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FOUNDATION COURSE GENERAL STUDIES PRELIMS CUM MAINS 2023

Approach is to build fundamental concepts and analytical ability in students to enable them to answer questions of Preliminary as well as Mains examination

- Includes comprehensive coverage of all the topics for all the four papers of GS Mains, GS Prelims & Essay
- Access to LIVE as well as Recorded Classes on your personal student platform
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Targeted towards those students who are aware of the basics but want to improve their understanding of complex topics, inter-linkages among them, and analytical ability to tackle the problems posed by the Mains examination.



Covers topics which are conceptually challenging.



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NOTE:

Dear Students,

Memorisation and recollection of information in Current Affairs is as important as understanding the articles. In order to enhance the learning outcomes from the Monthly Current Affairs Magazine, we are introducing following additions:



A thematic based colors has been used in the document in the boxes, tables etc to enable easy identification and recollection of various concepts and topics.




Questions are an important tool to assess and retain information. To enable this we are adding a Smart Quiz at the end of each section in the document for practicing the questions.



A wide variety of infographics have been added to ensure smoother learning experience and enhanced retention of the information. This will also help in effective presentation of information in the answer writing as well.



Places and persons in news are being presented in an objective manner through Maps, Tables & Pictures. This will help in easier recollection of factual information.



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1. POLITY AND GOVERNANCE

1.1. ELECTION FREEBIES

Why in News?

Recently, the 15th Finance Commission chairperson raised concerns over growing political election freebies with the need to contemplate adopting the concept of **sub-national bankruptcies**.

About Election Freebies

- Election Freebies are the **offerings/distribution of irrational freebies from political parties as part of electoral promises**.
- In the last few years election freebies have become an integral part of Indian elections with cumulative increase in each election. E.g., Free electricity, Free Water, Free Rides, Loan Waivers, Allowances, laptops etc.

Some of these 'freebies' help them to meet **basic needs of people** and **uplift their living standard**, helping to temporarily address other issues as well such as unemployment, rising cost of living, economic inequalities etc.

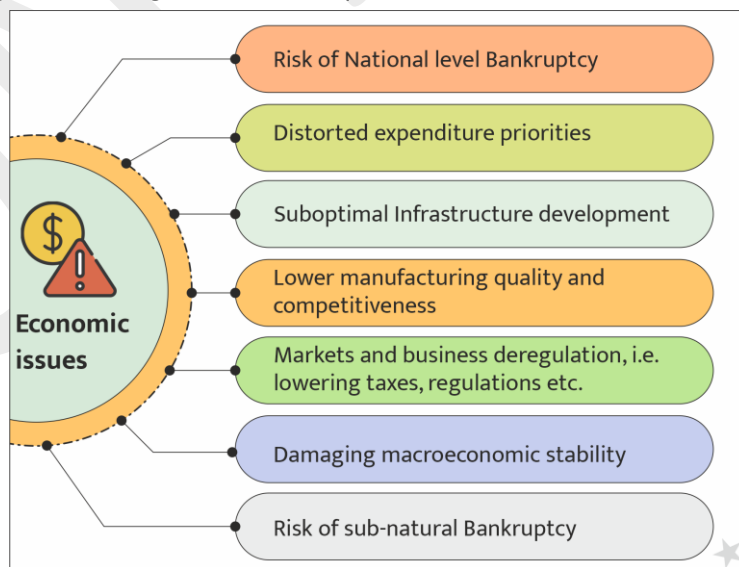
But it goes against the roots of **free and fair election** in a **democracy** and gives rise to several issues.

Issues with Freebies: Negative Impact of Freebies

- **Economic Issues:** Freebies are a **huge drain** on the state exchequer affecting the fiscal balance and macroeconomic stability of the country. If not checked it can lead to greater risks including **state bankruptcy** due to high debt-to-GDP ratio (see **image**). E.g.
 - The debt-to-GDP ratio of Punjab reached 53.3% in 2021-22 due to high-subsidy burden.
 - Telangana has committed 35% of revenue receipts, almost 63% of state's own tax revenue, to finance populist schemes which are centered around freebies.
- **Political Issues:** It goes against **Article 14** by distorting the level playing field among political parties, favoring the party in power over others. It also unduly influences voters leading to **short-sightedness** in their judgement.
- **Socio-psychological Issues:** Distorted economic decisions lack **equity and fairness**, leading to various socio-psychological issues such as reduced efforts or laziness, threats to social cohesion by **creating artificial divides between haves and have-nots** of the associated freebies. E.g.
 - In Rajasthan, 56% of tax and non-tax revenues are spent on pension and salaries. The state's recent decision to revive the old pension scheme will further lead to greater social inequalities.
- **Environment:** Freebies promote unsustainable practices by pushing governments and people away from environmentally sustainable practices. E.g.
 - **Free electricity** reduces incentives for farmers and domestic households to **install solar panels** or adopt more efficient public transport systems.

Sub-national Bankruptcy

- Sub-national Bankruptcy, also known as **sub-national insolvency**, refers to fiscal crises where the state/local government loses market access or faces rising financing costs that undermine its capacity to deliver essential services.
- In last few years due to various reasons or combination of them some states are moving at risk of sub-national bankruptcy such as:
 - **Willful unwillingness** from the state to make **tough budgetary choices**.
 - **Erosion of autonomous fiscal space** due to GST,
 - **Loss of revenue** due to Covid-19 pandemic and **economic shutdowns**.
- If not uncontrolled, it can lead to **high taxes on people**, **woefully inadequate services** from state and at worse threat to national unity.



Checking Freebie Politics: Steps taken by Election Commission of India

- In India, conducting Free and Fair elections is the responsibility of ECI.
- In **Subramaniam Balaji Vs State of Tamil Nadu (2013)**, SC observed the lack of provisions and directed ECI to frame guidelines to check freebies in consultation with political parties.
- To ensure electoral process integrity, in 2016 guidelines to check freebies were included under **Part VIII of Model Code of Conduct (MCC)**.
- Allowing welfare measures (as part of **Directive Principles of State Policy**), under these guidelines political parties should promise only what they can fulfil in order to gain electoral trust on feasible promises by:
 - **Reflecting the rationale** behind the promises, and
 - Clarify the **Ways and Means** to meet the expenses.
- But it can't regulate policies and decisions of parties due to lack of enabling laws to exercise the power to de-register a political party.

Way Forward

Solution to election freebies start with recognition of delicate interplay between politics and economics. Following steps can be taken to optimize efforts to counter this issue-

- **Empowering Election Commission** to enforce MCC by giving it legal status and power to de-register political parties if they violate MCC guidelines. (Committee on Electoral Reforms, Government of India.)
- **Differentiating between freebies** with priority to DPSPs based on merit goods such as PDS system, education, health etc. for greater prosperity.
- **Need Based Freebies with Transparency** by segregating haves and have-nots and identifying real beneficiaries. E.g., ensuring that farm loan waiver reaches only actual farmers.
- **Financial Budgeting on freebies** between subsidies and freebies with awareness programmes to educate people to promote demand-based interventions.
- **Achieve a more inclusive and higher economic Growth rate** to meet people's aspirations of jobs, better living standard, lesser inequalities etc. to reduce temptation towards freebies.
 - **Outcome-oriented government schemes** can help in this through better policy reach and expenditure efficiency.

Use of public money without proper responsibility carries other risks as well such as tax avoidance from taxpayers. Therefore, if not checked, it can lead to a culture of competitive freebie politics (domino effect) at all levels, creating threat to macroeconomic stability and **integrity of the nation**.

If you give a man a fish, you feed him for a day—if you teach him to fish, you feed him for a lifetime.

1.2. URBAN LOCAL BODIES (ULBS)

Why in news?

Recently, **Delhi Municipal Corporation (Amendment) Act, 2022** was enacted that seeks to **reunify the three Municipal Corporations of Delhi (MCD)**.

More about news

- **Delhi Municipal Corporation (Amendment) Act 2022** amends the 'Delhi Municipal Corporation Act, 1957', to effectively undo the earlier 2011 amendment to the Act by which erstwhile MCD was trifurcated into separate Municipal Corporation of North, South, and East Delhi.
 - The split-up was first proposed in the **1987 Balakrishnan Committee Report**, constituted by the Ministry of Home Affairs, which was bolstered in 2001 Virendra Prakash Committee Report.
- **Need for the Law**
 - To create compact municipalities at various centres in Delhi in the **interest of providing more efficient civic**

Key Provisions of the MCD Act 2022

- It **empowers the central government to decide various matters** like building regulations, sanctioning of consolidation of loans by a corporation etc.
- Total number of seats in the new corporation **should not be more than 250**.
- It allows the **Centre to appoint a Special Officer to exercise powers of the Corporation** until the first meeting of unified MCD takes place.
- It **omits the provision for a Director** of Local Bodies.
- **Establishing an e-governance system for citizen services** on anytime-anywhere basis for better, accountable, and transparent administration.
- MCD commissioner has been made **accountable only to the Centre**.

services to the public. Earlier trifurcation was uneven in terms of territorial divisions and revenue-generating potential.

- There was **huge gap in the resources available to the 3 corporations** compared to their obligations.
- **Increasing the financial difficulties** of the 3 Municipal Corporations in Delhi
- Municipalities are intended to serve and be responsive to local civic needs. However, recent reports underscore the **extent to which municipalities (urban local bodies) are mismanaged.**

Why does the problems associated with urban local bodies remain unaddressed even after they have been identified year after year?

- **Shortage of funds:** There is acute scarcity of funds among ULBs as **tax collections are extremely low**, further SFC (State Finance Commission) are not constituted regularly and its suggestions are not implemented.
 - For instance, poor finances of Bihar's ULBs is due to **delays in release of grants, and inadequate devolution of funds.**
- **Unplanned urbanisation:** The municipal services have failed to cope with the increasing needs of the population, both qualitatively and quantitatively leading to haphazard growth of cities as seen in Delhi-NCR region.
- **Excessive state control:** Functions have not been devolved and Mayor office has become ceremonial position with lack of concrete powers.
- **Multiplicity of Agencies:** Overlaps in jurisdiction of Department of Health and Family Welfare (DoHFW) and the city/town municipal corporations leads to a complex service delivery, reduced access for the most vulnerable population.
 - **For instance**, in Bangalore, there is a **mix of primary health centres (PHC)** operated by the Bruhat Bengaluru Mahanagara Palike (BBMP) as well as the state DoHFW.
- **Lack of human resources:** Untrained manpower, shortage of qualified technical staff and managerial supervisors has led to failure in delivery of public services.
- **Irregular Elections:** Elections are **not held regularly**, defeating the goal of decentralised governance. For instance, Tamil Nadu elections for ULBs held after 10 years.

Way forward

- **Devolving functions:** Effective devolution of functions as laid down by 74th amendment act, 1992 and giving powers and autonomy to Municipalities, Mayor's office is the need of the hour.
- **Building human resource capacity:** To deliver the functions efficiently and effectively, city governments need human resources with adequate skills and capacities.
 - States need to follow the example of Madhya Pradesh, Gujarat, and Tamil Nadu and create a specialised municipal cadre for effective administration.
- **Increasing accountability:** To ensure accountability of the elected representatives, **robust by-laws outlining the working of the corporation and procedure rules** need to be enacted. Additionally, citizens of the ward should have the authority to remove the person from their post.

About Municipal corporations

- Municipal Corporations are **urban local level governments in India** which works for the development of any Metropolitan City with a **population of more than one million**. It's also called as **Mahanagar Palika, Nagar Palika, Nagar Nigam, City Corporation**, etc.
- The **first Municipal Corporation** was set-up in **Madras in 1688**, and followed by similar corporations in **Bombay and Calcutta in 1726**.
- Their **sources of revenue** include property tax, water tax, professional tax, drainage tax, etc and some fixed aid from the state government.
- The members of the Municipal Corporation are **directly elected by the people** and are called **Councillors**.
- Elections to the Municipal Corporations are conducted under the **guidance, direction, superintendence and control of the State Election Commission**.
- Municipal corporations are established in **states by acts of the concerned state legislatures**, and in the **union territories by the acts of Parliament** of India.
- **Lord Ripon (1880-84)**, the Viceroy of India introduced elections in Municipal Corporation and is known as "**father of Local Self-government in India**".
- To provide for a **common framework and strengthen urban local bodies (ULBs)** functioning as effective units of self-government, **74th Amendment Act, 1992** has **inserted Part IX-A** into the Constitution which deals with administration of Municipalities and Nagar Palikas.

- **Making cities financially independent:** To increase their revenue, city governments should **expand coverage and increase efficiency in tax collection along with transferring the power and authority** to introduce new taxes and revise tax rates.
 - Mumbai is the only example of a city where sanctioning powers have been given to ward committees.
- **Active citizen participation:** For transparency and accountability in the governance process, there needs to be active citizen participation, particularly in areas such as **budget-making and urban planning**.
- **Citizen grievance redressal mechanisms:** The complaint redressal mechanism **should be centralised for all the public services delivered** in the city, irrespective of whether they're delivered by a city, state, or central agency.
- **Regular Elections:** Elections to ULBs shall be completed **before the expiry of their duration**. In case of dissolution, election shall be held within six months from that date.

Steps taken by government to strengthen ULBs

- **World Bank assisted Capacity Building for Urban Development (CBUD) Project:** It is proposed as a Central Scheme to enhance capacity building and strengthening of ULBs to implement urban reforms with World Bank credit.
- **Peer Experience and Reflective Learning (PEARL) program:** To foster cross learning among cities and institutions.
- **Rapid Training Program (RTP):** To prioritize slow performing cities that have lagged behind in accessing JNNURM (Jawaharlal Nehru National Urban Renewal Mission) funds, on three prioritized modules- Governance & Reforms, Supervision/Preparation of Detailed Project Reports (DPRs) and Project Management and Implementation.

1.3. LOCALISATION OF SUSTAINABLE DEVELOPMENT GOALS (SDGS)

Why in News?

The Ministry of Panchayati Raj has signed a joint statement of understanding on **localisation of Sustainable Development Goals (SDGs)** with the United Nations Development Programme (UNDP).

About SDGs and their Localisation

- SDGs is a set of **17 Sustainable Development Goals (SDGs)** to **end poverty, fight inequality and injustice, and tackle climate change by 2030**; adopted at the **United Nations Sustainable Development Summit in 2015**.
- Localisation of SDGs is the process of **taking into account sub-national contexts in the achievement of SDGs**. This includes:
 - The use of SDGs to provide a **framework for local development policy**, and
 - **Identifying how bottom-up actions** from local and regional governments can support SDGs achievement.

Significance of SDGs Localisation

- The success on SDGs achievement depends on its implementation at **all territorial levels**. To do so, we need to:
 - **Interpret** the Goals and targets within the **local context**, i.e., making the global goals a reality in urban and rural areas,
 - **Associate** them with the **roles and responsibilities** of local bodies, and
 - **Monitor** their implementation at **sub-national level**.
- SDGs localisation helps in this by **localising the development**, based on shared learning and effective partnerships for-
 - **Improved state capacities, localised solutions, and promotion of cooperative and competitive federalism** with various benefits (see image).



Importance of localisation of SDGs in Panchayati Raj institutions (PRIs)

- With nearly **65% of the Indian population** living in **rural areas**, the role of PRIs (rural local bodies) has become a **critical component** of local self-governance. They provide **last-mile connectivity** and help the government in implementing a number of **social sector schemes** in areas of drinking water, sanitation, housing etc.
- The localisation of SDGs at PRIs level will help in achieving SDGs by **keeping the local priorities on top** of the agenda and **active involvement** of PRIs in SDGs.

- But its success will depend on our **ability to create awareness** on SDGs in PRIs and **empowerment of rural local bodies** by overcoming their:
 - Limitations due to the **limited devolution of Funds, Functions and Functionaries** from various states, and
 - Ability to take into account the **diversity** of India, especially **tribes** who are among the most deprived sections with almost **90%** living in rural areas (**Census, 2011**).

Challenges in SDG Localisation

With less than a decade left to achieve sustainability, localisation of SDGs is vital to accelerate the implementation of the SDGs. To do so, a number of challenges need to be addressed such as:

- **Local Translation and Adaptation:** India is a diverse country with hundreds of languages, socio-cultural practices etc. So, the first challenge is to accommodate these differences within SDGs localisation.
- **Infrastructure Challenge:** SDGs localisation demands system-wide alignment for data collection, implementation and monitoring. So, we need to overcome challenges related to availability of local data and capacities to perform local monitoring.
- **Governance Challenge:** The prevalence of top-down approach and apathy from state and bureaucracy towards local bodies create functional and coordination issues (vertical and horizontal) among all stakeholders.
 - The lack of political will and support for local governance adds to it.
- **Devolving Responsibility Without Resource:** Availability of funds have remained a concern for local bodies since their formation. Localised SDGs will add more responsibilities with limited funds transfer and local resource mobilization.
 - The reduced revenues of the state since covid-19 are another setback to it.
- **Awareness on SDGs:** Limited awareness of the SDGs at the sub-national level is another challenge towards successful SDGs localisation.

Efforts taken for localization of SDGs

- In India, the overall **coordination for implementation** of SDGs is handled by the **National Institution for Transforming India or NITI Aayog** with twin mandate of:
 - **Overseeing the adoption and monitoring** of the SDGs in the country, and
 - **Promote competitive and cooperative federalism** among States and UTs.
- To do so, NITI Aayog launched the **annual 'SDG India Index' in 2018** which **monitors progress** of states and Union Territories (UTs) on SDGs and **localisation of SDGs** through **eight steps**.

Some Examples of Successful Localisation from States

Andhra Pradesh	<ul style="list-style-type: none"> • Navaratnalu, a cluster of nine flagship programmes, to reach out to vulnerable communities across sectors, such as, agriculture, health, education, housing, entrepreneurship development and social protection.
Assam	<ul style="list-style-type: none"> • Arunodoi scheme for women from 1.7 million families through Direct Benefit Transfer.
Bihar	<ul style="list-style-type: none"> • Viksit Bihar ke 7 Nischay, a package of programmes which includes schemes on inclusion, entrepreneurship, women's reservation in jobs, provision of water, electricity, concrete streets, toilets and higher education.
Goa	<ul style="list-style-type: none"> • Dayanand Social Security scheme for single women, widows, people with HIV, persons with disability, senior citizens and other vulnerable communities; and • Swayampurna Mitras (promoters of self-reliance): These are selected government officials to improve development outreach and make villages self-reliant.
Madhya Pradesh	<ul style="list-style-type: none"> • Monthly collection of disaggregated data on specific indicators related to vulnerable population groups, and • Notification of 50 aspirational blocks (including 29 tribal blocks) for special initiative.



Way Forward

The achievement of our pledge to **leave no one behind** has seen significant threats in the last few years due to **global uncertainties, impact of pandemic, food shortages** etc. Therefore, we need to localise SDGs through a **holistic and persistent approach**-

- **Break down** the goals and implementation to **sub-national and local levels** for implementation in a **people-centric manner**, i.e., gender responsive, community responsive localisation of SDGs.

- Provide for **proper monitoring and evaluation** of SDGs implementation through effective partnership among all SDG partners.
- Help in **learning** from the **shared experiences** to overcome the **functional silos** and **adapt to the global challenges through local actions**.

To know more about **Sustainable Development Goals (SDGs)**, please refer to the following weekly document.

 <p>Sustainable Development Goals: The Pathway to the Future</p>	<p>The 2030 Agenda for Sustainable Development is more than the sum of measurable Goals, targets, and indicators. It provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. With less than a decade left, countries across the world, including India, still remain off track to achieve the Sustainable Development Goals, with the pandemic threatening to reverse years of progress. This document provides an assessment of India's current actions and progress towards achieving the SDGs, whilst listing the obstacles it faces in its way and suggesting measures to overcome these barriers.</p>	
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1.4. UNIQUE IDENTIFICATION AUTHORITY OF INDIA (UIDAI)

Why in news?

Recently, **Comptroller and Auditor General (CAG) audit on the 'Functioning of UIDAI'** presented in Parliament has found that the data stored in the Aadhar Data Vault of the institution is "vulnerable."

