetation cover and increase in the areas of cropland mainly from the year 2006 onwards.
 - The analysis showed reductions in vegetation with 104.5 sqkm lost per year.
 - On the other hand, there were significant increases in cropland (182.1 sqkm per year) and urban and built-up lands (0.3 sqkm per year) during the period 2001–2018.

➤ Significance of Studying the North-East Region:

- Since north-east India is mostly hilly and is an extension of the Indo-Gangetic Plains, the region is highly sensitive to changes in regional and global climate.
- It has to be noted that the first signs of the effect of climate change will be evident for the extreme cases such as the rainfall at Cherrapunji.
- North-east India has the highest vegetation cover in India and includes 18 biodiversity hotspots of the world, indicating the importance of the region in terms of its greenery and climate-change sensitivity.

Reason for High Rainfall in Cherrapunji and Mawsynram

- Cherrapunji (elevation 1313 m) and Mawsynram (elevation 1401.5 m) are located on the southern slopes of the east Khasi Hills in Meghalaya.

Note:



- Meghalaya is a mountainous state with **numerous valleys and highland plateaus**.
- **Elevation** in the plateau region ranges between **150 m to 1,961 m**, with the central part comprising the Khasi Hills with the highest elevations.
- The rainfall in Cherrapunji-Mawsynram is **caused by the orography favouring a monsoon wind regime**.
- The northward moving moist winds from the Bay of Bengal passing over the plains of Bangladesh are **forced to converge in the narrow valleys of the Khasi Hills** with orography providing forced ascent that causes condensation, formation of clouds resulting in rain on the windward side of the slope.

Shifting Cultivation

- Shifting cultivation, **locally called 'Jhum'**, is a widely practiced system of crop cultivation among the indigenous communities of North-east India. The practice, also known as **slash-and-burn agriculture**, is when farmers clear land by slashing vegetation and burning forests and woodlands to create clear land for agricultural purposes.
- This provides a **very easy and very fast method** of the preparation of the land for agriculture.
- The bush and the weeds can be removed easily. The **burning of waste materials provides needed nutrients for the cultivation**.
- It **gives** a family its **food, fodder, fuel, livelihood** and is closely linked to their identity.
- Because of cutting of forests and trees, this practice **leads to soil erosion and may also affect the course of rivers**.

Nathu La, Sikkim

Why in News

Recently, the Indian Army rescued several tourists caught in a snowstorm at **Nathu La** on the **India-China border in Sikkim**.

Key Points

- Nathu La, one of the **highest motorable roads** in the world,



is a mountain pass in the Himalayan peaks situated on the Indo-Tibetan border 14450 ft. above sea level.

- Nathu means **'listening ears'**, and La means 'pass'.
- It is an open trading border post between India and China.
- The other passes located in the state of Sikkim are **Jelep La Pass, Donkia Pass, Chiabhanjang Pass**.

Pass	Link/Features
Banihal Pass	Kashmir Valley with the outer Himalaya and the plains to the south.
Bara-Lacha-La Pass	Lahaul district in Himachal Pradesh with Leh district in Ladakh.
Fotu La Pass	Leh with Kargil of Ladakh
Rohtang Pass	Kullu Valley with the Lahaul and Spiti Valleys of Himachal Pradesh.
Shipki La Pass	Kinnaur district of Himachal Pradesh with Autonomous Region of Tibet, China.
Jelep La Pass	Sikkim with Autonomous Region of Tibet, China.
Nathu La Pass	Sikkim with Autonomous Region of Tibet, China.
Lipu Lekh Pass	Chaudans valley of India with Autonomous Region of Tibet, China. It is located close to the tri junction of Uttarakhand (India), China and Nepal.
Khardung La	Ladakh with Siachen glacier. It is the highest motorable pass in the world.
Bom di La	It is in Arunachal Pradesh

Note:

Social Issues

Highlights

- Same Sex Marriage

- Autism Spectrum Disorder

Same Sex Marriage

Why in News

Recently, the Central Government opposed **same-sex marriage** in Delhi High Court stating that a marriage in India can be recognised only if it is between a “biological man” and a “biological woman” capable of producing children.