More about news

- The findings are part of the first performance review by the country's independent auditor of UIDAI, which was carried out over a **four-year period between FY2015 and FY2019**.
 - After being launched in 2010, the **Aadhaar database reached 1.29 billion records by March 2021** and is considered as one of the largest biometric based identification systems in the world.
- **Key findings highlighted by the CAG report**

About UIDAI

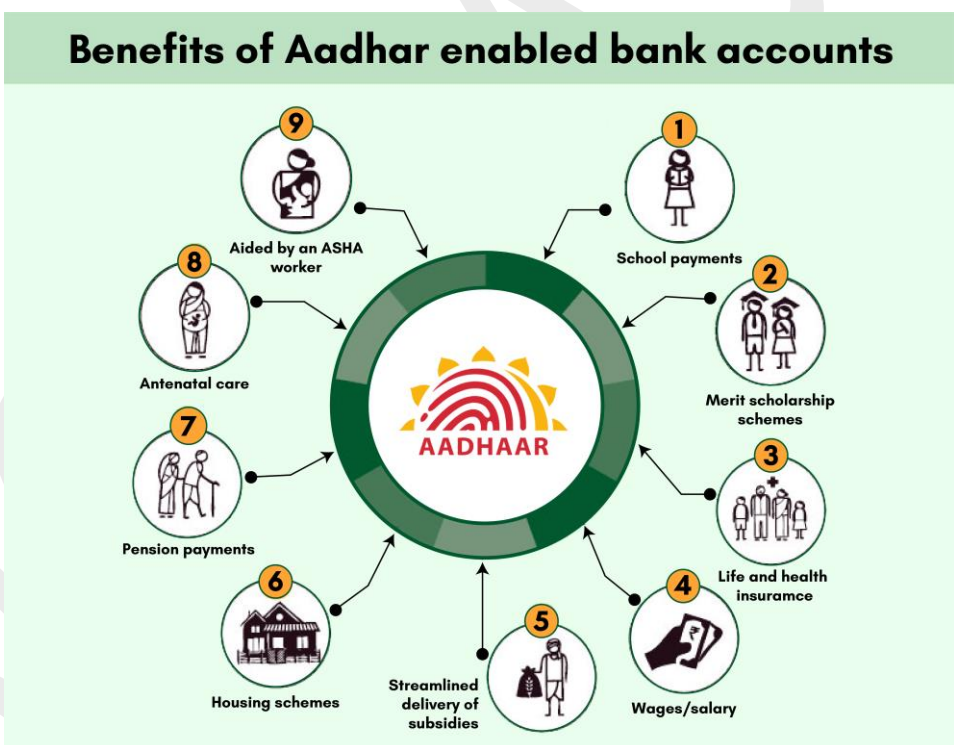
- It is a **statutory authority** established under provisions of the **Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016** ("Aadhaar Act 2016").
- It is under jurisdiction of **Ministry of Electronics and Information Technology (MeitY)**.
- It was established in 2009 and functions as part of the then Planning Commission.
- It issues a **12-digit unique identity number called Aadhaar** to each resident of the country.
- As of 2021, UIDAI had issued 131.68 crore Aadhaar numbers.

No residency proof	<ul style="list-style-type: none"> • Aadhaar numbers are only issued to individuals who have resided for a period of 182 days or more in the 12 months before the date of application. • However, UIDAI has not prescribed specific proof/document or process and there is no system in place to confirm that Aadhaar holders in the country are 'Residents' as defined in the Aadhaar Act.
Bal Aadhaar cards	<ul style="list-style-type: none"> • UIDAI issues Bal Aadhaar cards to children under the age of five based on their parents' biometric information, is against the basic tenet of the Aadhaar Act and incurred a huge cost which require the uniqueness of biometric identity to be confirmed (which cannot usually be done at such a young age).
Data protection	<ul style="list-style-type: none"> • UIDAI manages one of the world's largest biometric databases, but it lacks a data archiving policy, which is considered a critical storage management best practice.
De-duplication	<ul style="list-style-type: none"> • Though UIDAI has introduced iris-based authentication features for enrolment for Aadhaar, instances like issuing of Aadhaars with the same biometric data, faulty biometrics and documents to different residents continue to indicate flaws in the deduplication process.

	<ul style="list-style-type: none"> In 2019, UIDAI had to cancel more than 4.75 lakh Aadhaars for being duplicate.
Data matching	<ul style="list-style-type: none"> All Aadhaar numbers were not paired with the documents relating to personal information of their holders and UIDAI was unable to determine the extent of mismatch even after ten years.
Faulty system	<ul style="list-style-type: none"> UIDAI charged people for voluntary biometric updates when poor quality data was fed in during enrolment. 73% of biometric updates were voluntary updates.
Infrastructure verification	<ul style="list-style-type: none"> No verification of the infrastructure and technical support of requesting Entities and Authentication Service Agencies before their appointment in ecosystem. Also, there is no system to analyze the factors leading to authentication errors.
Inadequate arrangements	<ul style="list-style-type: none"> UIDAI's arrangements with Department of Posts were insufficient to ensure delivery of Aadhaar letters to the correct addressee, as evidenced by the large number of Aadhaar letters returned as undelivered.

Recommendations suggested by CAG

- Frame data policy:** UIDAI needs to frame a **suitable data archival policy to mitigate the risk of vulnerability** to data protection along with reducing the usage of data storage by weeding out duplicate data.
- Curb duplication:** UIDAI needs to **strengthen the 'Automated Biometric Identification System'** so that generation of multiple/duplicate Aadhaars could be curbed at the initial stage itself.
 - Also, UIDAI must **explore alternate ways to capture the uniqueness of biometric identity** for children below five years, especially since the Supreme Court has stated that no benefit will be denied to any child for want of Aadhaar document.



- Establish procedure:** UIDAI should go beyond self-declaration, and **prescribe a procedure and required documentation other than self-declaration**, in order to confirm and authenticate the applicants' residence status.
- Avoid complications:** It is required to **take proactive steps to identify and fill the missing documents** in UIDAI database to avoid any legal complications or inconvenience to holders of Aadhaar issued prior to 2016.
- Regular review:** UIDAI should **review charging of fees for voluntary update of residents' biometrics**, as residents were not at fault for capture of poor quality of biometrics.
- Improve success rate:** UIDAI needs to make efforts to **enhance the success rate of authentication** transactions by analysing failure cases.
- Complete verification:** UIDAI should conduct **thorough verification of the documents, infrastructure, and technological support** claimed to be available, before on-boarding the entities (Requesting Entities and Authentication Service Agencies) in the Aadhaar ecosystem.
- Aadhaar Data Vault:** There is need to ensure the **implementation of Aadhaar Data Vault process and carry out periodic audits independently**, to enhance the security of Aadhaar number storage data by user organizations.

Other prevalent issues in Aadhar

- **Unreliable demographic details:** Demographic details on an Aadhaar card are often **unverified and unreliable**, particularly the person's age (date of birth), and **correcting age on an Aadhaar card is often difficult** without supporting documents such as a birth certificate.
- **Fraud-prone Aadhaar-enabled Payment System (AePS):** Rampant abuses of AePS by corrupt business correspondents to **extort money from unsuspecting victims** by persuading them.
- **Consent:** There is no informed consent about the uses to which the data will be subjected.
- **Violation of rights:** Possible leakage of biometric and demographic data, either from the central Aadhaar repository or from a point-of-sale or an enrollment device, violates people's right to privacy.
- **Exit Option:** The absence of an exit option to get out of the UIDAI database.
- **Lack of accountability:** UIDAI lacks accountability to Parliament if there is a failure in the system and someone suffers in consequence.

1.5. INDIA'S INVESTIGATIVE AGENCIES

Why in news?

Recently, Chief Justice of India (CJI) called for **creating an "independent umbrella institution"** to bring various investigating agencies like Central Bureau Investigation (CBI), Enforcement directorate (ED) and Serious Fraud Investigation Office (SFIO) under one roof.

Investigative agencies in India

CBI	<ul style="list-style-type: none">• It is the premier investigating police agency in India, established in 1963, and functions under Ministry of Personnel, Pension & Public Grievances• Its establishment was recommended by Santhanam Committee on Prevention of Corruption (1962-64).• It is the nodal police agency in India, which coordinates investigation on behalf of Interpol Member countries.• Motto: Industry, Impartiality and Integrity.• It is not a statutory or constitutional body.• It is governed by the Delhi Special Police Establishment (DSPE) Act, 1946.• It focuses on combating corruption in public life, curb economic and violent crimes through meticulous investigation and prosecution.• It helps to fight cyber and high technology crime.• Lokpal Act, 2014 provided the appointment of CBI director through high-powered committee comprising Prime Minister, CJI and leader of opposition.• In 2021, President promulgated two ordinances to extend the tenures of the Directors of the CBI and ED for up to five years, from fixed tenure of two years.• It provides assistance to Central Vigilance Commission (CVC) and Lokpal.
ED	<ul style="list-style-type: none">• Established in 1956 with its Headquarters at New Delhi.• Specialized financial investigation agency under Department of Revenue, Ministry of Finance.• Responsible for enforcement of Foreign Exchange Management Act, 1999 (FEMA) and certain provisions under Prevention of Money Laundering Act (PMLA), 2002.• FEMA is a civil law while PMLA is criminal law.
SFIO	<ul style="list-style-type: none">• It is a multi-disciplinary organization under Ministry of Corporate Affairs.• Consists experts in field of accountancy, forensic auditing, law, information technology, investigation, company law, capital market and taxation for detecting and prosecuting or recommending for prosecution white-collar crimes/frauds.• Headquarter at New Delhi.• Accorded statutory status under Companies Act, 2013.• Power to arrest accused people for violation of Company law.• To assist officers of SFIO on investigations, the Computer Forensic and Data Mining Laboratory (CFDML) was set up in 2013.
National Investigation Agency (NIA)	<ul style="list-style-type: none">• Governed by its own NIA Act, 2008.• Headquarters is at New Delhi.• Gives powers to the central agency to take suo motu cognizance of terror activities across the country.• Governing body is Ministry of Home Affairs.• Functions as the Central Counter Terrorism Law Enforcement Agency in the country.

Analysis of the Functioning of investigative agencies

- **Multiple agencies:** Single incident investigated by multiple agencies, often leading to **dilution of evidence, a contradiction in depositions, overlapping of powers** and prolonged incarceration of innocents.
- **Delay in trials:** **Lack of public prosecutors and standing counsels**, seeking adjournments, and filing voluminous documents in pending trials, **undue imprisonment of undertrials**, cherry-picking of the evidence, and repeated transfers of officers leading to unnecessary delays in investigation.
- **General consent:** When a **general consent is withdrawn by several states** like Mizoram, West Bengal, Maharashtra etc. **CBI needs to seek case-wise consent from the concerned state** for investigation.
 - CBI officers thus **lose all powers of a police officer** as soon as they enter the state unless the state government has allowed them.
 - **Section 6 of DSPE Act** empowers state government to **give or deny consent to CBI officer**.
- **Inadequate Infrastructure:** National Investigation Agency (NIA) is nodal counter terror body but is still **lacking infrastructure, manpower and fleet of vehicles** to conduct investigations and quick mobilization.
- **Falling credibility:** Image of investigative agencies like CBI, ED and SFIO has been tarnished by allegations of **corruption, excesses, lack of impartiality, and a close nexus with the political class**. Example, Bofors scandal, Hawala scandal.
 - CBI denied information, claiming exemption under section 24 of Right to Information Act, thus, **hampering public accountability**.
- **Lack of autonomy:** Agencies like CBI is administratively and financially dependent on the Department of Personnel and Training and lacks functional autonomy.
- **Federalism:** Central government decision of **entrust the pan India investigation of offences to any agency without the consent of the state government** violates constitution as public order and policing are matters of the state government.
 - UAPA (Unlawful Activities (Prevention) Act, 1967) is one of the Acts that were added to the schedule of the NIA Act. The Agency is given pan India jurisdiction to investigate offences covered in the Acts.

CBI investigates three types of cases:

- **Anti-corruption:** These are usually registered against public officials, employees of union government. The **superintendence of CBI** related to investigation of **offences under the Prevention of Corruption Act, 1988** lies with **CVC**.
- **Special crimes:** Investigation of **serious and organized crime** under Indian Penal Code on requests of State Governments or on the orders of Supreme Court and High Courts.
- **Economic offences:** Crimes of financial malfeasance, bank frauds, money laundering, black money operations etc. However, CBI usually **transfers cases of money laundering to the Enforcement Directorate (ED)**.
- **Suo-moto:** CBI can suo-moto take up investigation of offences **only in the UTs**.
 - **Centre** holds the power to authorize the CBI to investigate a crime in the state **only after the consent of concerned state**.
 - However, **Supreme Court and High Courts can order CBI to investigate a crime anywhere** in the country without the consent of the state.

Reforms needed in investigative agencies

- **Umbrella organisation:** It is required to bring various agencies under one roof to **improve coordination, resources and intelligence sharing** along with clearly defining its powers, functions and jurisdictions.
 - Also, it will **save the investigative agencies from being blamed as a tool of harassment** and end multiplicity of agencies.
- **Regular upgradation:** There is a need for regular upgradation of knowledge, deployment of state-of-the-art technology, and international exchange programmes to learn the best practices.
 - **State agencies must be equipped to deal with increasing challenges** in the field of investigation.
- **Performance audit:** Annual audit of the performance of the institution by the appointing committee to address loopholes and improve efficiency of investigative agencies.
- **Autonomy:** The agency should be made independent with functional autonomy without the administrative control of government. Its director should be given power of the Secretary to the government and should report to the Prime Minister or the Minister concerned.
- **Women participation:** There is need for more **women's representation in policing system** so that women victims feel confident to approach and report crimes.

- **Improving credibility:** There should be a **harmonious relationship and collaboration** between the State and Central agencies **to reclaim social legitimacy and public trust** by breaking the nexus with the political executive.
 - It is essential that all institutions, including police and investigative bodies, **uphold and strengthen democratic values** and not allow any authoritarian tendencies to creep in.

1.6. PRISON REFORMS

Why in News?

Ministry of Home Affairs (MHA) issued guidelines for implementation of the Modernisation of Prisons (MoP) Project.

Background

- **Prison is a State subject** under List-II of the Seventh Schedule in the Constitution.
- The management and administration of Prisons **falls exclusively in the domain of the State Governments**, and is governed by the **Prisons Act, 1894 and the Prison Manuals** of the respective State Governments.
- However, the **Ministry of Home Affairs provides regular guidance and advice to States and UTs** on various issues concerning prisons and prison inmates.

Need for Prison Reforms

- **Overcrowding:** “Prison Statistics India”, brought out by National Crime Records Bureau stated that in 2019, there were nearly 4.8 lakh inmates in 1,306 facilities against the sanctioned strength of 4.1 lakh, with an occupancy rate of 118%.
 - This undermines the ability of prison systems to meet the basic needs of prisoners, such as healthcare, food, and accommodation.
 - This also endangers the basic rights of prisoners, including the right to have adequate standards of living and the right to the highest attainable standards of physical and mental health.
- **No separation of under-trials:** Around 75% of inmates in our jails are under-trials. As these awaiting trial inmates come into touch with their incarcerated inmates, they get influenced into the world of crime.
- **Health consequences of imprisonment:** Prisoners health conditions deteriorate in prisons which are overcrowded, where nutrition is poor, sanitation inadequate and access to fresh air and exercise often unavailable.
- **Imprisonment and poverty:** Imprisonment contributes directly to the impoverishment of the prisoner, of his family. Family experiences financial losses as a result of the imprisonment of one of its members, exacerbated by the new expenses that must be met - such as the cost of a lawyer, food for the imprisoned person, transport to prison for visits and so on.
- **Severe staff crunch:** About 30% of the sanctioned jail executive staff posts still lie vacant. At national level there is an average 7 inmates per staff in all jails in India (2020).
- **Issues of women prisoners:** There is a severe lack of female staff, inadequate numbers of toilets, bathrooms and other basic preconditions for sanitation and hygiene. Also physical and sexual violence is a common scenario in prison.
- **Detrimental social impact:** Imprisonment disrupts relationships and weakens social cohesion. The disruption of the family structure affects relationships between spouses, as well as between parents and children, reshaping the family and community across generations.

About Modernisation of Prisons (MoP) Project

- Government of India has decided to provide financial assistance (in form of Grant in aid) to States and UTs, through **MoP for using modern-day security equipment in Prisons for**
 - **Enhancing the security** of jails and
 - **To facilitate the task of reformation and rehabilitation** of prisoners through correctional administration programmes.
- Duration of the project is for five years **2021-26**.
- **Objectives of MoP project**
 - **Filling the existing gaps in security infrastructure** of jails.
 - **Providing new security equipment to jails** in line with modern day technologies.
 - **Strengthening the jail security system** through security equipment like Door Frame/ Metal Detectors/ Security Poles, Baggage Scanners/ Frisking/ Search/ Jamming Solutions etc.
 - **Focus on correctional administration**, which includes bringing attitudinal change in the mindset of prison officials handling inmates through extensive training and by introducing appropriate programs for inmates for their skill development and rehabilitation, including engagement of trained correctional experts, behavioural experts, psychologists, etc.
- **Project will cover all States and UTs** and shall broadly **cover the following prison types**- Central Jails, District Jails, Sub-Jails, Women Jails, Open Jails, Special Jails etc.
- **Core components of MoP project** are video conference infrastructure, body worn cameras, door frame/Metal detector/Security Poles etc., Baggage Scanners/ Frisking/ Search/ Jamming Solutions etc, correctional programmes etc.

- **COVID-19 induced changes:** Many prison systems have failed to implement critical COVID-19 preventive measures. People in prison are especially vulnerable due to cramped living conditions, lack of hygiene supplies and poorer health status.

Way forward

- **Issue of overcrowding can be addressed by:**

- **Open Prisons:** It is a correctional institution in which inmates are trusted to serve out their sentences under limited supervision and are often not locked up in jails. They are free to go to work and return to the jail after working hours.
- **Improving the system of Parole and Furlough,** so that inmates can maintain their social links while our prisons are less cramped.
 - ✓ Grant of parole and furlough **must be balanced against public interest and can be refused** to certain categories of prisoners.
- **Fast-Track Courts:** should be established so that no innocent prisoner should be forced to spend too much time in jail.

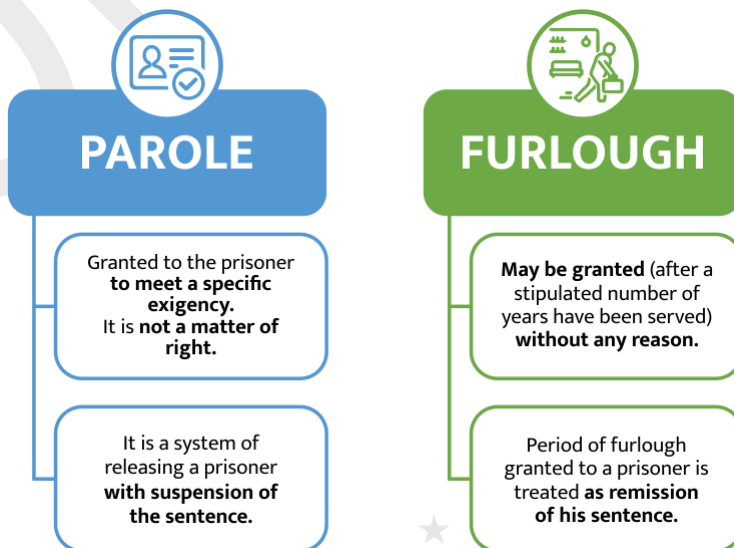
- **Adherence to key international rules and standards such as:**

- **UN Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules)** that set out the minimum standards for the treatment of people in prison and for good prison management.
- **UN Rules for the Treatment of Women Prisoners and Non-custodial Measures for Women Offenders (the Bangkok Rules)** give guidance to reduce unnecessary imprisonment of women, and to meet the specific needs of women who are imprisoned.
- **UN Standard Minimum Rules for Non-custodial Measures (the Tokyo Rules)** provide a set of basic principles to promote the use of non-custodial measures and sanctions, as well as minimum safeguards for persons subject to alternatives to imprisonment.

- **Use of technology:** Automation and other technological advances can significantly ease the burden on prison staff, although the use of such technology needs to be balanced with the necessity for critical interaction between prison staff and people detained.
- **A National Commission for Prisons:** should be established to provide a national perspective on prisons and be a central body responsible for these.
- **A robust grievance redressal mechanism:** should be put in place in all prisons to ensure the rights of prisoners are not violated and their concerns are heard impartially.



Important Reform Measures taken so far in India

- The modern prison system was **conceptualised by TB Macaulay** in 1835.
- In 1836, a **Prison Discipline Committee** was constituted by **William Bantick** to improve discipline in prisons.
- **Prison Act, 1894**, enacted to bring uniformity in the working of the prisoners in India. The Act provided for classification of prisoners.
- **All India Jail Committee (1919-1920)** was first ever comprehensive study that was launched on this subject.
- **All India Jails Manual Committee 1957-59** to prepare a model prison manual.
- **All India Committee on Jail Reforms 1980-83** under Justice A N Mulla.
- In 1987, the GoI appointed the **Justice Krishna Iyer Committee** to undertake a study on the situation of women prisoners in India
- **Draft National Policy on Prison Reforms** and Correctional Administration, 2007
- **Model Prison Manual 2016** aims at bringing in basic uniformity in laws, rules and regulations governing the administration of prisons and the management of prisoners all over the country.
- **SC had constituted a 3-member committee in 2018** to look into entire gamut of prison reforms across the country and suggest measures to deal with them.
- **Report on 'Women in Prisons'** by Ministry of Women and Child Development in 2018.



- **Healthcare needs:** Both physical and mental health needs should be addressed appropriately and regularly. Inmates should have access to doctors and psychologists as and when needed.
- **Skill development:** Educational facilities, Vocational training and skilling facilities in prison should be also be upgraded as it can improve the daily lives of prisoners and give them economic support after release.

To know more about **Criminal Justice System**, please refer to our following Weekly Focus Document.

 <p>India's Criminal Justice System: Reforming Institutions For Delivering Justice</p>	<p>The entire existence of the orderly society depends upon sound and efficient functioning of the Criminal Justice System. Understanding the evolution and various components of criminal justice system in India, the document examines various maladies and faults with which the existing criminal justice system is affected. It further pinpoints various alternatives and suggestions for strengthening the system in order to achieve equity and prompt delivery of justice in the country.</p>	
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1.7. PHONE TAPPING

Why in news?

Recently, an IPS officer was under probe for tapping the phones of political leaders in 2019.

About phone tapping

- **Definition:** Phone tapping refers to the monitoring of internet-based communications and phones by a third party by secret means. The word 'phone tapping' also means wiretapping or line bugging or interception of the phone. It was first commenced in the USA in the 1890s after the invention of the telephone recorder.
- **Legal provisions:** Phone tapping is regulated by the Indian Telegraphic Act, 1885.

Constitutional provisions on phone tapping

- **Schedule 7th:** Telephones along with other **communication devices** find mention under **Entry 31 of the Union List**.
- **Right to privacy:** Telephone conversation is an important facet of a person's private life. Telephone-tapping would, thus, infract Article 21 of the Constitution of India unless it is permitted under the procedure established by law.
- **Freedom of speech:** If, a person is talking on the telephone, She/ he is exercising his or her right to freedom of speech and expression. Thus, telephone tapping would also infringe Art 19(1)(a) unless it came within the restrictions on this right set out in Art 19(2).

The Indian Telegraphic Act, 1885

- **Power for phone tapping:** Both, the **Central and the State Governments** have a right to tap phones under Section 5(2) of Indian Telegraphic Act, 1885.
 - In the states, police have the powers to tap phones.
 - At the Centre, 10 agencies are authorised to do so: Intelligence Bureau, CBI, Enforcement Directorate, Narcotics Control Bureau, Central Board of Direct Taxes, Directorate of Revenue Intelligence, National Investigation Agency, R&AW, Directorate of Signal Intelligence, and the Delhi Police Commissioner.
 - **Tapping by any other agency would be considered illegal.**
- **Grounds for phone tapping:** Phone tapping can be done by the Centre or states if they are satisfied that it is necessary in the interest of "**public safety**", "**sovereignty and integrity of India, the security of the State, friendly relations with foreign States or public order or for preventing incitement to the commission of an offence**".
 - **Exception for the press:** Press messages intended to be published in India of correspondents accredited to the Central Government or a State Government shall not be intercepted or detained, unless their transmission has been prohibited under this sub-section.

- **Power to issue the order for phone tapping:**

According to the Rule 419A of the Indian Telegraph (Amendment) Rules, 2007, phone tapping orders could be issued only by the **Secretary, Union Ministry of Home Affairs or his State Counterpart**. The order has to be conveyed to the service provider **in writing**; only then can the tapping begin. The competent authority **must record reasons for tapping in writing**.

- However, in the **exceptional cases the order may be issued by the lower authorities** also which may include officer, not below the rank of a Joint Secretary, to the Government of India or the head or the second senior-most officer of the authorised law enforcement agency at the central level, and by authorised officers, not below the rank of Inspector General of Police, at the state level.
- Such order has to be communicated to the competent authority within a specified time period.

Checks against misuse of power of phone tapping

- **Last resort:** The law is clear that interception must be ordered only if there is no other way of getting the information.
- **Time limit:** The directions for interception remain in force, unless revoked earlier, for a period not exceeding 60 days. They may be renewed, but not beyond a total of 180 days.
- **Review committee:** Any order issued by the competent authority is reviewed by a committee headed by the Cabinet Secretary with the Law and Telecom Secretaries as members. In states, it is headed by the Chief Secretary with the Law and Home Secretaries as members. The review committee may set aside the directions and orders for destruction of the copies of the intercepted message or class of messages
- **Destructions of records:** Records pertaining to such directions shall be destroyed every six months unless these are, or are likely to be, required for functional requirements. Service providers too are required to destroy records pertaining to directions for interception within two months of discontinuance of the interception.
- **Procedural transparency:** There are multiple provisions aimed at keeping the process transparent:

Common phone tapping technologies			
Attributes	Integrated Network (ISDN)	Digital Services	Leased line
Process of tapping	<ul style="list-style-type: none"> • A mediation server intercepts a call and then transmits it through a Primary Rate Interface (PRI) line to the office of a government agency. • Also, the police can listen to the phone on their PRI line and store the recording to attached computers. A sound file of the intercepted call is also recorded and stored in the mediation server, simultaneously 		The service provider gives the agency direct access to its backbone network through a dedicated fast speed fibre optic cable connection.
Time lag	<ul style="list-style-type: none"> • The transfer of call-related data doesn't happen in real time. • A slow 64 kbps speed results in a time lag of two to three minutes. 		The call-related data is not only transmitted in real time , at the speed of 2 mbps , the chances of missing any call are minimal.
Advantage	Cheaper		Costly, as cost of laying a fast-speed fibre optic cable connection is higher.
Utility	State agencies are more dependent on ISDN as it is cheaper		

IMPORTANT CASES ON PHONE TAPPING



PUCL v. UOI (1996)

Held: Telephone tapping infringed the **fundamental right to privacy**, and **created safeguards** against arbitrariness in the exercise of the state's surveillance powers.



K.L.D Nagasree v. Government of India (2006)

Held: the occurrence of any public emergency or the existence of a public safety interest is the **sine qua non** under **Section 5(1) & (2)**.



Rayala M. Bhuvaneshwari vs Nagaphanender Rayala (2008)

Held: Act of tapping conversation of **wife by husband illegal**.



- **Written direction to service provider:** The directions for interception have to be conveyed to designated officers of the service providers in writing by an officer not below the rank of SP or Additional SP or equivalent.
- **Disclosure of information:** Directions for interception are to specify the name and designation of the officer or the authority to whom the intercepted call is to be disclosed
- **Responsibility of service providers**
 - ✓ The designated nodal officers of the service providers are supposed to **issue acknowledgment letters** to the security/law enforcement agency within two hours on receipt of an intimation.
 - ✓ They are to forward every 15 days a list of interception authorisations received to the nodal officers of the security and law enforcement agencies for **confirmation of authenticity**.
 - ✓ They shall put in place adequate and effective **internal checks to ensure that unauthorised interception of messages does not take place** and extreme secrecy is maintained.
 - ✓ In case of **unauthorised interception**, the service provider may be **fined or even lose its licence**.

Recourse against illegal phone tapping

- Unauthorized tapping is in violation of the right to privacy and the aggrieved person can file a **complaint in the Human Rights Commission**.
- **An FIR can be lodged** in the nearest Police Station when unauthorized phone tapping comes into the knowledge of the person.
- Additionally, the aggrieved person can move the Court against the person/company doing the Act in an unauthorized manner **under Section 26 (b) of the Indian Telegraphic Act which provides for 3 year imprisonment for persons held for tapping**. The person (s) can also be prosecuted for authorized tapping but sharing of the data in an authorized manner.

1.8. NEWS IN SHORTS

1.8.1. INDIA STAYS OUT OF GLOBAL DECLARATION ON FUTURE ON INTERNET

- Aiming to keep the **Internet open, free, and neutral**, the declaration is a **political commitment** among the partners to advance a **positive vision** for the Internet and digital technologies.
 - Around **60 countries have signed** the declaration include the US, European Union, United Kingdom, Canada and France. **India, China and Russia** are among the large nations that are **not part of this declaration**.
- **Key principles of Declaration**
 - Commitments to **protect human rights and fundamental freedoms** of all people,
 - Promote a global Internet that **advances the free flow of information**, advancing “inclusive and affordable” connectivity,
 - Promote **trust in the global digital ecosystem**, including through protection of privacy,
 - Protecting and strengthening the **multi-stakeholder approach** to governance.
- Earlier, a report titled, **“The return of digital authoritarianism: internet shutdowns”** highlighted that
 - Number of countries that **shut down the internet** in 2021 has **increased to 34 from 29 in 2020**.

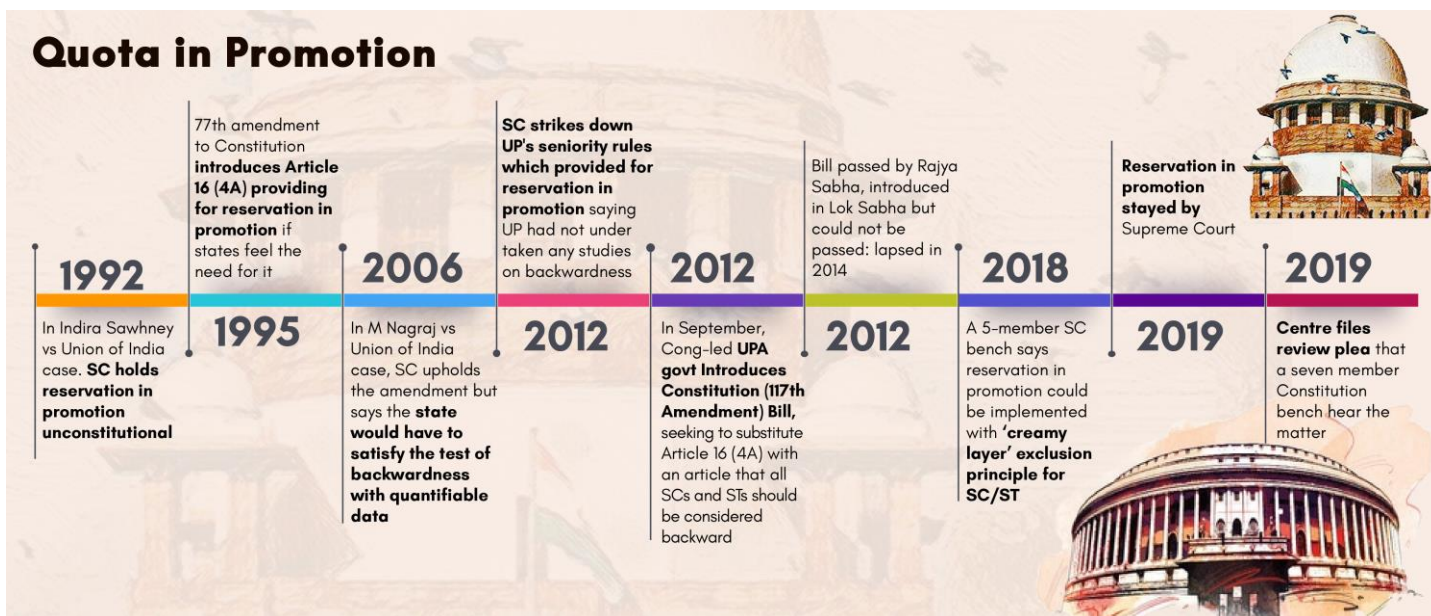
- **India is the top country to impose internet shutdowns** in 2021 for the fourth consecutive year.
- India also **did not sign the Budapest Convention on Cybercrime, 2001**.
 - The **data sharing** provisions of Budapest Convention infringes on **national sovereignty**.
 - Presently, it is the **only legally binding multilateral convention** on cybercrime and electronic evidence.

1.8.2. THE DEPARTMENT OF PERSONNEL AND TRAINING (DOPT) LAYS DOWN NORMS FOR QUOTA IN PROMOTIONS

- The DoPT has asked all departments of central government to **collect the data on inadequacy** of representation of Scheduled Castes and Scheduled Tribes before **implementing the policy of reservation in promotion** in government offices.
 - The memorandum **referred to the January verdict of the SC** (upheld the M. Nagaraj v. Union of India, 2006 judgement) having **three conditions** were laid down by the apex court
 - ✓ **The collection of quantifiable data** regarding the inadequacy of representation of SCs and STs.
 - ✓ The **application** of this data to **each cadre separately**.

- ✓ The cadre being the unit of operation of the promotion roster.
- **Reservation in promotion**
 - **Article 16 (4A):** Empowers State to make provisions for reservation in matters of promotion to SC/ST.

- **Nagaraj v. Union of India, 2006:** SC laid down 3 criterion to be followed for implementing reservation in promotion.
- **Jarnail Singh v L.N. Gupta (2018):** SC held that states need not be required to collect quantifiable data on the backwardness of the SCs and STs.



1.8.3. RULES FOR RESIGNATION AND REINSTATEMENT OF AN INDIAN ADMINISTRATIVE SERVICE OFFICER (IAS)

- In 2019, an IAS officer, who resigned from service has been reinstated.
 - Resignation of an officer of any of three All-India Services — IAS, Indian Police Service (IPS) and Indian Forest Service— is governed by Rules 5(1) and 5(1)(A) of All India Services (Death-cum-Retirement Benefits (DCRB)) Rules, 1958.
 - There are similar rules for resignation of officers belonging to other central services as well.
- **Rules to withdraw a resignation that has already been submitted**
 - As per DCRB Rules (amended in 2011), central government may permit an officer to withdraw his/her resignation “in the public interest”.
 - If an officer who has submitted his/her resignation sends an intimation in writing withdrawing it before its acceptance by the competent authority, resignation will be deemed to have been automatically withdrawn.
 - Central Government shall not accept the request for withdrawal of resignation where,
 - ✓ a member is associated with any political parties or any organisation which takes part in politics,

- ✓ to take part in, or assist in any other manner, any political movement or political activity or to canvass or use his/her influence in connection with, or take part in, an election to any legislature or local authority.

- **Resignation of an IAS officer must be submitted to**
 - Chief secretary of state in case of an officer serving in state.
 - Secretary of concerned Ministry or Department in case of an officer who is on central deputation.
- Only after recommendation of concerned cadre/state is received, the competent authority, i.e., central government consider the officer's resignation.
 - Competent authorities are- Minister of State at the Department of Personnel & Training (DoPT) in respect of IAS, Minister for Home Affairs in respect of IPS, and Minister for Environment, Forest and Climate Change in respect of Forest Service.

1.8.4. FAST AND SECURED TRANSMISSION OF ELECTRONIC RECORDS (FASTER)

- Recently, CJI launched the FASTER, a digital platform for court officials to instantly send e-copies of the orders.
- It will transmit e-authenticated copies of the interim orders, stay orders, bail orders and record of proceedings to the duty-holders for compliance and

due execution through a secured electronic communication channel to intended parties.

- It is developed on directions from Supreme Court (SC) after suo motu cognisance on delayed release of convicts from Jail after court order.

○ It is launched by Ministry of Information & Broadcasting.

- It is a simple and user-friendly web portal that provides a broadcaster with an end-to-end solution and would bring Transparency, Accountability & Responsiveness in the ecosystem.
- It will reduce the turnaround time of applications and at the same time will help applicants track the progress.

1.8.5. BROADCAST SEVA PORTAL

- It is an online portal solution for speedy filing and processing of applications of broadcasters for various kinds of licenses, permissions, registrations, etc



SMART QUIZ

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फाउंडेशन कोर्स सामान्य अध्ययन प्रारंभिक एवं मुख्य परीक्षा 2023

इनोवेटिव क्लासरूम प्रोग्राम

- प्रारंभिक परीक्षा, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिकों का विस्तृत कवरेज
- मौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान
- एनीमेशन, पॉवर प्वाइंट, वीडियो जैसी तकनीकी सुविधाओं का प्रयोग
- अंतर - विषयक समझ विकसित करने का प्रयास
- योजनाबद्ध तैयारी हेतु करंट ओरिएंटेड अप्रोच
- नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन
- सीसेट कक्षाएं
- PT 365 कक्षाएं
- MAINS 365 कक्षाएं
- PT टेस्ट सीरीज
- मुख्य परीक्षा टेस्ट सीरीज
- निबंध टेस्ट सीरीज
- सीसेट टेस्ट सीरीज
- निबंध लेखन - शैली की कक्षाएं
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लाइव/ऑनलाइन कक्षाएं भी उपलब्ध

2. INTERNATIONAL RELATIONS

2.1. UNITED NATIONS HUMAN RIGHTS COUNCIL

Why in news?

UN General Assembly adopted a resolution calling for Russia to be **suspended from the UN Human Rights Council**.

More about news

- The resolution was moved by the US to suspend Russia from the Council over allegations that **Russian soldiers killed civilians** while retreating from towns near the **Ukrainian capital Kyiv**.
- The resolution was **adopted with 93 votes in favour**, 24 against and **58 abstentions**.
- **India has abstained** on the vote asserting that India has chosen side of "peace and stands for an immediate end to violence".

About UN Human Rights Council

- It is an **inter-governmental body** within the United Nations system, **made up of 47 States**, is responsible for the promotion and protection of all human rights around the globe. It reports **directly to the General Assembly's** 193 members.
- **Background:** It was **established in 2006** by **Resolution 60/251** as a **subsidiary body to the UN General Assembly**. It replaced the **former Commission on Human Rights**, which operated from **1946 to 2006**.
 - **Commission on Human Rights** was created in 1946 as a subsidiary body of the U.N. Economic and Social Council (ECOSOC).
 - The initial mandate of the commission was to **establish international human rights standards** and develop an international bill of rights.
- **Mandate and Role in the U.N. System**
 - It is responsible for promoting **universal respect for the protection of all human rights and fundamental freedoms** for all.
 - It aims to **prevent and combat human rights violations**, including gross and systematic violations, and to **make recommendations** thereon.
 - It also works to **promote and coordinate the mainstreaming** of human rights within the UN system.
 - It receives **substantive and technical support from the U.N. Office of the High Commissioner for Human Rights (OHCHR)**, an office within the U.N. Secretariat.
 - Its decisions, resolutions, and recommendations are **not legally binding**.
- **Membership:** The Council **comprises 47 members** apportioned by geographic region (Refer infographic).
 - **Eligibility:** **All U.N. members are eligible** to run for a seat on the Council. Countries are **nominated** by their regional groups and **elected** by the General Assembly through **secret ballot** with an **absolute majority** required.
 - The General Assembly takes into account the **candidate States' contribution to the promotion and protection of human rights**, as well as their voluntary pledges and commitments in this regard.
 - **Term:** Members of the Council serve for a **period of three years** and are **not eligible for immediate re-election** after serving **two consecutive terms**.
 - **Suspension of Membership:** If a Council member commits "gross and systematic violations of human rights," the General Assembly **may suspend membership with a two-thirds vote** of members present.
- **Meetings:** The Council is **headquartered in Geneva, Switzerland**, and meets **for three or more sessions per year** for a total of 10 or more weeks. It can **hold special sessions** on specific human rights situations or issues at the request of any Council member with the **support of one-third of the Council membership**.

Region	Number of seats
African States	13
Asia-Pacific States	13
Latin American and Caribbean States	8
Western European and other States	7
Eastern European States	6

Significance of UNHRC

- **Platform for Dialogue among states:** The Council serves as a **forum for dialogue** among States, with **input from other stakeholders**. Through dialogue and cooperation, it contributes towards the **prevention of human rights violations and respond promptly** to human rights emergencies.
- **Special procedures to monitor human rights:** The Council has **created or renewed** the mandates of various “special procedures.” The special procedures are **experts appointed** to monitor human rights around priority themes or **in specific countries** with serious human rights problems.
- **Reviewing Human rights record:** The Council also manages the **Universal Periodic Review (UPR)**, a process through which each UN Member State’s **overall human rights record is reviewed**.
 - In addition, the Council **receives complaints alleging** patterns of human rights violations, which are considered by the **Working Group on Communications** and may be referred to the Working Group on Situations.
 - The Working Group on Situations **reports substantiated claims of consistent patterns** of gross violations to the Council and makes recommendations for action.
- **Encourages Civil Society Participation:** It explicitly acknowledges the role of non-governmental organizations at the national, regional and international levels, in the **promotion and protection** of human rights”. Therefore, council works in **close cooperation** in the field of human rights with **Governments, regional organizations, national human rights institutions and civil society**.
- **Others:**
 - Promotes the **implementation of human rights obligations** undertaken by States.
 - Provides advisory services, technical assistance and capacity building in **consultation with and with the consent** of Member States concerned.
 - **May issue resolutions** calling on States to take **specific actions** or **uphold certain principles**, or it may **create mechanisms** to investigate or monitor questions of concern.

India and UNHRC

- In May 2017, for third time in less than ten years, **India’s human rights record was reviewed** under the Universal Periodic Review (UPR) mechanism of the UNHRC.
- India also presented its **Voluntary National Review (VNR)** on the implementation of the **seventeen Sustainable Development Goals (SDGs)** under the 2030 Agenda at the High Level Political Forum (HLPF) of the ECOSOC at the United Nations in July 2017.
- In October 2021, India was **re-elected to the UNHRC for a sixth term (2022-2024)**. The overwhelming majority (**184 votes** in the 193-member assembly against required majority of 97) is a **robust endorsement** of our strong roots in **democracy, pluralism and fundamental rights**.