Key Points

➤ Background:

- Petitions, seeking recognition of same sex marriages under the **Hindu Marriage Act (HMA), 1955** and the **Special Marriage Act (SMA), 1954**, were filed in 2020.

➤ Centre’s Response/Argument:

- **Supreme Court’s Order:**
 - In reading down the provision of **Section 377 of the Indian Penal Code (IPC)**, the **Supreme Court** only **decriminalised a particular human behaviour** but neither intended to, nor did in fact, legitimise the human conduct in question.
- **Societal Morality:**
 - There exists a “**legitimate State interest**” in limiting the recognition of marriage to persons of opposite sex. The considerations of “**societal morality**” are relevant in considering the validity of a law and it is for the Legislature to enforce such societal morality and public acceptance based upon Indian ethos.
- **Not in Consonance with Existing Laws:**
 - The fundamental right under **Article 21** is subject to the procedure established by law and it **cannot be expanded to include the fundamental right for same sex marriage** to be recognised under the laws which in fact mandate the contrary.

- **Article 21** of the constitution guarantees the right to life. This right cannot be taken away except through a law which is substantively and procedurally fair, just and reasonable.

- Any interference with the existing marriage laws would cause complete havoc with the delicate balance of personal laws in the country.

○ Sanctity of Marriage:

- Living together as partners or in a relationship with a same-sex individual is “not comparable” with the “Indian family unit concept” of a husband, wife and children, arguing that the institution of marriage has a “sanctity”.

➤ Legality of same-sex marriages in India:

- The **right to marry is not expressly recognized either as a fundamental or constitutional right under the Indian Constitution.**
- Though marriage is regulated through **various statutory enactments**, its recognition as a fundamental right has only **developed through judicial decisions of India’s Supreme Court.**
- Such declaration of law is binding on all courts throughout India under **Article 141** of the Constitution.

➤ Important Supreme Court Decisions:

- **Marriage as a Fundamental Right (Shafin Jahan v. Asokan K.M. and others 2018):**
 - While referring to **Article 16** of **Universal Declaration of Human Rights** and the Puttaswamy case, the SC held that the **right to marry a person of one’s choice is integral to Article 21** of the Constitution.
 - **Article 16 (2)** in the Indian constitution provides that there **cannot be any discrimination on grounds** only of religion, race, caste, **sex**, descent, place of birth, residence or any of them.

Note:



- The **right to marry** is intrinsic to the liberty which the Constitution guarantees as a fundamental right, is the **ability of each individual to take decisions** on matters central to the pursuit of happiness. Matters of belief and faith, including whether to believe are at the core of constitutional liberty.
- **LGBTQ Community Entitled to all Constitutional Rights (Navjet Singh Johar and others v. Union of India 2018):**
 - The SC held that members of the **LGBTQ community** “are entitled, as all other citizens, to the full range of constitutional rights including the liberties protected by the Constitution” and are entitled to equal citizenship and “equal protection of law”.

Autism Spectrum Disorder

Why in News

Recently, a 12-year-old Maharashtra girl with **Autism Spectrum Disorder (ASD)** successfully swam across the Arabian Sea from Bandra-Worli Sea Link to Gateway of India in Mumbai.

Key Points

- **About:**
 - ASD refers to a range of conditions characterised by some degree of **impaired social behaviour, communication and language**, and a narrow range of interests and activities that are both unique to the individual and carried out repetitively.
 - It is a complex brain development disability which makes itself visible during the first 3 years of a person’s life.
 - It is **not mental retardation** as people with autism may show excellent skills in spheres like art, music,

writing etc. The level of intellectual functioning in individuals with ASDs is **extremely variable**, extending from profound impairment to superior levels.