Achievements of UNHRC

- **Country specific reports and commissions of inquiry:** Between 2006 and 2015, the **number of country-specific reports** submitted by special procedures increased by 104 percent and the number of **governments issuing standing invitations** to the independent experts almost doubled to 114.
- **Resolution on Internet free speech:** In 2012, UNHRC unanimously adopted a resolution to protect the free speech of individuals on the Internet, the first such U.N. resolution of its kind.
- **Special rapporteurs on Iran:** It highlighted the woeful human rights situation there, citing Iran’s **extremely high rate of executions, constraints** on an independent judiciary, violations of due process, women’s rights, and **systematic discrimination** against religious minorities.
- **Resolution on prevention of violations:** The resolution (adopted in 2020) highlights the need for the UN system to support states in **building national resilience**, as well as the possibility for council to resort to **dialogue and cooperation** to prevent violations and **respond promptly** to human rights emergencies.
- **Recognition of the Right to a Healthy Environment as a Human Right:** In **2021**, members of the UNHRC adopted resolution recognizing the human right to a **safe, clean, healthy and sustainable environment**.

Concerns with Human Rights Council

- **Membership criteria:** It requires candidates to **commit to the highest standards** of human rights, and states should take into account a **nominee’s human rights record** when voting. Both of these rules are **basically unenforceable**.
 - UN members have very **different views on human rights**. For example, US **wanted only “democratic nations”** to be eligible. Such a criterion would lead to debates over **meaning of “democracy”**, and would seem to **prioritise civil and political rights** over economic, social and cultural ones.

- In any case, the **“measurement” and respective ranking** of human rights records across states is **contentious**. Consequently, **Council** sometimes includes countries **widely perceived as human rights abusers**.
- **Lack of competitiveness in council election:** In some elections, **countries have run unopposed** after regional groups nominated the exact number of countries required to fill Council vacancies. For instance, October 2021 election.
- **Prone to politicization:** States **generally vote in favour of their national interests** rather than human rights interests if the two should clash. Thus Council remains prone to politicization, as evidenced by **decisions that privilege political interests over human rights** protection.
- **Reprisals against Human rights defenders:** NGO representatives invited to speak at the Council are too often **interrupted with harassing points of order** from repressive delegations.
- **Others:**
 - **Council’s closed ballot elections** in the General Assembly may make it easier for countries **with questionable human rights records** to be elected to the Council.
 - The **submissions and statements** of governments perceived to be human rights abusers are **taken at face value rather than being challenged**. The process gives these same countries a **platform to criticize** countries that may have generally **positive human rights records**.
 - Many experts have also expressed concern regarding some **member states’ rejection of UPR recommendations and nonparticipation** in the UPR process.
 - Further, it remains **difficult to build consensus** on specific issues relating to human rights.

Road Ahead

- **Procedural reforms:** Some experts and policymakers have **proposed requiring open ballots** in Council elections to hold countries **publicly accountable** for their votes. Experts also suggest **lowering the two-thirds vote threshold** to make it easier to remove a Council member.
- **Protecting Human Rights Defenders from Reprisals:** Any state found to be responsible for reprisals against human rights defenders, and which **fails to rectify** them, **should be disqualified** from sitting on the Council.
- **Strengthening UPR:** This can be done through **systematic follow-up** and implementation and adopting a **more rigorous** test. It can also be made a **part of the selection process** for election to Council or can be connected to other parts of the UN responsible for the **provision of material and technical assistance** to states.
- **Other measures**
 - Provision of **timely and accurate information** to reduce politicization and build consensus.
 - **Ensuring National implementation** of international human rights obligations and commitments and addressing human rights situations.
 - Strengthening delivery of international human rights **technical assistance and capacity-building support and additional resources** for human rights reporting.

2.2. WEAPONS OF MASS DESTRUCTION (WMD)

Why in news?

Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022 to ban funding of weapons of mass destruction was recently passed in Lok Sabha.

More on news

- The **Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022** amends the Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005.
 - The 2005 Act **prohibits unlawful activities (such as manufacturing, transport, or transfer) related to weapons of mass destruction**, and their means of delivery. The **recent amendment extends the scope of banned activities** to include financing of already prohibited activities.
- The amendment bill **bars persons from financing any prohibited activity** related to WMD and their delivery systems directly or indirectly.

- It empowers the central government to freeze, seize or attach financial assets and economic resources of people engaged in such activities.

Key developments that echoes the need for amendment

- **To align with international benchmarks:** The relevant organisations at the international level, such as the Financial Action Task Force have expanded the scope of targeted financial sanctions and demand tighter controls on the financing of WMD activities.
- **To keep pace with evolving threats:** With advancements in technologies, new kinds of threats have emerged that were not sufficiently catered for in the existing legislation. These include developments in the field of drones or unauthorised work in biomedical labs that could maliciously be used for terrorist activity.

Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005.

- Its primary objective to provide an integrated and overarching legislation on prohibiting unlawful activities in relation to all three types of WMD (i.e., Nuclear, Chemical and Biological), their delivery systems and related materials, equipment and technologies.
- It instituted penalties for contravention of these provisions such as imprisonment for a term not less than five years (extendable for life) as well as fines.
- The Act was passed to meet an international obligation enforced by the UN Security Council Resolution (UNSCR) 1540 of 2004.
 - UNSCR 1540 established binding obligations on all UN member states to take and enforce effective measures against proliferation of WMD, their means of delivery and related materials to non-state actors.

About Weapons of Mass Destruction (WMD)

- There is no single, authoritative definition of a WMD in international law and the expression is usually understood to cover nuclear, biological, and chemical (NBC) weapons.
- According to the United States Department of Homeland Security, “A weapon of mass destruction is a nuclear, radiological, chemical, biological, or other device that is intended to harm a large number of people.
- It is therefore categorised as a class of weaponry with the potential to:
 - Produce in a single moment an enormous destructive effect capable to kill millions of civilians, jeopardize the natural environment, and fundamentally alter the lives of future generations through their catastrophic effects;
 - Cause death or serious injury of people through toxic or poisonous chemicals;
 - Disseminate disease-causing organisms or toxins to harm or kill humans, animals or plants;
 - Deliver nuclear explosive devices, chemical, biological or toxin agents to use them for hostile purposes or in armed conflict.

DID YOU KNOW?



• The expression “weapon of mass destruction” (WMD) is considered to have been used first by the Archbishop of Canterbury (England), in 1937 to refer to the aerial bombing of civilians in the Basque town of Guernica by German and Italian fascists in support of General Franco during the Spanish Civil War.

Definitions of WMDs as per India’s WMD Act, 2005

Nuclear weapons



Those which are categorized as having nuclear capabilities and recognized by the Government of India. In general, these machinery and weapons use the process of nuclear fission in order to facilitate an explosion.

Chemical weapons



Toxic chemicals and their precursors (except where used for peaceful purposes); munitions and devices specifically designed to cause death or other harm through the toxic properties of those toxic chemicals; and any equipment specifically designed for use in connection with the employment of these munitions and devices.

Biological Weapons



Microbial or other biological agents, or toxins of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; and weapons, equipment or delivery systems specially designed to use such agents or toxins for hostile purposes or in armed conflict.

Global efforts to outlaw several classes of WMDs

Treaties/Conventions/Codes	Purpose	Has India signed and ratified it?
Biological and Toxic Weapons Convention (BWC), 1972	Prohibits the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons. <ul style="list-style-type: none"> It supplements the 1925 Geneva Protocol, which had prohibited only the use of biological weapons. 	Yes
Chemical Weapons Convention (CWC), 1992	Prohibits the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons. <ul style="list-style-type: none"> It led to the establishment of Organisation for the Prohibition of Chemical Weapons (OPCW) headquartered at Hague, Netherlands. 	Yes
Treaty on the Non-Proliferation of Nuclear Weapons (NPT), 1970	To prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament.	No. India opposes NPT's discriminatory nature and argues for the universal ban of nuclear weapons.
Treaty on the Prohibition of Nuclear Weapons (TPNW), 2017	Prohibits participating in any nuclear weapon activities. These include undertakings not to develop, test, produce, acquire, possess, stockpile, use or threaten to use nuclear weapons and also to provide assistance to any State in the conduct of prohibited activities.	No. India believes that this Treaty does not constitute or contribute to the development of customary international law; nor does it set any new standards or norms.
Comprehensive Nuclear-Test-Ban Treaty, 1996	It bans all nuclear explosion tests on Earth. It also establishes a CTBT Organization (CTBTO), located in Vienna, to ensure the implementation of its provisions. <ul style="list-style-type: none"> It is yet to enter into force. 	No. India opposes CTBT's discriminatory nature and supports universal ban of nuclear weapons
Hague Code of Conduct (HCOC) formerly known as "The International Code of Conduct" (ICOC), 2002	To regulate access to ballistic missiles which can potentially deliver weapons of mass destruction.	Yes
Multilateral Export Control Regimes (MECR)	Voluntary and non-binding agreements created by the major supplier countries to co-operate in their effort to prevent transfer of certain military and dual use technology that support proliferation of Weapons of Mass Destruction (WMD). There are currently four such regimes under MECR: <ul style="list-style-type: none"> Nuclear Suppliers Group (NSG) for the control of nuclear related technology. Australia Group (AG) for control of chemical and biological technology that could be weaponized. Missile Technology Control Regime (MTCR) for the control of rockets and other aerial vehicles capable of delivering weapons of mass destruction. Wassenaar Arrangement for Conventional Arms and Dual-Use Goods and Technologies. 	India is member of three of the four MECRs, except the Nuclear supplier Group.

What are the weaknesses of the global governance against WMD threats?

- Inclusivity and Discrimination Issues:** WMD regimes apply different requirements to different nations. For example, NPT permits five specific countries to possess nuclear weapons but has no mechanism for other countries' accession while they possess nuclear weapons.
- Ability to withdraw easily:** For example, the United States and Russia ended the Intermediate Range Nuclear Forces Treaty in 2019 rather than working to address their mutual concerns about one another's adherence to it. These types of examples **could lead to further crumbling of existing global governance.**

- **Blatant use of WMD:** The greatest weakening of norms against WMD stems from the use of chemical weapons, which has become far too common and no longer appears to be effectively deterred.
- **Dual-use nature** of so many technologies involved in WMD production and use.
- **Accountability deficit:** Numerous instances of WMD use and testing remain essentially unpunished.
- **Broader political and security trends:** This includes range of issues among Russia, the United States, and European nations; North Korea's nuclear and missile programs; continuing uncertainty regarding the future of the Iran nuclear agreement; trade wars; terrorism; rising cyber threats; civil conflicts; and more.
- **Arms racing** among holders of world's largest nuclear weapon arsenals, the United States and Russia, to match and out manoeuvre the other. On the other hand players like China have sought to diversify into some new nuclear capabilities.

What is the role played by Asia and the Pacific Region in this regard?

States in Asia and the Pacific have experienced first-hand the inhumane effects of WMDs, and the region has assumed a leadership role in the global campaign to delegitimize all forms of WMDs. Examples of treaties and initiatives establishing nuclear-weapon-free zones in Asia and the Pacific include the following:

- **Treaty of Rarotonga** (South Pacific Nuclear Free Zone Treaty, 1986):
- **Bangkok Treaty** (Southeast Asian Nuclear-Weapon-Free Zone Treaty, 1995),
- **Central Asia Nuclear-Weapon-Free-Zone** (2006).
- **Mongolia declared itself the first single-State nuclear-weapon-free zone (SS-NWFZ) in 1992**, which was later recognized by P5 (five nuclear-weapon states) as well. This has set a precedent for other states to follow in declaring themselves SS-NWFZs.

Conclusion

The use of WMD is becoming more frequent, and there are no limits to the potential escalation the world could experience if global governance against WMD is not strengthened and expanded with urgency. Reducing such catastrophic risk is fully achievable, and the time to act is now. India has always played a leadership role to re-establish norms against WMD use and strengthen global governance in this regard.

Related News

World's stockpile of nuclear weapons increasing: Report by Nuclear Weapons Ban Monitor (NWBM)

- Objective of the report is to **track the progress being made to eradicate the world of nuclear weapons**, as set out in the **treaty on the prohibition of nuclear weapons (TPNW)**, which came into force in 2021.
- **Key findings of the report**
 - World's nine nuclear-armed states has a **combined arsenal of 12,705 warheads at the beginning of 2022**.
 - Approximately **90% of the world's nuclear warheads are owned by Russia and US**.
 - Countries including **China, India, North Korea and Pakistan, continued to increase their stockpiles last year** and, at this rate, could soon reverse the overall pace of decline in nuclear weapons.
- **About NWBM**
 - It is established as **research programme in 2018**, produced and published by **Norwegian People's Aid (NPA)**, a partner organization of **International Campaign to Abolish Nuclear Weapons (ICAN)**.
 - ✓ ICAN is a coalition of NGOs promoting adherence to and implementation of UN nuclear weapon ban treaty.
 - It **evaluates nuclear-weapons-related policies and practices of each of the 197 states** that are party/not party to global treaties on nuclear weapon reduction.

2.3. THE INDIAN ANTARCTIC BILL, 2022

Why in news?

Recently, the government has tabled **The Indian Antarctic Bill, 2022** in Lok Sabha. The draft bill is the first domestic legislation about the Antarctica in India.

Need of the Bill

- **India's increasing activities in Antarctica:** India's activities in the region has been increasing. Hence, there is a need for such domestic protocols which can regulate these activities.
- **To have sovereign rules and regulations:** Due to lack of domestic legislation about the Antarctica in India, Indian expeditions have been circumscribed by international law.

- **Enforcement of the Antarctica Treaty:** The Antarctic Treaty of 1959, which India is a signatory of, makes it mandatory for all the member countries to have provisions to prevent or check unlawful activities at their research stations. Hence, the bill provides validity to the treaty.
- **Extending Jurisdiction of Indian courts to Antarctica:** Currently there is no recourse for crimes committed during any Indian expedition, including crimes against the environment. Therefore, it has become important to extend the jurisdiction of Indian courts for such crimes.

Key Provisions of the Bill

- **Applicability:** Provisions applicable to any, Indian or foreign person, vessel or aircraft that is involved in any Indian expedition to Antarctica.
- **Establishment of a Committee on Antarctic Governance and Environmental Protection** chaired by the **Secretary of the Ministry of Earth Sciences** along with ten members and two experts by the Union Government. The functions of the Committee include:

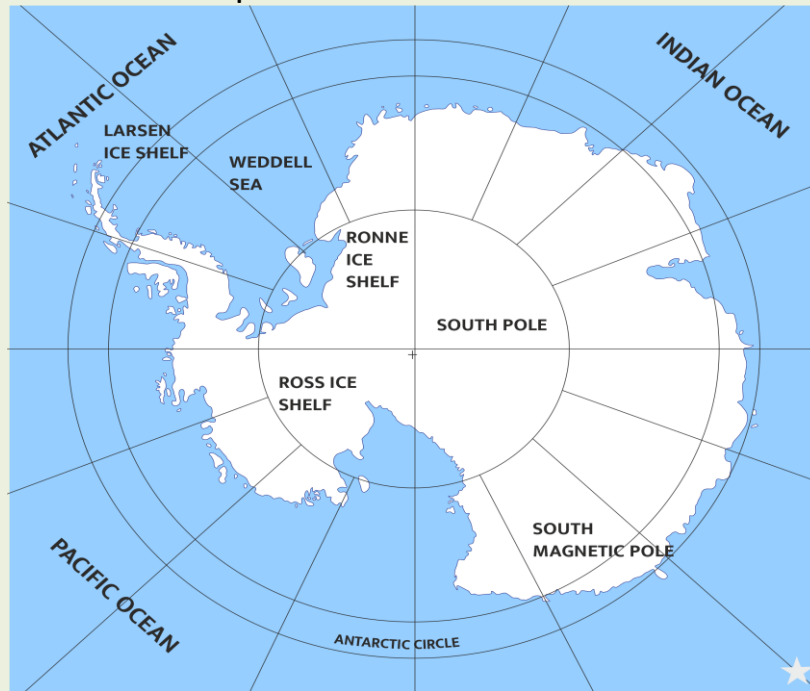
- **Granting permits** for various activities,
- Implementing and **ensuring compliance** of relevant international laws for protection of Antarctic environment,
- **Obtaining and reviewing relevant information** provided by parties to the Treaty, Convention, and Protocol, and
- **Negotiating fees/charges with other parties** for activities in Antarctica.

- **Permits system:** A permit by the Committee or written authorisation from another party to the Protocol (other than India) will be required for various activities such as:

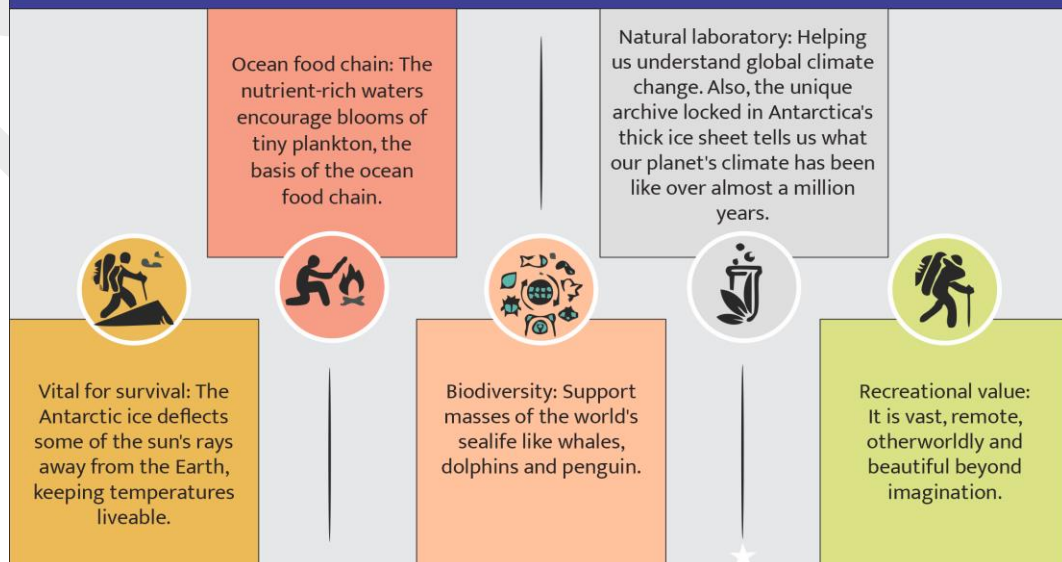
- **Entering and staying in Antarctica.**

About Antarctica

- World's 5th largest, southernmost and is the **driest, windiest, coldest, and iciest** continent.
- It is the world's highest continent, with an average elevation of about 7,200 feet (2,200 meters) above sea level.
- Due to cold desert climate supports only cold-tolerant land plant and plant like organisms.
- **Mt. Erebus and Deception Island** are the two active volcanoes in Antarctica.



Why Antarctica matters?



- **Mineral resource activities** like drilling, dredging or excavating for mineral resources, or collecting samples of mineral resources.
- **Introduction of non-native animals** and plants or microscopic organisms into Antarctica.
- **Removal of biological specimen** or any other sample from Antarctica.
- **Activities which may harm native species.**
- **Waste disposal** in Antarctica or discharge into sea.
- **Prohibited activities:**
 - Nuclear explosion, disposal of radioactive wastes.
 - Introduction of non-sterile soil.
 - Introduction of specified substances and products.
 - Discharge of garbage, plastic, or other substance harmful to marine environment in Antarctica.
 - Damage, destroy or remove any historic site or monument.
 - Possession, sale or offering for sale, trading, transporting, transferring or sending anything that has been obtained by violating provisions of the act.
- **Stringent penalties for contravention of its provisions:**

<p>India's other endeavours in Antarctica</p> <ul style="list-style-type: none"> ● The Protocol on Environmental Protection to the Antarctic Treaty (the Environmental Protocol or Madrid Protocol) entered into force for India in 1998. ● India is also a member of Council of Managers of National Antarctic Programme (COMNAP), Scientific Committee of Antarctica Research (SCAR) and Commission for Conservation of Antarctic Marine Living Resources (CCAMLR). ● India's Research stations: Maitri at Schirmacher Hills, Bharati at Larsemann Hills (Dakshin Gangotri was the first Indian base established in 1984). ● The Antarctic operations of India are currently funded from the budget allocated to the Ministry of Earth Sciences under relevant head. 	<p>About Antarctic Treaty</p> <ul style="list-style-type: none"> ● The treaty was signed in 1959 and came into force in 1961 after ratification by 12 original members. <ul style="list-style-type: none"> ○ These 12 countries are: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, USSR (now Russia) the UK, and the US. ● Parties: Currently 54 countries have acceded it. <ul style="list-style-type: none"> ○ India joined the treaty in 1983 and soon received consultative status. ● Objectives of the treaty <ul style="list-style-type: none"> ○ To demilitarize Antarctica and to establish it as a zone free of nuclear tests and the disposal of radioactive waste, and to ensure that it is used for peaceful purposes only. ○ To promote international scientific cooperation in Antarctica. ○ To set aside disputes over territorial sovereignty. ● The Treaty parties have also negotiated three international agreements which govern activities in Antarctica, collectively known as the Antarctic Treaty System- <ul style="list-style-type: none"> ○ Convention for the Conservation of Antarctic Seals (1972) ○ Convention on the Conservation of Antarctic Marine Living Resources (1980) ○ Protocol on Environmental Protection to the Antarctic Treaty (1991)
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Offense	Punishment
Conducting a nuclear explosion in Antarctica	Imprisonment of 20 years which may extend to life imprisonment and a fine of at least Rs 50 crore
Drilling for mineral resources or introducing non-native animals or plants in Antarctica without a permit	Imprisonment up to seven years and a fine between Rs 10 lakh and Rs 50 lakh

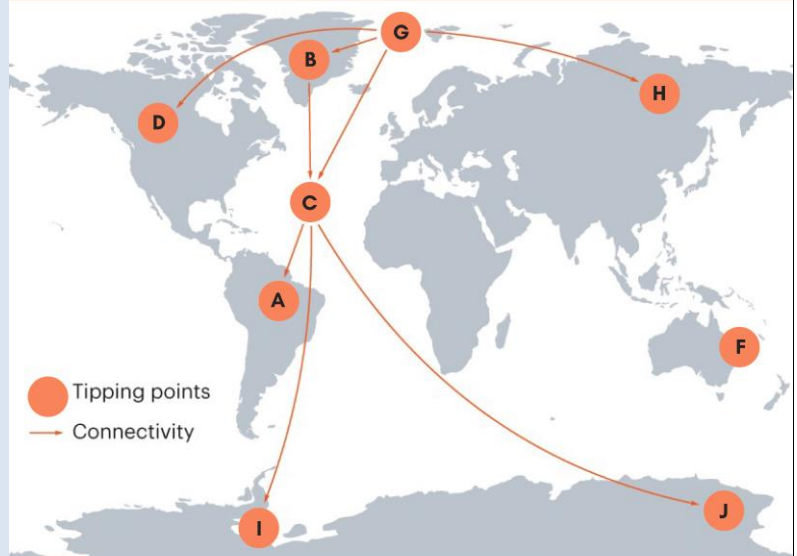
- **Sessions court to try punishable offences:** The central government may notify one or more Sessions Courts to be the Designated Court and specify its territorial jurisdiction to try offences punishable under the Bill.
- **Other provisions:**
 - **Constitution of the Antarctic fund** to be applied towards the welfare of Antarctic research work and protection of Antarctic environment.
 - **Grant of Special permit for commercial fishing in Antarctica** by applying to the Secretariat of the Commission for the Conservation of Antarctic Marine Living Resources through the Committee.
 - **Inspection:** Inspection in India by an officer designated by the Central Government as an Inspector and to constituting an inspection team to carry out inspections in Antarctica.
 - **Specifies Duties and liabilities of Operator** in case of environmental emergency.
 - **Establishment of waste classification system** and waste management plan.

Related News

Ice Shelf Collapses in Eastern Antarctica Amid Soaring Temperatures

- For the first time, since wide availability of satellite images, Scientists observed **breakup of Conger Ice Shelf** in eastern Antarctica.
 - It is happening due to **rising temperatures** with **both North and South Pole** seeing warmer than average temperature **despite opposite seasons**.
- Also, a new research highlighted that **Antarctica is approaching a climate tipping point** by 2060- when Antarctic ice could begin melting at a runaway rate.
 - Climate tipping points** are points where any **small change could push the earth system into abrupt or irreversible change**.
 - Globally, we have **9 climate tipping points** with the Antarctic Ice Sheet as one of them.

Evidence that tipping points are under way has mounted in the past decade. Domino effects have also been proposed.



A. Amazon rainforest
Frequent droughts

B. Arctic sea ice
Reduction in area

C. Atlantic circulation
In slowdown since 1950s

D. Boreal forest Fires and pests changing

F. Coral reefs
Large-scale die-offs

G. Greenland ice sheet
Ice loss accelerating

H. Permafrost
Thawing

I. West Antarctic ice sheet
Ice loss accelerating

J. Wilkes Basin, East Antarctica
Ice loss accelerating

2.4. INDIA US RELATIONS

Why in news?

The **fourth '2+2' dialogue between India and the United States** was held in Washington DC.

More about news

- Both sides look forward to India's co-hosting of the **Indo-Pacific Armies Chiefs Conference (IPACC)** and **Indo-Pacific Armies Management Seminar (IPAMS)** in 2023.
- They also announced the conclusion of a **Memorandum of Understanding on Space Situational Awareness** and pledged to expand bilateral space cooperation.
- Both countries looked forward to **expansion of the USAID-supported COVID-19 Learning Exchange virtual platform** to include programs for more population groups and allow cities and health officials to **share best practices**.

About 2+2 dialogue

- The 2+2 dialogue is a format of meeting of the **foreign and defence ministers** of India and its allies on strategic and security issues.
- A 2+2 ministerial dialogue enables the partners to **better understand and appreciate each other's strategic concerns and sensitivities** taking into account political factors on both sides.
- India has 2+2 dialogues with **four key strategic partners**: the US, Australia, Japan, and Russia.

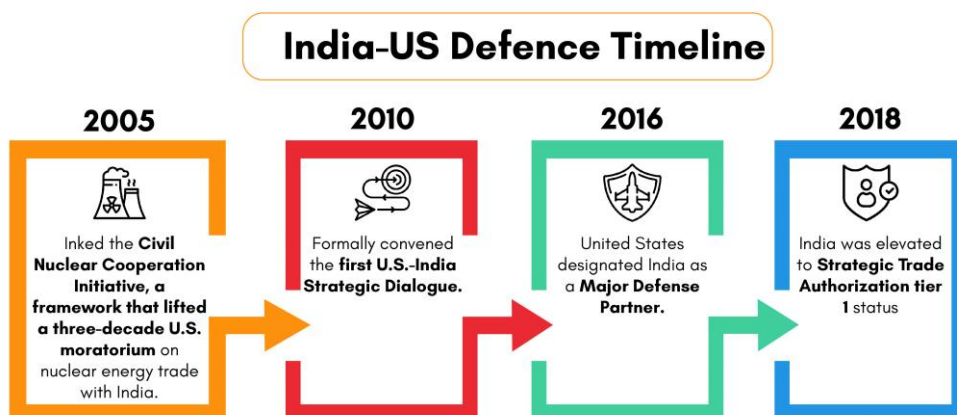
About India US relations

- India and United States enjoy a **comprehensive global strategic partnership** covering almost all areas of human endeavour, driven by shared democratic values, **convergence of interests** on a range of issues, and vibrant **people-to-people contacts**.
- India US relations have had a **turbulent past**. During cold war, India's **policy of non-alignment** and its relations with the **erstwhile Soviet Union** and the **US-Pak alliance** were major irritants.
- While the end of Cold War led to a **gradual improvement** in relations, these shifts came to a **halt in May 1998** when India conducted nuclear tests and the US imposed **wide ranging sanctions**. With start of 21st century, **there was a convergence of interests in a diverse set of issue-areas** like:
 - Preventing Asia from being dominated by any **single power**,

- Eliminating the threats posed by state sponsors of **terrorism**,
- Arresting the further spread of **weapons of mass destruction** and related technologies,
- Protecting the **global commons**, especially the sea lanes of communications etc.
- Current heightened cooperation between India and the US can be attributed to two major factors: **global COVID-19 pandemic**, and **China's moves**, both its **domestic actions** on the COVID-19 pandemic and in Hong Kong and **increasingly provocative regional behaviour**.

Areas of engagements

- **Trade and Economic relations:** Trade and investment ties are a key aspect of U.S.-India bilateral relations. Bilateral trade in goods and services stood at **US\$ 146 billion in 2019**. In 2020, total U.S.-India merchandise trade (exports plus imports) accounted for **about 2% of U.S. merchandise trade, and about 12% for India**.



- India was the **United States' 11th -largest** overall goods trading partner; and the United States was **India's largest** merchandise export destination and **third-largest merchandise import supplier** (after China and the European Union).
- US replaced Mauritius as **second largest source of foreign direct investment** into India **during 2020-21** with inflows of **USD 13.82 billion**. US is one of the **top 5 investment destinations** for Indian FDI.
- **International cooperation:** India and the United States cooperate closely at **multilateral organizations**, including the United Nations, G-20, Association of Southeast Asian Nations (ASEAN) Regional Forum, International Monetary Fund, World Bank, and World Trade Organization.
 - During **first Quad (India, Japan, United States & Australia) Leaders' Summit** in March 2021, both countries reiterated their common vision for a **free, open and inclusive Indo-Pacific region**.
- **Defence cooperation:** India-US defence cooperation is based on "**New Framework for India US Defence Cooperation**", which was renewed for a **period of ten years in 2015**. India has procured defense items of **around US\$ 21 billion** from the US since 2008.
 - US recognized India as a "**Major Defence Partner in 2016**."
 - Several **defense agreements** have been signed like **Logistics Exchange Memorandum of Association** (August 2016); **Communications Compatibility and Security Agreement** (September 2018); **Industrial Security Agreement** (December 2019); **Basic Exchange and Cooperation Agreement** (October 2020).
 - **Bilateral military exercises like Yudh Abhyaas, Vajra prahar, etc. and defense exchanges** are important aspect of deepening military-to-military cooperation. Two countries now **conduct more bilateral exercises with each other** than they do with any other country.
 - In addition to a number of service-to-service exercises, in 2019 a **tri-services exercise– Tiger Triumph-** was conducted.
- **S&T and Space Cooperation:** India-US cooperation in Science and Technology has been growing steadily under the framework of the **India-US Science and Technology Cooperation Agreement** signed in 2005, which was renewed for a period of ten years in **2019**.
 - India and the U.S. have a long history of cooperation in **the civil space arena** in Earth Observation, Satellite Navigation, Space Science and Exploration. The **ISRO and NASA are working together to realize a joint microwave remote sensing satellite** for Earth observation, named **NISAR**.
- **Diaspora/People-to-People ties:** About **4.2 million Indian Americans/Indian origin** people reside in the US. The Indian Americans (3.18 million) constitute the **third largest Asian ethnic group** in the US.

- **Other areas** of cooperation include Education, Health, Energy, cyber security, civil nuclear cooperation, Counterterrorism and Counter Narcotics etc.

Challenges in India US relations

- **Economic sphere:** The main divergences are **pharma patents, data flows, e-commerce, and regulatory precision**. On pharma, Americans want **long term protection** to monetize and recoup investments whereas Indians want **lower cost and greater access**. On data, the U.S. takes a **light touch on privacy** with basic consumer protections.
 - India remained on the **Priority Watch List** of the U.S. 2021 “Special 301” report, which cited concerns like India’s **patent treatment, high IP theft rates, and lax trade secret protection**.
 - U.S. is concerned about **persisting investment barriers**, due to India’s restrictive rules for e-commerce platforms and other issues affecting the investment climate, such as **India’s regulatory transparency and localization policies**.
 - Two countries are **locked in a ‘low intensity trade war’** through imposition of tariffs, thus **restricting trade**. United States has longstanding concerns over **India’s tariff regime, especially in agriculture**. India opposes the continued **U.S. steel and aluminium tariffs**, applied since 2018.
 - Additionally, US had cancelled **India’s developing country status** under the Generalized System of Preferences (GSP) in 2019.
- **Strategic and security sphere:** Lack of a formal alliance does place some systemic limits which could manifest as differences.
 - India **remains reluctant** to become fully plugged into **US defence systems** due to India’s longstanding **commitment to non-alignment** (and its post-Cold War variants of **strategic autonomy/omni- or multi-alignment**).
 - India’s preference for India to be a **pole in a multipolar world** is also not entirely in concordance with an American view that does **not see the benefits of multipolarity** in the same way. Rather, U.S. global leadership and American primacy are Washington’s objectives.
 - Further, given the **U.S. withdrawal from Afghanistan**, counter-terrorism cooperation between India and the U.S. may become more difficult.
- **Countering America’s Adversaries through Sanctions Act (CAATSA):** CASTSA, which restricts defence purchases from **Russia, Iran and North Korea** continues to be a **sore spot** in the relationship. Given that **Russia is a declared U.S. competitor and adversary**, expanding and deepening India-Russia defense cooperation **complicates and could limit** what the United States does with, **shares with, and sells** to India.
 - US has expressed concern **regarding new streams of arms like the S-400** air defense system, because they **diminish prospects for interoperability of and secure communications between U.S. and Indian forces**, and preclude **sharing of existing sensitive** weapons technologies.
- **Divergences on WTO issues:** Two nations, at times, use the WTO to **enforce trade rules and settle trade disputes** against each other. US and some developed countries also are **critical of India, China, and others for self-designating as developing countries** to claim special and differential treatment under WTO rule.
 - In 2021, **US voiced support** for the concept of a **waiver of certain WTO IPR obligations for COVID-19 vaccines**. But India and some other countries seek a **broader WTO IPR waiver** for COVID-19-related health **products and technologies**.
 - Differences remain on other issues under negotiation, like **e-commerce customs duties and fisheries subsidies**.

Road Ahead

- **Long term convergence:** Notwithstanding the **substantial disagreements** between India and US on variety of issues, the relationship is too valuable to both the parties. US sees **India’s potential** to be an important contributor to **Asian security and prosperity**.
 - **India’s China challenge, regional and global aspirations, and increasing role** in multilateral fora – and a growing acceptance of reliance on **U.S. cooperation** in these spheres ensure the two countries will **continue to find convergence** in the long term.
- **Turning challenges into opportunities:** Quad’s support for India’s pharmaceutical industry to help **manufacture vaccines** for global distribution and US’s decision to **avoid demanding that India quickly commit to net-zero emissions** have transformed potentially prickly challenges into **opportunities for cooperation**.

- **Managing differences by understanding each other's concerns:** This was seen when US had allowed some exceptions to the Chabahar port from its sweeping sanctions on Iran, appreciation for India's inescapable dependence on Russian arms and recently both sides have shown willingness to understand each other's positions on Ukraine.
 - Going forward, the Government of India could consider devoting some diplomatic capital to negotiate possible solutions to avoid sanctions (particularly when it impacts India's energy security) while maintaining its strategic relationship with the US.
 - India expects greater openness from the United States to cooperation and understanding of Indian needs in emerging areas such as digital tech and e-commerce.
 - There is also a need for deeper appreciation of Indian values that emanate from India's own unique history and politics.

2.4.1. SPACE SITUATIONAL AWARENESS (SSA)

Why in News?

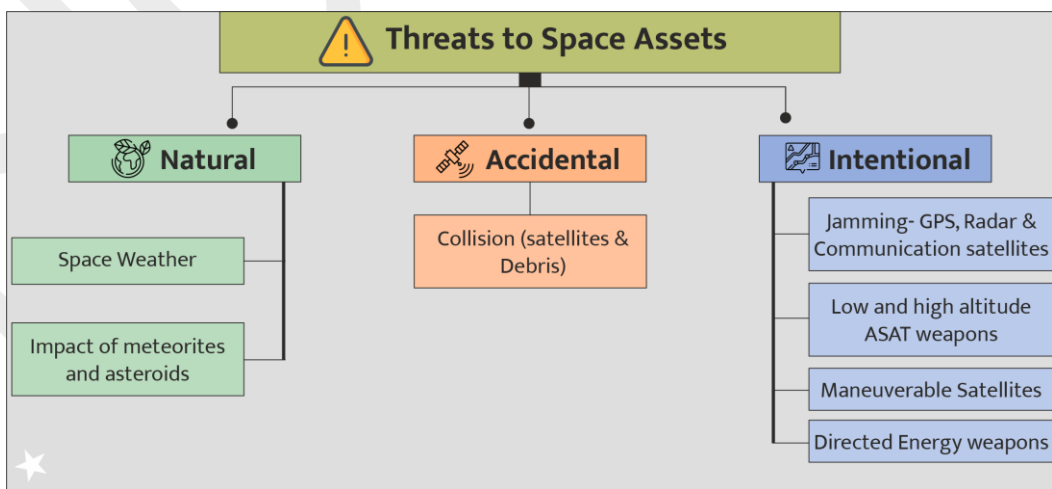
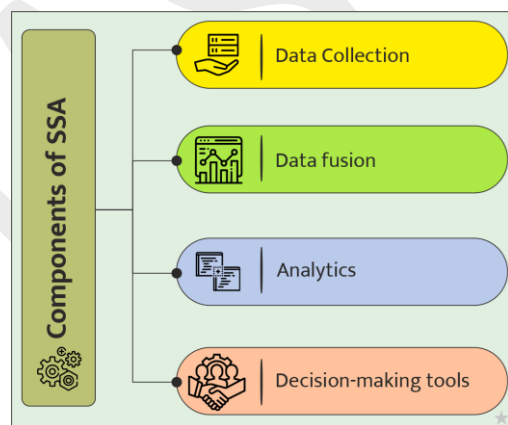
In the light of the signed MoU, space has become a growing and consequently integral part of the India-US relations.

What is SSA?

SSA is the practice of tracking objects in space, identifying them, establishing their orbits, understanding the environment they're operating in, and predicting their future positions and threats to their operations.

Importance of SSA for India

- **To ensure security of space assets:** SSA can help in debris tracking, collision avoidance, Prediction and monitoring of threats (refer infographic) and Satellite anomaly detection.
- **Space superiority:** SSA also helps in providing information regarding adversary's activities in space, detection of adversary's counter space activities, monitoring adversary's missile launches etc. which will enable decision makers to gain and maintain space superiority.
- **Dramatic rise in number of space objects:** The advent of private players and the growing importance of the commercial sector has rapidly transformed the use of space. The number of objects in space is increasing exponentially, heightening the risk of collisions between space objects.
 - Currently there are a total number of 19,432 objects on orbit of which only 2216 are active satellites.



Steps taken in the light of importance of SSA

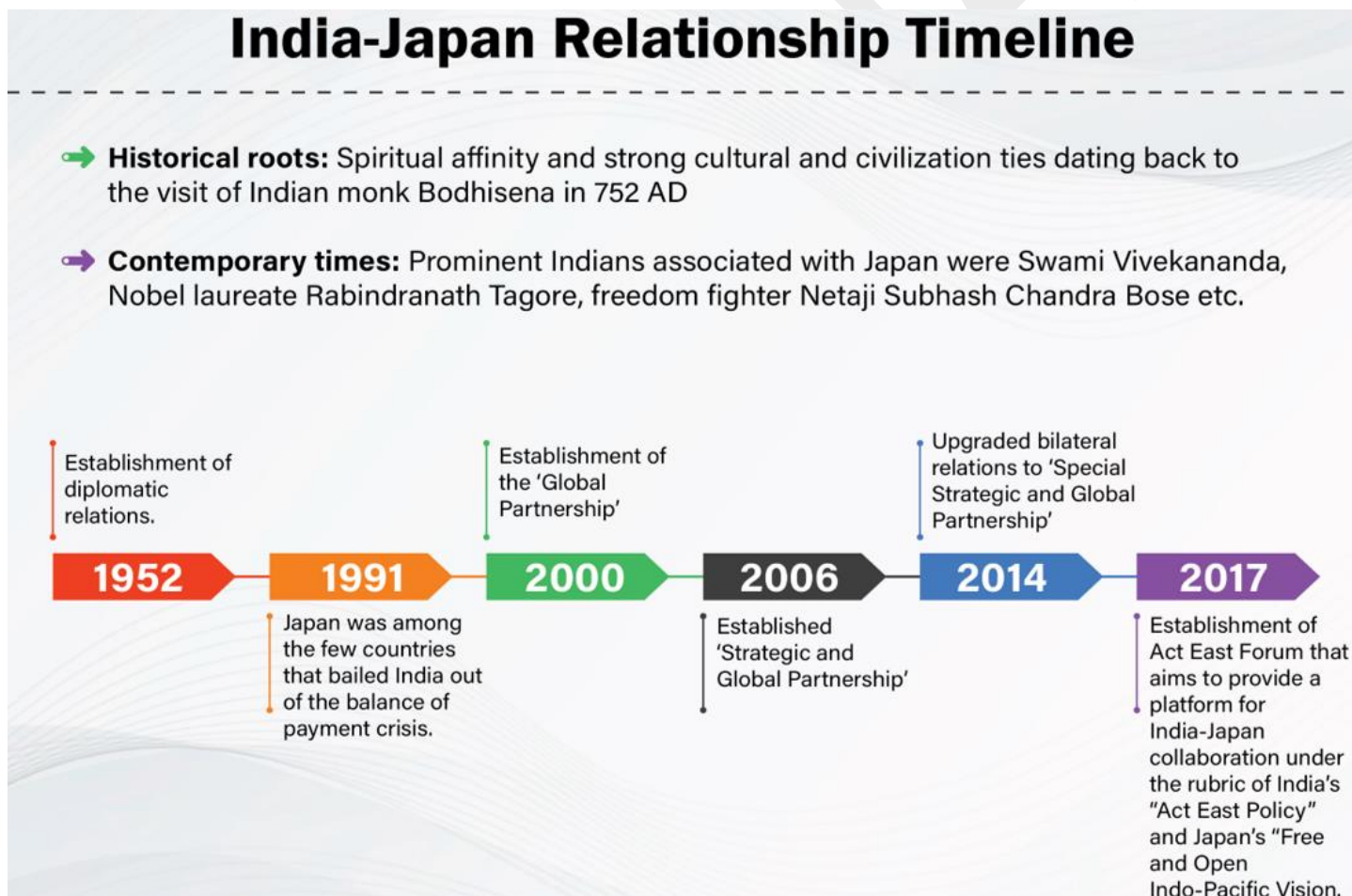
- **ISRO has set up a Directorate of Space Situational Awareness and Management (SSAM)** aiming at protecting high valued space assets from space debris close approaches and collisions.
- **A control centre is being established at Bengaluru** to systematically carryout all activities related to SSAM.
 - It would host a range of activities pertaining to protection of Indian Space assets from inactive satellites, pieces of orbiting objects, near earth asteroids and adverse space weather conditions.