- **Causes:**
 - There are probably many factors that make a child more likely to have an ASD, including **environmental and genetic factors**.
- **Signs and Symptoms:**
 - Difficulty with social communication and interaction, restricted interests, and repetitive behaviors.
- **Cure:**
 - Although autism is **not curable**, its symptoms can be addressed with appropriate interventions like evidence-based psychosocial interventions, behavioural treatment and skills training programmes for parents and other caregivers, health promotion, care, rehabilitation services, etc.
- **Global & National Initiatives to Raise Awareness on ASD:**
 - **United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), Sustainable Development Goals** deal with rights of people with disabilities including autism.
 - The **Right of Persons with Disabilities Act, 2016** increased the types of disabilities **from 7 to 21**. It also added **autism spectrum disorder** among others, which were largely ignored in earlier Act.
 - In 2014, the **World Health Organisation (WHO)** adopted a resolution entitled “Comprehensive and coordinated efforts for the management of autism spectrum disorders (ASD),” which was supported by more than 60 countries.
 - In 2008, the United Nations General Assembly unanimously declared 2nd April as **World Autism Awareness Day**.



Note:



drishti

Security

Highlights

- Roads on Arunachal Border
- NAVDEX 21 and IDEX 21: UAE
- Arjun MBT MK-1A
- Helina and Dhruvastra: Anti-tank Guided Missile

Roads on Arunachal Border

Why in News

The Union government approved **more than Rs 1,100 crore for critical infrastructure development in Arunachal Pradesh.**

- The **Cabinet Committee on Security (CCS)** also cleared a proposal for construction of 32 roads under phase II of the **Indo-China Border Roads (ICBR) scheme.**
- **Earlier**, the government **followed a restrictive policy** and areas along the China border were not developed much.

Key Points

- **Critical Infrastructure Development in Arunachal Pradesh:**
 - Most projects have been earmarked in areas along the China border in the north and northeast part of Arunachal.
 - It includes motorable roads, mule tracks and facilities for porters. It envisages construction of roads and 18 foot-tracks measuring 598 km.
 - This will enhance the capabilities of **Indo-Tibetan Border Police (ITBP)**, which maintains vigil along the border. These tracks can be used by the Army to supplement the main border roads for transportation of men and material.
- **Indo-China Border Roads Scheme:**
 - The first phase was **initiated in 2005**, when it was decided that the Ministry of Home Affairs (MHA) would construct 27 priority roads totalling 608 km along China areas at an estimated cost of Rs. 912 crore and other 14 roads will be built by agencies such as the **Border Roads Organisation (BRO).**

- Some of the important projects include the **Darbuk-Shayok-Daulat Beg Oldie (DS-DBO) road** and **Rohtang tunnel** in the Ladakh; and in the northeast, the **Sela Tunnel** and a road and rail tunnel under the Brahmaputra river with Indian Railways.

- Under phase II of the Indo-China Border Roads (ICBR) scheme, the roads, measuring 638.12 km and amounting to Rs. 12,434.90 crore, are to come up in **Ladakh, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.**

➤ Importance of Roads near Arunachal Border:

- Arunachal **shares its longest border with China**, followed by Myanmar and Bhutan.
 - Further, **China claims the entire Arunachal Pradesh** as South Tibet.
- **Lack of proper communication and other basic facilities** in the border areas not only affects the local population but also is a major cause of concern from the country's security point of view.
- **Insurgency** in the north-east, **smuggling** and **illegal migration** are factors that demand more restricted border security.
- **Encroachment:** China has made rapid strides in border areas of Arunachal by **setting up new villages** and a labyrinth of road network, including highways.
- **Other Related Steps:**
 - India will spend 10% funds of the **Border Area Development Programme (BADP)** only to improve the infrastructure along the China border.
 - The Border Roads Organisation (BRO) has constructed the **Daporijo bridge** over Subansiri river in Arunachal Pradesh.
 - It links roads leading upto the Line of Actual Control (LAC) between India and China.