- It would assimilate the **tracking data of inactive satellites** from indigenous observation facilities and generates useful information from bare observations through analysis.
- It would also **enable research activities** pertaining to active debris removal, space debris modelling and mitigation.
- **Network for space object Tracking and Analysis (NETRA) Project:** It is an early warning system in space to detect debris and other hazards to Indian satellites.
 - Currently there are 15 functional Indian communication satellites in the geostationary orbit of 36,000 km; 13 remote sensing satellites in LEO of up to 2,000 km; and eight navigation satellites in medium earth orbits which would come under its supervision.
- **Global cooperation:** India is an active member of Inter-Agency Debris Coordination Committee (IADC) and also engages in several initiatives with North American Aerospace Defense Command (NORAD).
- **Multi Object Tracking Radar (MOTR):** Currently used for proximity analysis, but when used in conjunction with NETRA and a dedicated Command Centre, it could drastically improve the observation accuracy of space assets.

2.5. INDIA-JAPAN RELATIONS

Why in news?

Recently, the India and Japan completed 70 years of establishment of diplomatic relations.



Areas of Cooperation between India and Japan

- **Economic and Commercial Cooperation:**
 - A **Comprehensive Economic Partnership Agreement (CEPA)** exists between the two since **2011**, which provides a boost to bilateral trade.
 - Japan is one of the largest investors in India with nearly **\$35 billion** of FDI in the last two decades, mainly in areas of automobile, electrical equipment, telecommunications, chemical and pharmaceutical sectors.

- Japan is also the **biggest bilateral donor to India** with **Japanese Official Development Assistance (ODA)** extended to some of the major infrastructure projects of India, like Delhi-Mumbai Industrial Corridor, Ahmedabad-Mumbai High Speed Rail Link among others.
- In wake of Supply Chain disruptions by Covid-19, India and Japan are working with Australia on the **Supply Chains Resilience Initiative (SCRI)**.
- **Defence and Strategic Cooperation:**
 - For long, India and Japan are working with Germany and Brazil for **permanent membership of UNSC (as G4 or Group of Four)**.
 - With start of **2+2 Dialogue (Foreign and Defence Ministerial Dialogue)**, defence and strategic cooperation between two nations has expanded beyond national boundaries.
 - **Quadrilateral Security Dialogue (Quad)** between India, United States, Japan and Australia for **Free and Open Indo-Pacific**.
- **Cultural Relations:** Starting from 1st **Cultural Agreement** of 1957, India and Japan cultural relations have gone uphill through friendly exchanges and enhanced people-to-people contact.
- **Skill Development:** Japan has set up **12 Japan India Institute of Manufacturing**. Also, Japan has offered to train 30,000 Indian youth in Japanese style manufacturing in the next 10 years.



Major Armed Forces Exercises between two nations

- **Naval Exercises:** JIMEX (started in 2012), Malabar (started by India and US in 1992 with Japan becoming permanent member in 2015)
- **Army Exercise:** Dharma Guardian (started in 2018)
- **Air Force Exercise:** Shinyuu Maitri (started in 2018)

Cooperation in Frontier and Emerging Technologies

Nuclear Energy	After brief pause and economic sanctions on India post 1998 Nuclear Tests , in 2017 both nations signed an Agreement for Cooperation in the Peaceful Uses of Nuclear Energy , helping in- <ul style="list-style-type: none"> ● Enhanced Cooperation in energy security and Clean Energy, ● Opening doors to commission global nuclear reactors with Japanese parts, and ● Boost India's claim for NSG membership.
Space Cooperation	In 2019, the first India-Japan space dialogue was organized for bilateral cooperation in space. <ul style="list-style-type: none"> ● Presently, ISRO and Japan Aerospace Exploration Agency (JAXA) are working on a joint lunar polar exploration (LUPEX) mission. ● The mission aims to send a Lander and Rover to the Moon's south pole around 2024
India-Japan Digital Partnership (I-JDP)	Launched in 2018 to take the Science and Technology of 1985 further through greater focus on 'Digital ICT Technologies'. This includes setting up a Startup Hub between India and Japan
Emerging Technologies	Launched ' India-Japan Emerging Technology and Innovation Fund ' in 2019, a fund-of-funds for emerging technology startups in Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning etc.

Challenges in India-Japan Relationship

- **Limited Success of CEPA:** Despite elimination of tariffs over **90%** of Japan imports and **97%** of Indian imports by CEPA in 2011, the trade between two nations has grown marginally from **\$13.1 billion in 2010** to **\$17.6 billion in 2019**.
- **Rising Trade Imbalance:** After initial pickup in Indian exports, the trade deficit between two nations has increased with Japan exporting **\$12.7 billion goods (from \$8.3 billion in 2010)**, showing only **one side** increase
 - The **higher minimum standards** on everything in Japan, further acts as **entry barrier for Indian companies** and products; reducing **dynamism in investment**.

- **Difference on Cross-border Data Flow:** While India is looking at **data localization** (e.g. RBI rules on payment systems), under 'Osaka Track' Japan along with number of other G-20 nations proposed **standardization of cross-border data flow** with international rule-making on e-commerce trade
- **No Concrete Achievement by Asia-Africa Growth Corridor (AAGC):** Since 2016 launch, AAGC has not been able to move much beyond vision statement or provide alternative to Chinese OBOR.

Way Forward

While the **special strategic and global partnership** between two nations allows them to work on strategic goals, both nations need to remove the **anomalies of trade** and accelerate their cooperation at the global stage.

Based on **values of trust and democracy**, the partnership between two nations allows opportunities to overtake others and go beyond bilateral relations for **truly global benefits** of India-Japan relationship.

2.6. INDIA TURKMENISTAN RELATIONS

Why in news?

President of India paid a state **visit to Turkmenistan** which is the **first ever visit by an Indian President** to Turkmenistan.

More about news

- Both sides signed and exchanged **four MoUs/Programme of Cooperation** in the fields of **disaster management, financial intelligence, culture and youth matters**.
- India-Turkmenistan commemorative Postal stamp, celebrating the **30th anniversary of establishment of Diplomatic Relations** between the two countries was also released.

About India Turkmenistan relations

- India enjoys **close, friendly, and historical ties** with Turkmenistan. Both countries share centuries-old **civilizational and cultural linkages**.
- Archaeological finds in south Turkmenistan have revealed contacts with **Indus Valley Civilization**. '**Turkmen Gate**' built in **Delhi** in 1650's also testifies to centuries-old ties between India and Turkmenistan.
- India was **one of the first countries to recognize** Turkmenistan's independence in 1991 and establish **formal diplomatic relations in 1992**. It considers Turkmenistan as part of its **extended neighbourhood**.

Areas of engagement

- **Political relations:** India-Turkmenistan political relations have been **warm and cordial**. **Institutional mechanisms** between the two governments, namely **Foreign Office Consultations (FOC)** and **Inter-Governmental Commission (IGC)** furthers bilateral cooperation.
 - Both cooperate under the **India-Central Asia Dialogue** mechanism as well.
- **Trade & Commercial Relations:** Total trade for the year 2019-20 stood at **US\$29.97 million with India registering a surplus of US\$22.83 million**.
 - Major items of **import from India** include electronic and electrical items, machinery and woven apparel and pharmaceuticals etc. **Exports to India** comprises of fertilizers, cotton, inorganic chemicals (e.g. Iodine) etc.
- **Education:** India provides training for Turkmen nationals under its **ITEC programme**. Since the inception of the programme for Turkmenistan in 1994, **over 400 Turkmen nationals** have been trained in various courses. In addition, India provides **ICCR Scholarships** to students from Turkmenistan to **pursue graduation, post-graduation and Ph.D.**



- **Culture:** In 2015, **Hindi Chair** was established in **Azadi Institute** of World languages, Ashgabat where Hindi is being taught to university students. '**Vishwa Hindi Diwas**' is celebrated in Turkmenistan every year. **Indian Cinema and TV serials** are popular with Turkmen people.
 - Similarly, **Indian music** also holds a special place in the hearts of Turkmen people. **Indian film festivals** are held on regular basis in different cities in Turkmenistan. **Central Asia's first Yoga and Traditional Medicine Centre** was inaugurated in Ashgabat in July 2015.

Challenges in India Turkmenistan relations

- **Connectivity concerns:** The adverse **geographic terrain and the thorny India-Pakistan border dynamic**, greatly impedes connectivity, thereby **curbing greater economic cooperation** between India and the region.
 - Further, planned connectivity projects are facing serious **financial, political, and security challenges**, frustrating oil and gas diplomacy. E.g., TAPI Project.
- **Unrealised trade potential:** Bilateral trade is **far below** its potential. Besides the physical barriers, factors such as **trade regulatory hindrances and political fragility** have often created obstacles in the free flow of trade.
- **Security challenges:** Security challenges include **international terrorism**, cross border terrorism, extremism, **radicalisation**, illegal migration, **trafficking** in narcotic drugs and psychotropic substances, and transnational organised crime.

Road Ahead

- **Strengthening connectivity:** Turkmenistan has conveyed readiness to join the **International North-South Transport Corridor (INSTC)** and also proposed that the **Kazakhstan-Turkmenistan-Iran railway line** could be a linked corridor of the INSTC to streamline movement of goods **between Turkmenistan and India and beyond**.
 - During recent meet, Turkmenistan has agreed to examine India's proposals of ensuring **integrity, safety and security** of the project by integrating "**the Business Principles**" in various Agreements pertaining to **TAPI gas pipeline project**.
- **Increasing cooperation in various sectors:** Sectors like energy, petrochemicals, **transport, communications, information and technology, textile, leather and footwear, chemicals, pharmaceuticals, renewable energy**, etc. hold huge potential for greater cooperation between the two countries.
 - Turkmenistan has also expressed interest in studying the possibility of joining the **International Solar Alliance (ISA) and Coalition for Disaster Resilient Infrastructure (CDRI)**.
- **Strengthening ties at geo-political level:** Given the **broad consensus** between two countries on regional and global geo-political and economic issues, cooperation should be strengthened through enhanced interaction in the **United Nations and other regional and international organisations**.

SIGNIFICANCE OF TURKMENISTAN



Strategic

- **Strategically placed** in Central Asia.
- Acts as a **link** to other **Central Asian countries and the Caspian region**.



Political

- **Supports India's permanent membership** in a reformed and expanded UN Security Council
- Supported **India's initiatives as a non-permanent member** of UNSC for the period of 2021-22.



Economic

- Turkmenistan's gas reserves are estimated to be the **world's fourth largest**, representing **about 10 percent of global reserves**.
- Also rich in petroleum, sulfur, iodine, salt, bentonite clays, limestone etc.

Major Initiatives

- **Connect Central Asia Policy:** It is a broad-based approach including **political, security, economic, and cultural** connections. The policy envisages **deeper mutual relations** with the region including Turkmenistan.
- **International North-South Transport Corridor (INSTC):** It encompasses **ship, rail and road** routes connecting India with **Russia, Central Asia and Europe via Iran**. India is also planning to include **Chabahar port** in the INSTC framework.
- **TAPI (Turkmenistan, Afghanistan, Pakistan and India) project:** The project aims to transport 33 billion cubic metres of gas from **Turkmenistan's Galkynysh gas field** to Afghanistan, Pakistan and **finally India** through the proposed 1814-km long pipeline, also called the '**Peace Pipeline**'.
- **Ashgabat Agreement (India joined in 2018):** It aims to establish an international multimodal transport and transit corridor between **Central Asia and the Persian Gulf**.

- **Greater attention to all facets of cultural cooperation:** Cultural cooperation can be strengthened through regular Film Festivals, cooperation between museums, translation of literary work, digitization of manuscripts, restoration work related to cultural heritage archaeological survey, etc.

2.7. NEWS IN SHORTS

2.7.1. MARITIME RESCUE CO-ORDINATION CENTRE

India and Sri Lanka have signed a Memorandum of Understanding for Bharat Electronics Ltd (BEL) to set up a state-of-the-art Maritime Rescue Co-ordination Centre (MRCC) in Colombo.

About Maritime Rescue Co-ordination Centre (MRCC)

- MRCCs are part of an international network **under the UN's International Maritime Organisation to monitor the sea lanes.**
- Objective is to **provide swift response to emergencies**, such as vessels in distress, rescue and evacuation of people, and prevention of and containing environmental disasters such as oil spills.
- **Each country is responsible for its own Search and Rescue Region.** The work of MRCCs is co-ordinated by the Navy or Coast Guard in each country.
 - **In India, the Coast Guard is the co-ordinating agency.** In Sri Lanka, it is the Navy.
- The agreement appears to be part of India's SAGAR (Security and Growth for all in the Region) initiative in the Indian Ocean Region (IOR) and **will also help in enhancing maritime security in the region.**

About International Maritime Organisation

- It is a **specialized agency of the United Nations** which is responsible for measures **to improve the safety and security of international shipping** and to prevent pollution from ships.
- **It is also involved in legal matters**, including liability and compensation issues and the facilitation of international maritime traffic.
- It currently has 175 Member States. **India is a member.**

2.7.2. MALDIVES PRESIDENT ISSUES DECREE BANNING 'INDIA OUT' CAMPAIGN

- This step was taken to **protect the long-standing bilateral relations between Maldives and India** and protect Maldives's **national and regional security.**
- **'India Out' campaign** was regarded as an organised campaign that aims to **disrupt relations** between the two countries by inciting unrest.
 - One of the reasons for this was cooperation between the two sides in 2021 to develop a **harbour on the Uthuru Thilafalhu (UTF) atoll for the Maldivian coast Guard** as it was rumoured that

there were Indian military personnel stationed there.

- **Why India - Maldives relationship is important for both?**
 - Maldives is **strategically important for India** due to
 - ✓ **Maldives' proximity to the west coast of India,**
 - ✓ **its situation at the hub of commercial sea lanes running through Indian Ocean**
 - Both countries have signed a **security cooperation pact with a credit line from India** for capacity building in the maritime domain.
 - ✓ **Maldives is part of the Colombo Security Conclave (India initiated)** which envisages peaceful cooperation in Indian Ocean along with Sri Lanka and Mauritius.
 - India is constructing **High Impact Community Development Project (HICDP) in various atolls of Maldives.**
- India's approach for Maldives is driven by the vision of **Security and Growth for All in the Region (SAGAR) to assist island nations in Eastern Indian Ocean.**

Other Concerns in India-Maldives relationship

- **Political instability** - The past regime was pro-China, which created a gap in the India-Maldives relationship.
- **Relations with China** - Maldives has emerged as an important 'pearl' in China's "String of Pearls" construct in South Asia. Also, huge Chinese investment in the region like the China-Maldives friendship bridge is a cause of concern for India.
- **Islamic Radicalisation** - Owing to political and socio-economic uncertainty the number of Maldivians drawn towards terrorist groups like Islamic State (IS) and Pakistan-based madrassas and jihadist groups has been increasing.

2.7.3. INDIA AND THE EUROPEAN COMMISSION AGREED TO LAUNCH INDIA-EU TRADE AND TECHNOLOGY COUNCIL (TTC)

- This **strategic coordination mechanism** will allow both partners **to tackle challenges at nexus of trade, trusted technology and security**, and thus deepen cooperation in these fields between EU (European Union) and India.
 - **1st for India and 2nd for EU** (after the US-EU TTC of 2021), **TTC signifies enhanced political value of India** in uncertain global strategic environment.

- **TTC will**
 - **Provide political-level oversight** to India-EU relationship.
 - **Resolve economic divergences** for an early and comprehensive India-EU trade and investment agreement.
 - **Bring India-EU politically closer to address current challenges** and geopolitical circumstances in Indo-Pacific region.
 - **Better coordination in multilateral bodies** such as G20, WTO etc. on issues of mutual interest.
- **India-EU relations date to early 1960s**, with India being amongst the first countries to establish diplomatic relations with European Economic Community.
 - EU as a block is **India's largest trading partner**.
- In 2004, relationship was **upgraded to a 'Strategic Partnership'**. In 2020 '**India-EU Strategic Partnership: A Roadmap to 2025'** was adopted.

Factors shaping India-EU relations in the current times

- **Changing geopolitical developments** such as Russia-Ukraine war, rise of China, U.S. withdrawal from Afghanistan etc.
- **Convergence of interests in the Indian Ocean** as the Indian Ocean is the main conduit for global trade and energy flows.
- **New emerging world order after COVID-19** as EU seeks to move away from a global supply chain that is overly dependent on China, India can emerge as its most natural ally.

2.7.4. INDIA GETS ELECTED TO FOUR UN ECONOMIC AND SOCIAL COUNCIL (ECOSOC) BODIES

- **ECOSOC is one of the six principal organs** of the UN System established by the **UN Charter in 1945**.
 - The 54-member ECOSOC is at the heart of the United Nations system to advance the three dimensions of sustainable development – economic, social and environmental.
 - It is **elected by the General Assembly**.
- **India was elected to the UN ECOSOC for the term 2022-24**, last year, in the Asia-Pacific States category along with **Afghanistan, Kazakhstan and Oman**.
- **Four bodies** of ECOSOC are:

Body	Function
Commission for Social Development	To advise ECOSOC on social policies of a general character and, in particular, on all matters in the social field not covered by the specialised inter-governmental agencies.
Committee on Non-Governmental Organisations	Consideration of applications for consultative status and requests for reclassification submitted by NGOs

	and consideration of quadrennial reports submitted by NGOs.
Commission on Science and Technology for Development (CSTD)	Holds an annual intergovernmental forum for discussion on timely and pertinent issues affecting science, technology and development.
Committee on Economic, Social and Cultural Rights (CESCR)	Monitors implementation of the International Covenant on Economic, Social and Cultural Rights by its state parties.

2.7.5. RAISINA DIALOGUE 2022

- It is a **multilateral conference committed to addressing the most challenging** issues facing the global community, held annually in New Delhi since 2016.
 - It takes its name from **Raisina Hill**- the seat of the **Indian government**.
- It is **hosted by the Observer Research Foundation** (an independent think tank) in collaboration with the **Ministry of External Affairs**.
- It has emerged as **India's flagship conference on geopolitics and geo-economics**.
- It brings together global leaders in **policy, business, media, civil society, defense and foreign policy**.

2.7.6. TRILATERAL DEVELOPMENT CORPORATION (TDC)

- **Ministry of External Affairs** has recently launched a platform **TDC Fund** that would involve private sectors with state support for huge investments in the **Indo-Pacific region**.
- Its aim is to provide an **alternative to the Chinese development partnership model** that has pushed parts of the developing world to a debt trap.
- India's **Global Innovation Partnership (GIP)** launched with the UK will **provide a template to use the TDC Fund** for trilateral projects with other countries like Japan, Germany, France and the EU.
- India's **contribution to GIP will be channelized through the TDC Fund**.

2.7.7. GLOBAL SECURITY INITIATIVE FROM CHINA

- With an eye on the Pacific Ocean, the Chinese President has proposed a new **Global Security Initiative**.
- According to China, the new **Global Security Initiative** will work against the **Cold War Mentality** or hegemonism, power politics and bloc confrontation.
- It will counter the **US Indo-Pacific Strategy, Quad** (the India, US, Australia and Japan grouping) and **AUKUS** (Australia, UK and US).

2.7.8. INTERNATIONAL TELECOMMUNICATION UNION (ITU)

- India secured leadership position in ITU's Council Standing Committee on Administration and Management.
- ITU, founded in 1865, is **United Nations specialized agency for information and communication.**
 - It is governed by **Plenipotentiary Conference and Administrative Council.**
 - ✓ Plenipotentiary Conference is **supreme organ of the Union.**
 - ITU currently has a **membership of 193 countries** and over 900 private-sector entities and academic institutions.
 - **India has been a regular member of ITU since 1952.**
 - It empowers people around world **through technology education and training.**
 - It **supports communications in the wake of disasters and emergencies.**
 - **Headquartered-** Geneva, Switzerland.

2.7.9. UNITED STATES COMMISSION ON INTERNATIONAL RELIGIOUS FREEDOM (USCIRF)

- USCIRF has designated **India as a "Country of Particular Concern (CPC)" for third consecutive year.**
 - Designation is reserved for **worst violators of religious freedom.**
 - Pakistan, Saudi Arabia, Iran, North Korea and Russia are also designated as CPCs.
- USCIRF is an **independent, bipartisan U.S. federal government agency** created by 1998 International Religious Freedom Act (IRFA).
 - An **advisory or a consultative body** to US Congress on **issues pertaining to international religious freedom.**
 - It uses international standards, such as **Article 18 of the Universal Declaration of Human Rights**, to monitor violations of religious freedom or belief abroad.



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3. ECONOMY

3.1. POVERTY ESTIMATES

Why in News?

Recently, authors affiliated with the International Monetary Fund (IMF) and World Bank (WB) published two different estimates of poverty and inequality in India.

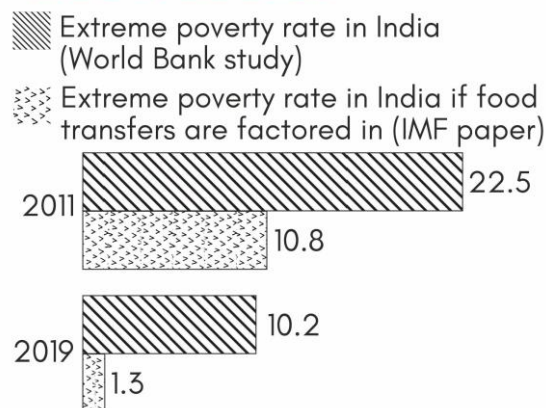
More on News

- Based on the CMIE (Centre for Monitoring Indian Economy) **Consumer Pyramid Household Survey (CPHS)**, the WB paper found a **12.3% decline in extreme poverty** in India (from **22.5% in 2011** to **10.2% in 2019**).
- In comparison, based on the **Consumer Expenditure Survey and other data sets including subsidy adjustments**, the IMF paper suggested that India has almost eliminated extreme poverty-reaching **1.3% in 2019** from **10.8% in 2011**.

About Poverty and Different Poverty Measures

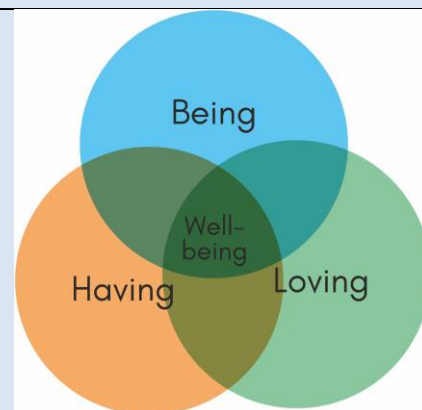
- Poverty** is broadly defined as a state or condition of a person or community with lack of money or access to resources to enjoy a decent standard of living.
- It is usually measured as either **absolute or relative poverty**, based on a poverty threshold or poverty line, with people falling under this threshold/line being considered poor.
 - Absolute poverty, or extreme poverty**, represents the lack of sufficient resources to secure basic life necessities, such as safe drinking water, food, or sanitation. E.g. People earning less than **\$1.9 on purchasing power parity (PPP) basis a day** are considered extremely poor by the World Bank.
 - Relative Poverty** represents the worse income and resource status of a person or a household than what is thought to be adequate or socially acceptable in the society in which they live.
- But poverty has many faces, changing with time and place, leading to different poverty measures such as:

WIDE VARIANCE in %



Source: World Bank paper and IMF paper

Poverty Estimation Approach	Dimensions/Indicators
Well-being Approach	<p>Given by Erik Allard, it includes three dimensions as:</p> <ul style="list-style-type: none"> Having (Material), Loving (Social), and Being (Spiritual-emotional).



<p>Capabilities Approach</p>	<p>Given by Amartya Sen, as an alternative to income and consumption approach, OECD has developed multidimensional capabilities framework with five capabilities as:</p> <ul style="list-style-type: none"> • Economic Capabilities, • Human Capabilities, • Political Capabilities, • Socio-Cultural Capabilities and • Security Capabilities. 	
<p>Multidimensional Poverty Index (MPI)</p>	<p>Given by UNDP for measuring and describing household-level poverty based on 3 dimensions (10 indicators) as:</p> <ul style="list-style-type: none"> • Education (Years of Schooling and School Attendance), • Health (Child Mortality and Nutrition), and • Standard of Living (Electricity, Drinking Water, Sanitation, Flooring, Cooking Fuel and Assets). 	

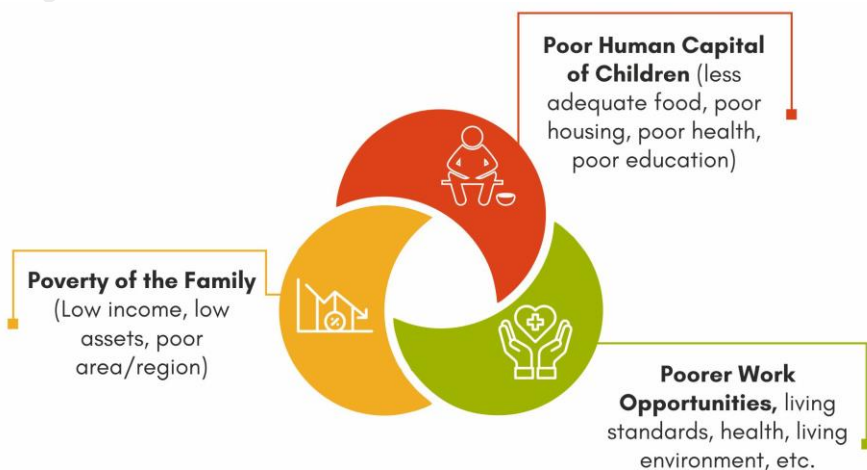
- **In India** also a number of initiatives have been taken to measure poverty. Starting from Dadabhai Naoroji to the recent **National Multidimensional Poverty Index** from **NITI Aayog** in collaboration with **UNDP** and **Oxford Poverty and Human Development Initiative (OPHI)**.

To know more about the National Multi-dimensional poverty index, please refer to the Article 3.2 in the November 2021 edition of the Monthly Current Affairs Magazine.

But we still **lack a common agreement** on what poverty actually is and how it should be measured.

Importance of accurate Poverty Estimates

- **Address the intergenerational cycle of poverty** by overcoming the permanent disadvantages faced by children for enhanced productivity (see image).
- **Evidence-led policy making** for targeted policy interventions and sustainable results.
- **Bringing inclusive growth** by addressing the inequalities and other issues of basic needs, learning and job opportunities.
- **Ensure full and effective** enjoyment of human rights by ensuring civil, social, and cultural participation
- **Finding areas of social-economic discrimination** within communities, some **groups** (e.g., person with disabilities) and within family. For instance, **women** face disproportionate burden of children, leading to the issue of **time poverty**.
 - **Time poverty** is the state of having little time for self. It leads to poor food choices, health, mental stress etc. among women and girls.



Challenges in accurate Poverty Estimation

- **Availability of Data:** Adoption of large number of indicators for poverty estimation have some theoretical justification but limited number of indicators are used because of dearth of data availability.
- **Economist Bias:** Calculation of poverty estimates is usually dominated by economists under the agencies responsible for collection of data on overall economy. It leads to use of **income and consumption data** as proxy indicators of actual well-being.
- **Data Lag:** Even within these data sets we can have significant lag in household data or data errors. E.g., the **Consumer Expenditure Survey (CES)** is conducted every five year and the **2017-18 CES** data was withheld due to quality issues; almost 10 year of data lag on CES.
- **Difficulties in adoption of indicators:** Identifying and designing indicators which can offer meaningful comparisons between rich and poor sections of society/counties are difficult to design as the **weights and range of variation** of various elements tend to vary with context.
- **Complexities in Qualitative data collection:** Understanding poverty and well-being is a complex process due to India's high socio-economic diversity. Also, for such a large population, collecting comparable data on subtle and complex elements/sections of society like women is difficult.

Conclusion

The National Multidimensional Poverty Index created by NITI Aayog can be further improved using disaggregated data on sub- indicators for targeted policy making with other steps such as:

- **Collecting specific data** based on gender, age, vulnerability etc.
- **Shifting to a higher low middle income (LMI) poverty line** of PPP (\$3.2 a day) for even higher efforts to reduce poverty.
- **Using cost-effective high frequency surveys**, i.e., income and consumption surveys based on economic modelling or wireless technology to capture real time poverty data.

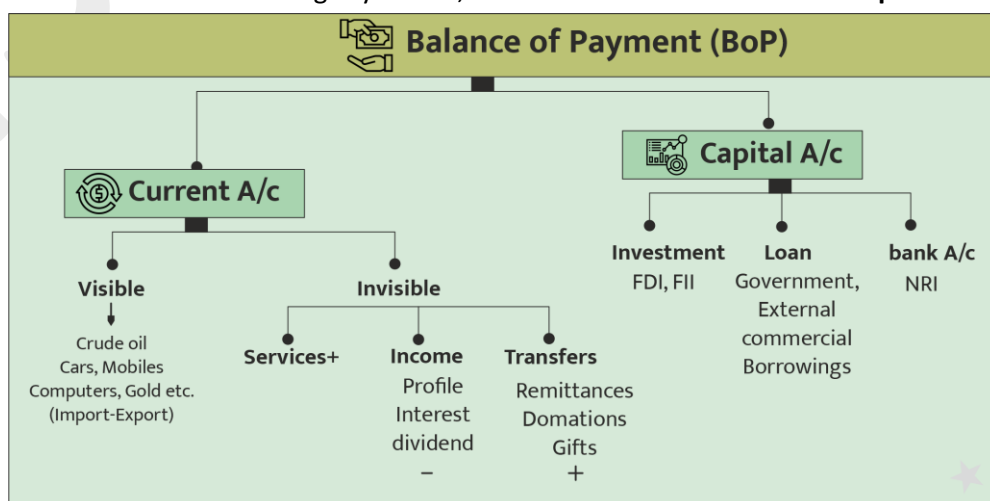
3.2. CURRENT ACCOUNT DEFICIT (CAD)

Why in News?

In the December quarter of FY2022 India's Current Account Deficit (CAD) reached \$23 billion (**2.7% of GDP**), a nine-year high since the CAD touched \$31 billion during the December quarter of 2012.

Current Account Deficit (CAD)

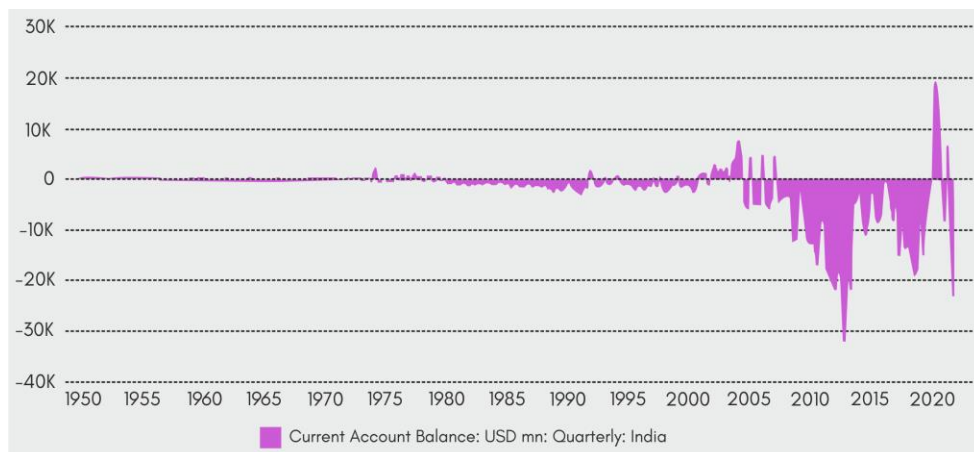
- **Balance of Payments (BoP)** records the transactions in goods, services, and assets between residents of a country with the rest of the world for a specified time period typically a year.
 - When viewed from the perspective of investment-savings dynamics, the current account can also be **expressed as the difference between national (both public and private) savings and investment.**
- One of the **two main accounts** in the **Balance of Payments (BoP)**, CAD records **exports and imports in goods and services and transfer payments** of a country.
 - When exports exceed imports, there is a trade surplus and when imports exceed exports there is a trade deficit.



- Transfer payments are **receipts received by the residents** ‘for free’, without any present or future payments in return. It includes remittances, gifts and grants.
- **Capital account** is the second account, recording all international purchases and sales of assets such as money, stocks, bonds, etc. for a specified time, usually a year.

India’s CAD trend

- **Trend in the past:** India is a CAD country and it has faced BoP crisis in 1991 due to higher CAD, on account of increased oil prices, along with other reasons.
- **Recent trend:** In the last few years, it recorded few isolated quarters of **Current Account surplus** such as **Q1 of 2021-22**- after more than a decade gap but failed to sustain it (see image).
- **Trends in merchandise and services trade:** Behind the continued CAD of India is its **trade deficit in Merchandise Goods** as it has **trade surplus in services**, and it is the **world’s largest recipient of remittances** (US\$ 87 billion).
 - For instance, for **FY 2021-22**, Merchandise trade **deficit was about US\$ 192 Billion** whereas Services trade **surplus was about US\$ 105 Billion**.



Primary reasons behind India’s CAD

- **Increased domestic demand/consumer spending** due to domestic economic growth which is reflected in revival of imports post-pandemic recovery.
- **Uncompetitive exports** due to unfavorable policies, exchange rate or lack of essential goods exports.
- **Increased Energy imports** due to increasing demand and lower domestic production. E.g., in **2021-22**, India’s domestic crude oil production fell by 2.67%.
- **Rise in Global Commodity Prices**, especially high import commodities such as crude oil, gas, coal, edible oils, gold, etc.

Potential threats from increasing CAD

Based on historical perspective, India can sustain a **CAD of 2.5-3.0% of GDP** without getting into an external sector crisis (Economic Survey 2021-22). But **rising geo-political risks, elevated global commodity prices, new Covid-19 variants fear and looming threat of US monetary policy normalization** can widen CAD with other threats such as:

- **Pull out of foreign institutional investors** or limited capital flow. E.g., the Taper Tantrum of 2013.
- **Costly macroeconomic adjustments** due to free fall in currency exchange rate.
- **Inflationary concerns** leading to further reduction in domestic savings, leading to lower investments or foreign borrowing to fund growth needs.
 - In the short-term, such foreign borrowings may help a debtor but in the long-term it is worrisome due to concerns over returns from investors and rise in debt to GDP ratio.
- **Payment imbalances, leading to BoP crisis** as observed in the **Asian Financial Crisis (1997)** and the recent **Sri Lankan crisis**.

Recent contraction in Forex Reserves and import coverage are first signs of slowed or reversed capital flows. Between **October 2021** and **March 2022**, **Forex reserves** contracted from **US\$ 642 billion** to **US\$ 607 billion**.

Way Forward

In order to be prepared to face external shocks, India should build higher Forex Reserves and further improve the external sector resilience through steps such as:

- **Increase domestic production** of oil and gas with **faster adoption of renewable energy fuels** such as solar, hydrogen etc.
- **Import substitution** under AtmaNirbhar Bharat with increased exports through best use of Free Trade Agreements.
 - **Fair valuation of Rupee** can help in keeping the exports competitive. Also, steps can be taken to curb non-essential imports such as gold, mobiles, and electronics.
- **Maintain Capital inflows** through continued Ease of Doing Business reforms and gain investors' confidence through FDI reforms for ease of flow of foreign investments.
- **Starting Fiscal Consolidation** through tight monetary policy to control inflation and promote savings to control CAD. For example, as suggested by the NK Singh Committee.
 - For example, **keep external debt to GDP ratio** low, especially short-term debt due to higher volatility.

3.3. OPEN NETWORK FOR DIGITAL COMMERCE

Why in News?

Recently, Department of Promotion of Industry and Trade (DPIIT) launched the pilot phase of open network for digital commerce (ONDC).

More on News

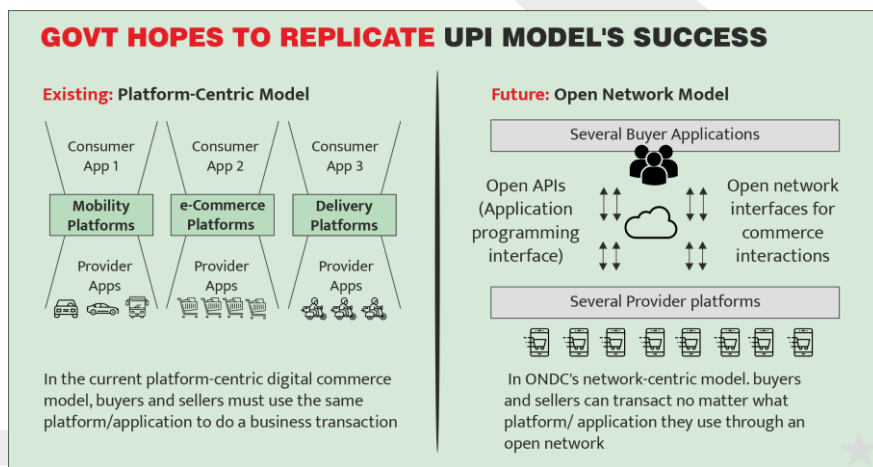
- The pilot aims to test end-to-end transactions on the ONDC architecture across different platforms, including ordering, payment, and delivery.
- This will be done across five cities — Delhi, Bengaluru, Coimbatore, Bhopal, and Shillong. Thereafter, it will be scaled up and launched in 100 cities over a period of six months.

About open network for digital commerce (ONDC)

- It is aiming at **promoting open networks for all aspects of exchange of goods and services** over digital or electronic networks.
- ONDC goes beyond the current platform-centric digital commerce model where the buyer and seller have to use the same platform or application to be digitally visible and do a business transaction
 - So under ONDC, a buyer registered on Amazon, for example, may directly purchase goods from a seller who sells on Flipkart.
- ONDC is to be **based on open-sourced methodology**, using open specifications and open network protocols independent of any specific platform.
- ONDC project is **modelled around the Unified Payments Interface (UPI) project** to ensure that buyers and sellers of goods in the e-commerce market can transact regardless of the platforms on which they are registered.
 - UPI project **allows people to send or receive money irrespective of the payments platforms** on which they are registered.
- It is an **initiative of DPIIT** under the Ministry of Commerce and Industry. **Quality Council of India will provide the integration** of the e-commerce platform for it.

Significance of ONDC project

- **Check domination** of the e-commerce market by a few large platforms, such as Amazon and Flipkart, which have been accused of discriminating among sellers on their platforms and promoting certain seller entities in which they hold indirect stakes.



What does open-source mean?

- To make a process or software 'open source' implies that the **technology or code deployed for the process is freely made available for everyone** to use, redistribute, and modify.
 - For instance, while the **operating system of iOS is closed source** (it cannot be legally modified or used), the **android operating system is open source, making it possible** for smartphone manufacturers, such as Samsung, Nokia, Xiaomi, etc., **to modify it** for their respective hardware.

- India's e-commerce sector is expected to reach **US\$ 111.40 billion by 2025** from US\$ 46.20 billion in 2020, growing at a **19.24% CAGR**

- **Level playing field:** It will enable large-scale democratisation of digital commerce by providing a level playing field to both large and small merchants in the country. Small businesses would be able to use any ONDC compatible applications instead of being governed by specific platform centric policies.

- **Wider access to sellers**

(especially kirana store owners): Adopting ONDC will significantly increase the discoverability of their businesses, while also lowering the cost of doing business, leading to better prices and profit margins for them in the long term.

- **Overall development of the sector:** It is expected to digitise the entire value chain, standardise operations, promote inclusion of suppliers, derive efficiencies in logistics and enhance value for consumers.
- **Will help consumers:** It is expected to make e-Commerce more inclusive and accessible for consumers as they can discover any seller, product or service by using any compatible platform. This would also give consumers the liberty to choose their preferred local businesses.