Note:

- The Defence Minister has virtually laid the foundation of a **tunnel at Nechiphu** in West Kameng district of Arunachal Pradesh.
- The state government of Arunachal Pradesh has advocated **selection of 10 census towns along the India-China border** as pilot projects for infrastructure development in order to stop people living along its international borders, specifically with China, from migrating to faraway urban centres in the State.
- The **Sisseri River Bridge** is located at lower Dibang Valley in Arunachal Pradesh, connecting Dibang Valley and Siang.
- In 2019, the Indian Air Force inaugurated resurfaced runway at India's **easternmost Village-Vijaynagar (Changlang district)** in Arunachal Pradesh.
- In 2019, the Indian Army conducted **exercise 'HimVijay'** in Arunachal Pradesh and Assam with its newly created Integrated Battle Groups (IBG).
- **Bogibeel bridge**, which is India's longest road-rail bridge connecting Dibrugarh in Assam to Pasighat in Arunachal Pradesh was inaugurated in 2018.

- **IDEX** is the only international defence exhibition and conference in the **MENA region** demonstrating the latest technology across land, sea and air sectors of defence.

- **MENA Region:** MENA is an acronym for the **Middle East and North Africa region** and includes **approximately 19 countries**.

- The MENA region accounts for approximately 6% of the world's population, 60% of the world's oil reserves, and 45% of the world's natural gas reserves.
- Countries are Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, and Yemen.

➤ **INS Pralaya:**

- INS Pralaya, a ship of the indigenously built **Prabal Class Missile Vessels**, was commissioned in the Indian Navy in 2002.
- The ship, built indigenously at Goa Shipyard Limited, bears testimony to capabilities of the Indian shipbuilding industry and is a versatile platform capable of performing a wide variety of surface warfare missions.

➤ **India and UAE Defence Relations:**

- Defence relations between **India and UAE** have been steadily growing since the upgradation of bilateral relations to a '**Comprehensive Strategic Partnership**' in 2017.
- Sheikh Mohamed bin Zayed Al Nahyan, the **Crown Prince of Abu Dhabi** (capital of UAE), was a **Chief Guest at India's Republic Day celebrations** in 2017.
- Towards enhancing interactions between the two navies, the inaugural edition of **Indian & UAE Navy bilateral exercise GULF STAR-1** was conducted in March 2018. The **next edition** of the exercise is likely to be conducted in **2021**.

NAVDEX 21 and IDEX 21: UAE

Why in News

Indian Naval Ship (INS) Pralaya arrived at Abu Dhabi, UAE to participate in the **NAVDEX 21 (Naval Defence Exhibition)** and **IDEX 21 (International Defence Exhibition)**, scheduled from 20 to 25 February 2021.

- **INS Mysore** (an indigenously built guided missile destroyer deployed in the Persian Gulf) is also participating in the exhibition.

Key Points

- **About NAVDEX 21 and IDEX 21:**
 - **IDEX and NAVDEX**, and the **International Defence Conference** are **organised by the Abu Dhabi National Exhibitions Company (ADNEC)**, in cooperation with the Ministry of Defense and the General Command of the UAE Armed Forces.
 - **IDEX/NAVDEX takes place biennially**. The exhibitions **showcase the latest technologies and innovation** in the global defence sector, support the growth of UAE's defence industry, and forge new relationships between major international companies.

India's Defence Exhibitions

- **DefExpo:** The **11th edition of DefExpo** was held for the first time in Lucknow (Uttar Pradesh) in 2020.
 - It's a flagship biennial event of the Ministry of Defence.

Note:

- **Aero India:** The **13th edition of the Aero India** show was held at Bengaluru's Yelahanka Air Force Station (Karnataka).
 - Aero India is a biennial international military and civil airshow.
 - It is a premier event that draws international and Indian military and civil aircraft makers, their support industries, military brass and government dignitaries, and business visitors.

Arjun MBT MK-1A

Why in News

Recently, the Prime Minister of India has handed over the indigenously developed **Arjun Main Battle Tank (MBT) MK-1A** to the Indian Army.