ONDC
Open Network for Digital Commerce

OPEN NETWORK NETWORK FOR DIGITAL COMMERCE

The open interoperable ecosystem of ONDC reimagines digital commerce and enables platform-agnostic transactions between sellers and buyers

Features of ONDC	How will it help your business?
Non-rivalrous, non-exclusive public infrastructure	Creation of a level-playing field in digital commerce
Voluntary and flexible adoption	Reduction in customer acquisition costs
Open specifications	Reduction in monopolistic practices
Equal access	Establishing seamless integration across supply chain

Concerns raised against ONDC

- **Compete against the big players:** Both merchants and buyers flock to Amazon and Flipkart because of their service quality that includes everything from smooth returns and refunds experience for buyers to merchant-onboarding processes.
- **Quality of products:** There are some ground-level challenges that ONDC shall have to face. For example, is the product delivered by the seller genuine or fake, did the customer receive the same product that he purchased etc.
- **Establishing the technology:** It will be the biggest challenge for ONDC as Amazon and Flipkart have been able to lure merchants and buyers due to their tested technology. DPIIT needs to build something comparable, if not better, to outdo rivals.

Conclusion

ONDC's success depends on how the government takes it forward and builds a seamless platform which is user-friendly and capable of giving a better shopping environment than Amazon and Flipkart. Also, a swift dispute resolution is required to enhance credibility of the platform.

3.4. DIGITAL BANKING UNITS

Why in News?

Reserve Bank of India (RBI) released Guidelines on Establishment of Digital Banking Units (DBUs).

More on News

- This is part of the **announcement made in the Union Budget 2022-23** to set up 75 DBUs in 75 districts to commemorate the 75 years of independence of our country (Azadi ka Amrit Mahotsav).
- In pursuance of the budget announcement a **'Committee for establishment of Digital Banking Units (DBUs)' was set-up by RBI** to outline a roadmap for establishment of DBUs.
- **Based on the recommendations of the Committee**, the guidelines have been finalized by RBI.

Key features of RBI's guidelines on DBU's

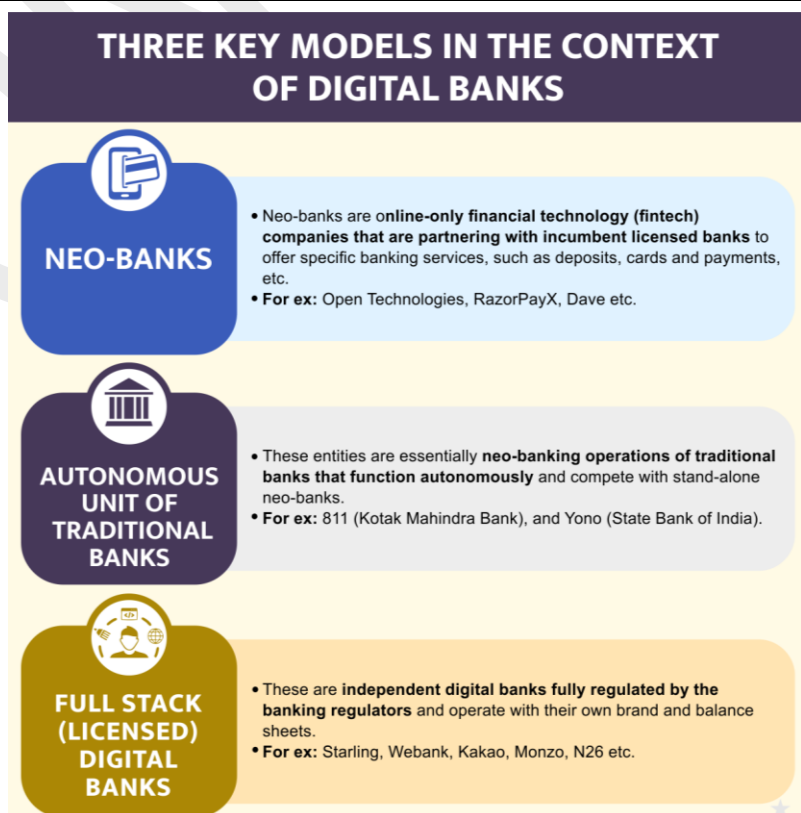
What are DBUs?	<ul style="list-style-type: none"> DBUs are specialised fixed point business unit / hub housing certain minimum digital infrastructure for delivering digital banking products & services as well as servicing existing financial products & services digitally.
Who is permitted to start DBUs?	<ul style="list-style-type: none"> All scheduled commercial banks (except Regional Rural Banks, Payment Banks and Lead Area Banks) with past digital banking experience are permitted to open DBUs in Tier 1 to Tier 6 centres without having the need to take permission from the central bank in each case. These DBUs will be treated as Banking Outlets (BOs).
Infrastructure and resources	<ul style="list-style-type: none"> Each DBU shall be housed distinctly, with the separate entry and exit provisions. They will be separate from an existing BO with formats and designs most appropriate for digital banking users. Banks are free to adopt an in-sourced or out-sourced model for operations of the digital banking segment including DBUs.
Products and services	<ul style="list-style-type: none"> Each DBU should offer a certain minimum digital banking products and services such as Liability Products and services: Account opening, Digital Kit for customers and merchants etc. Asset Products and services: Making applications for and onboarding of customer for identified retail, MSME or schematic loans etc. Digital Services: Cash withdrawal and Cash Deposit only through ATM and Cash Deposit Machines respectively, Internet Banking Kiosk, Lodging of grievance digitally etc.
Other features	<ul style="list-style-type: none"> Banks will have the options to engage digital business facilitator /correspondents to expand the virtual footprint of DBUs. DBUs to offer hands-on customer education on safe digital banking products and practices for inducting customers to self-service digital banking services. <ul style="list-style-type: none"> The district where the DBU is located will be the catchment area for the purpose. There should be adequate digital mechanism to offer real time assistance and redress customer grievances, directly or through Business Facilitators / Correspondents.

What are Digital Banks?

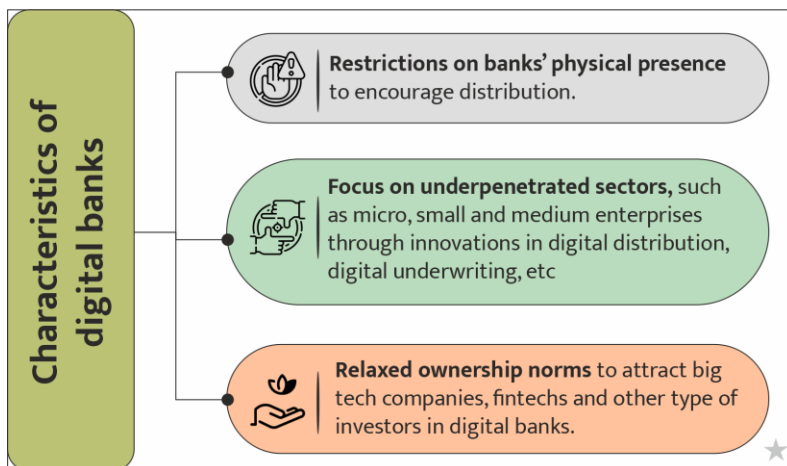
- Digital Banks principally **rely on the internet and other proximate channels to offer their services** (like deposits, extend loans), and not physical branches.
 - Globally, digital banking licenses go by different names: **'virtual banks' in Hong Kong, 'internet-only banks' in Korea and Taiwan** and **'digital banks' in Singapore**.
- It, essentially, **combines online and mobile banking services** under one umbrella.
 - Online banking** means accessing banking features and services via your bank's website from your computer.
 - Mobile banking** means using an app to access many of those same banking features via mobile devices such as smartphones or tablets.
- Overall, three key models emerge in context of digital banks**

Advantages of Digital Banks

- Light Banking approach:** by reducing physical footprint with fewer brick and mortar branches.
- Efficiency enhancement:** Typically, such banks apply a design thinking approach to a particular banking area and tailor their products and services in a manner that makes banking simpler and convenient to the end consumers.
- Meeting customer expectations:** who are rapidly adopting technology in their daily lives.



- **Improving financial inclusion:** A substantial fraction of around 63.88 million MSMEs remain outside the ambit of formal finance, digital banks can enable last-mile financial inclusion as a lender can reach a wider customer base in a more cost-effective manner.
- **Serving rural markets:** It will accelerate and widen the reach of digital banking services as move will open the rural market for service providers besides providing a boost to credit flow.
- **Easier to setup and can provide better services:** They also require lesser staff, with cheaper maintenance due to technological tools and can provide better customer experience aided by technology.
- **Supply side constraints in traditional brick and mortar banking:** such as high transaction costs, lack of product innovation, low risk appetite, limited underwriting ability etc.



Limitations of Digital Banks

- **Low public awareness:** Due to low financial literacy in semi-urban and rural areas, offline presence may be necessary for educating and driving customers to online mode.
- **Low internet and smartphone penetration** in lower-tier cities will make adoption of services difficult.
- **Building Trust:** Unlike traditional banks, they don't have a physical presence, so customers cannot literally 'bank upon' them in case of any issues/challenges.
- **Lack of regulations:** Due to the absence of enabling regulations, neo-banks cannot accept deposits or offer lending products on their own books.
- **Small range of services:** as compared to a whole gamut of services that traditional banks offer. Besides, since these are highly digital focused, they may not be able to cater to the banking needs of non-tech savvy consumers.

Conclusion

In developed nations, digital banks have ushered in considerable efficiencies, reduced costs and significantly transformed many areas of old-world banking. In like manner, India needs to push the envelope and a well thought out strategy may have to be devised to overcome the constraints.

3.5. STANDING DEPOSIT FACILITY (SDF)

Why in News?

In its **first bimonthly policy review (FY23)**, the **Monetary Policy Committee (MPC)** has introduced **Standing Deposit Facility (SDF)** as the floor in the **Liquidity Adjustment Facility (LAF) corridor**.

Standing Deposit Facility (SDF)

- SDF is a **liquidity management instrument** to absorb liquidity (deposit) from Scheduled Commercial banks (SCBs) **without any collateral/government securities** in return.
- It was first recommended in 2014 by the **Urjit Patel Committee**- 'Expert Committee to Revise and Strengthen the Monetary Policy Framework' as a tool to manage liquidity.
- In **2018, Section 17** of the **RBI Act, 1934** was amended to empower the RBI to introduce SDF as an additional tool for absorbing liquidity without any collateral.
- From 2022, SDF will replace the **Fixed Rate Reverse Repo (FRRR)** as the **floor** of the **LAF corridor** and its interest rate will be 3.75%.
- Deposits under the SDF won't be eligible for the **Cash Reserve Ratio (CRR)** maintenance under **Section 42** of the **RBI Act, 1934**, but they will be an eligible asset for maintenance of the **Statutory Liquidity Ratio (SLR)** under **Section 24** of the **Banking Regulation Act, 1949**.

Need for SDF: Liquidity Surplus of India due to Covid-19

- **Liquidity Management**, the operating procedure of monetary policy, is the main instrument for central banks working under Inflation Targeting regime of the RBI (4% +/-2%).
 - The inflation targeting regime was introduced in 2016 with a six-member Monetary Policy Committee, under Section 45ZB of the RBI Act (1934), to determine various policy interests to achieve the inflation targets.
- It involves use of various instruments to manage short-term or transient liquidity as well as durable liquidity under the **Liquidity Management Framework**. E.g., Targeted Long-Term Repo Operations (TLTROs), OMOs and SDF etc.
- In surplus since mid-2019 due to easing of monetary conditions, the liquidity in the system increased significantly during Covid-19 pandemic as the RBI offered liquidity facilities worth ₹17.2 lakh crore of which ₹11.9 lakh crore was utilized.
 - While part of it had been returned or withdrawn, a **liquidity overhang of ₹8.5 lakh crore** is still in the system because of the extraordinary measures of the pandemic.
- Starting this year, RBI plans to absorb this liquidity in a **gradual and calibrated withdrawal** over a multi-year time frame in a non-disruptive manner to normalize liquidity management to pre-pandemic levels.
 - As an additional tool, **SDF will absorb liquidity to restore surplus liquidity in the system** to a level consistent with the prevailing stance of monetary policy.





Benefits of SDF

- **Absorbing Surplus Liquidity** from banks flushed with excess money at higher interest rates to control inflation.
- **Strengthening Operating Framework** of monetary policy by removing the binding collateral or government security constraint on the RBI.
 - SDF effectively empowers RBI with unlimited sterilization power on liquidity due to no binding security constraint.
 - It will absorb the **transient nature liquidity** as it will be **operated on an overnight basis**, with the flexibility to absorb liquidity for longer tenor with appropriate pricing.
 - ✓ SDF will be available at all days of the week including public holidays and weekends through **e-Kuber portal**.
- **Restoration of the LAF corridor** by narrowing the LAF width to **50 basis point** or pre-pandemic arrangement from the current 90 basis point at the bottom of the corridor.
 - The LAF corridor has now become symmetric around the **policy repo rate** with standing facilities on both ends- **MSF as the ceiling** to inject liquidity and **SDF as the floor** to absorb liquidity.
- **Increased discretion of banks** to access SDF and MSF unlike other LAF tools such as repo/reverse repo, OMO (Open market Operations) and CRR (Cash Reserve Ratio) which are available at the RBI discretion.

Potential issues with SDF

As SDF is a **non-collateral open-ended instrument**, it could lead to following issues-

- **Arbitrage Opportunity** for banks to deploy surplus liquidity with RBI via SDF rather than going for risks in lending to the private sector.
 - **Arbitrage** refers to exploitation of short-lived variations in the price of identical or similar financial instruments in different markets or in different forms.
- **Not a long-term instrument and needs to be supplemented** by market related instruments like OMO during large capital net inflows to absorb durable liquidity. It is **against the Urjit Patel Committee recommendation for alignment between liquidity management operations and market conditions**.
- **Potential issues** of SDF in relation to impact on the balance sheet of RBI, impact on other instruments such as OMO and the Market Stabilisation Scheme (MSS) etc.

 Differences between the Terms associated with Liquidity Management			
Term (Rate)*	 Meaning	 Collaterals	 Function
Reverse Repo rate (3.35%)	It is the rate which RBI pays to SCBs to park their excess funds with RBI. (It is available at RBI's discretion.)	Yes (From RBI to Banks)	Tool to control inflation by absorbing liquidity.
Standing Deposit Facility (4.15%)	Newly introduced facility for SCBs to park their excess funds with RBI. (It is available at Bank's discretion)	No	Tool for liquidity management and financial stability .
Repo rate (4.40%)	It is the rate at which RBI lends money to SCBs.	Yes (From Banks to RBI)	Tool to regulate liquidity in the economy
Marginal Standing Facility or MSF (4.65%) * Subjects to changes by the MPC	It is a short-term borrowing window for SCBs to get overnight funds from RBI in case of serious cash shortage or the asset-liability mismatch. Its maximum limit is 2% of Banks Net Demand and Time Liabilities (NDTL).	Yes (From Banks to RBI)	Short-term loans from RBI to help SCBs.

Conclusion

The near-term global outlook looks gloomy due to rising **geo-political uncertainties**, continued **Covid-19 variant change threats, strained supply chains**, elevated commodity prices and monetary policy normalization from US Federal Reserve to tame inflation. Introduction of SDF goes with the swift shifts in risk sentiments and tightening of global financial conditions to manage different risks.

But the **effectiveness of SDF** will depend upon ability to have **simple and transparent implementation, absorption of surplus liquidity** while keeping banking sector distortions to a minimum, and **requirement of limited actions to offset its risks**.

3.6. COAL SECTOR IN INDIA

Why in News?

Union Cabinet recently approved the policy for land acquired under the Coal Bearing Areas (Acquisition & Development) Act, 1957 (CBA Act).

More on the news

- CBA Act provides for **acquisition of coal bearing land and its "vesting in a government company"**, free from any encumbrance.
- The approved policy provides clear policy framework for **utilisation of following types of lands acquired under the CBA Act**:
 - Lands **no longer suitable or economically viable** for coal mining activities; or
 - Lands **from which coal has been mined out / de-coaled** and such land has been reclaimed.
- Government coal companies, such as Coal India Ltd. (CIL) and its subsidiaries shall remain owner of these lands acquired under the CBA Act and the **policy allows only leasing of the land for the specified purposes given in the policy**.

Coal sector in India

- **India has the fifth** (when accounting for only proven reserves) **largest coal reserves in the world**. A cumulative total of 319.02 billion tons of Geological Resources of Coal have so far been estimated in the country.
- The Coal resources of India are **available in older Gondwana Formations of peninsular India and younger Tertiary formations of north-eastern region**.
- **India is the second largest importer of coal**. **Coal accounts for almost 50% share** in total installed generation capacity in India.
- As per the Draft National Energy Policy of Niti Aayog, the **demand for coal is expected to rise in the range of 1.3-1.5 billion tonnes by 2030**.

Issues in Coal Sector:

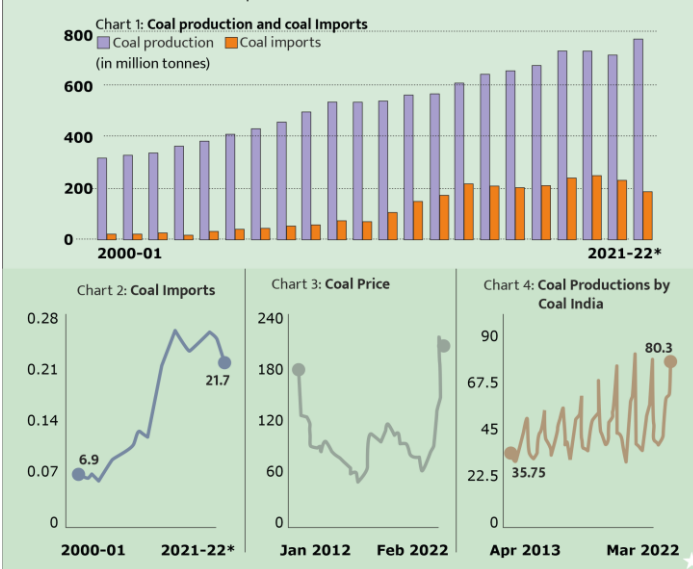
- **Regulatory challenges**: A stricter regulatory framework for land acquisition, resettlement and rehabilitation (R&R) and environment management leads to higher cost of compliance for access and extraction of coal.

Significance of the move

- **Infrastructure development**: The approved policy provides the framework for use of such land for energy and coal related infrastructure.
- **Cutting cost of operation for CIL**: as it will be able to set up coal-related infrastructure and other projects such as solar plants on its own land by adopting different business models in partnership with private sector.
- **Coal gasification**: It will make coal gasification projects viable as coal need not be transported to distant places.
- **Faster land acquisition**: Utilisation of already acquired land would also prevent fresh acquisition of land and related displacement and would promote local manufacturing and industries.
- **Address the demand of the displaced families** as they always prefer to stay as close as possible to their original residential places.

COAL CONUNDRUM

Over the years, both domestic coal production and imports have risen. However, coal imports have risen at a much faster pace.



- **Limited technology use:** Indian coal mining sector is still beset with relatively small-scale mining with limited mechanisation/scale of equipment. Approximately 87 per cent of the underground coal mines of CIL are either semi-mechanised or non-mechanised (manual).
- **Import dependency:** Although India has achieved significant reduction in import but still between 2012-13 and 2020-21, coal imports fulfilled a little over a fifth of the demand (mainly from Indonesia, South Africa, Australia).
- **Transportation challenges:** Bottlenecks in domestic coal transportation and lack of proper road connectivity further increase the challenge. Also, availability of railway wagons and mismatch of demand and supply of wagons and coal offtake affect production capacity.
- **High ash content in coal:** It creates problems for coal users that include erosion, difficulty in pulverisation, poor emissivity and flame temperature and generation of excessive amounts of fly-ash containing large amounts of unburnt carbon.
- **More focus on renewable sources:** India has been trying to reduce its dependency on non-renewable sources of energy to meet climate targets. Fierce competition from renewable energy sources are also contributing to stress in the coal sector.
- **Poor financial state of DISCOMs:** This has led to financial challenge in overall power sector. Several states, including Jharkhand and Maharashtra, have large outstanding dues to coal companies.
- **Increased water stress:** in the country is another factor that is providing significant headwinds to the coal energy sector. Coal-fired power plants require large amounts of water for cooling purposes.
- **Safety issue in mining:** When it comes to coal mining accidents, India has a higher proportion of deaths resulting from strata fall (or fall of the roof and sides of underground mines) than from the use of explosives.



Way Forward

- **Simplifying regulations:** Support in land acquisition and R&R related issues to ensure timely and smooth completion. Offering projects with secured clearances will boost timely development as well as increase the industry participation.
- **Securing sustainable supply:** Presently, India is mainly dependent on Indonesia and South Africa for import of thermal coal and on Australia for coking coal. New regulatory scenarios in these countries necessitate the requirement of intensive efforts in identifying new avenues for supply, like Mozambique, Columbia and others.
- **Technology development:** Steps need to be taken to promote research and exploration activities and modern underground mass production technologies which will also help in dealing with land acquisition related issues.
- **Improvements in transport and infrastructure:** Indian Railways, port authority and the industry need to work in close collaboration to plan development of infrastructural facilities as per requirements.

Reasons for recent coal shortage?