Key Points

- **About:**
 - **Launch:** The Arjun MBT Project was initiated by **Defence Research and Development Organisation (DRDO)** in 1972 with the **Combat Vehicles Research and Development Establishment (CVRDE)** as its lead laboratory.
 - **Objective:** To create a "state-of-the-art tank with superior fire power, high mobility, and excellent protection".
- **Features of the Arjun Tank:**
 - The Arjun MBT is equipped with an indigenously developed **120mm main rifled gun** with **Fin Stabilised Armour-Piercing Discarding Sabot (FSAPDS)** ammunition.
 - **FSAPDS** is capable of destroying all known tank armour up to direct shooting range.
 - It also has a **computer-controlled integrated fire control system** with stabilised sighting that works in all lighting conditions.

- The secondary weapons include a coaxial 7.62-mm machine gun for anti-personnel and a 12.7-mm machine gun for anti-aircraft and ground targets.
- **Mk1A and MkII:**
 - The development of Arjun Mk1 was followed by improved variants - Mk1A and MkII.
 - Arjun Mk1A, which features improved **firepower and transmission systems**, completed the final integration tests in 2019 and was cleared for production.
 - The Arjun MkII variant is a light-weight **Futuristic Main Battle Tank (FMBT)** with electro-optical sensors and high-power lasers.
- **Features of Mk-1A:**
 - The Mk-1A version has 14 major upgrades on the earlier version. It is also supposed to have **missile firing capability** as per the design.
 - However, the biggest achievement with the latest version is **54.3% indigenous content** against the **41% in the earlier model**.
 - The newly developed **Kanchan** modular composite armour gives all-round protection to the tank from anti-tank ammunition.
 - Kanchan has been manufactured by **Defence Metallurgical Research Laboratory (DMRL)** - a DRDO Laboratory.

Defence Research and Development Organisation

- DRDO works to establish a world class science and technology base for India and provides India's Defence Services decisive edge by equipping them with internationally competitive systems and solutions.
- DRDO was established in 1958 after combining Technical Development Establishment (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).
- DRDO works under the administrative control of the Ministry of Defence, Government of India.

Helina and Dhruvastra: Anti-tank Guided Missile

Why in News

India has successfully test - fired indigenously

Note:



- developed **anti - tank guided missile systems 'Helina' and 'Dhruvastra'** in the Pokhran range, Thar desert (Rajasthan).

Nag Missile

- Nag is a third-generation, fire-and-forget, anti-tank guided missile developed by DRDO to support both mechanized infantry and airborne forces of the Indian Army.
- It is an all-weather condition with day and night capabilities and with a minimum range of 500m and a maximum range of 4km.
- Nag can be launched from land and air-based platforms. The land version is currently available for integration on the Nag missile carrier (NAMICA).
- Nag Missiles have been developed under the **Integrated Guided Missile Development Program**.

Integrated Guided Missile Development Program

- **IGMDP** was conceived by Dr. A.P.J. Abdul Kalam to enable India to attain self-sufficiency in the field of missile technology. It was approved by the Government of India in 1983 and completed in March 2012.
- The **five missiles (P-A-T-N-A)** developed under this program are:
 - **Prithvi**: Short-range surface to surface ballistic missile.

- **Agni**: Ballistic missiles with different ranges, i.e., Agni (I, II, III, IV, V).
- **Trishul**: Short-range low-level surface to air missile.
- **Nag**: 3rd generation anti-tank missile.
- **Akash**: Medium range surface to air missile.

Key Points

- **About:**
 - The **Helina (the Army version)** and **Dhruvastra (Indian Airforce version)** are **helicopter-launched versions** of third-generation anti-tank guided missiles (**the Nag missile system**).
 - The missile system has all-weather day-and-night capability and can defeat battle tanks with conventional armor and explosive reactive armor.
- **Indigenous:**
 - The missile systems have been designed and developed indigenously by the **Defence Research and Development Organisation (DRDO)**.
- **Operations:**
 - The 'Helina' and 'Dhruvastra' can engage targets both in **direct hit mode** as well as **top attack mode**.
 - **Top Attack Mode**: The missile is required to climb sharply after launch and travel at a certain altitude, then plunge on top of the target.
 - **Direct Attack Mode**: The missile travels at a lower altitude, directly striking the target.



Note:

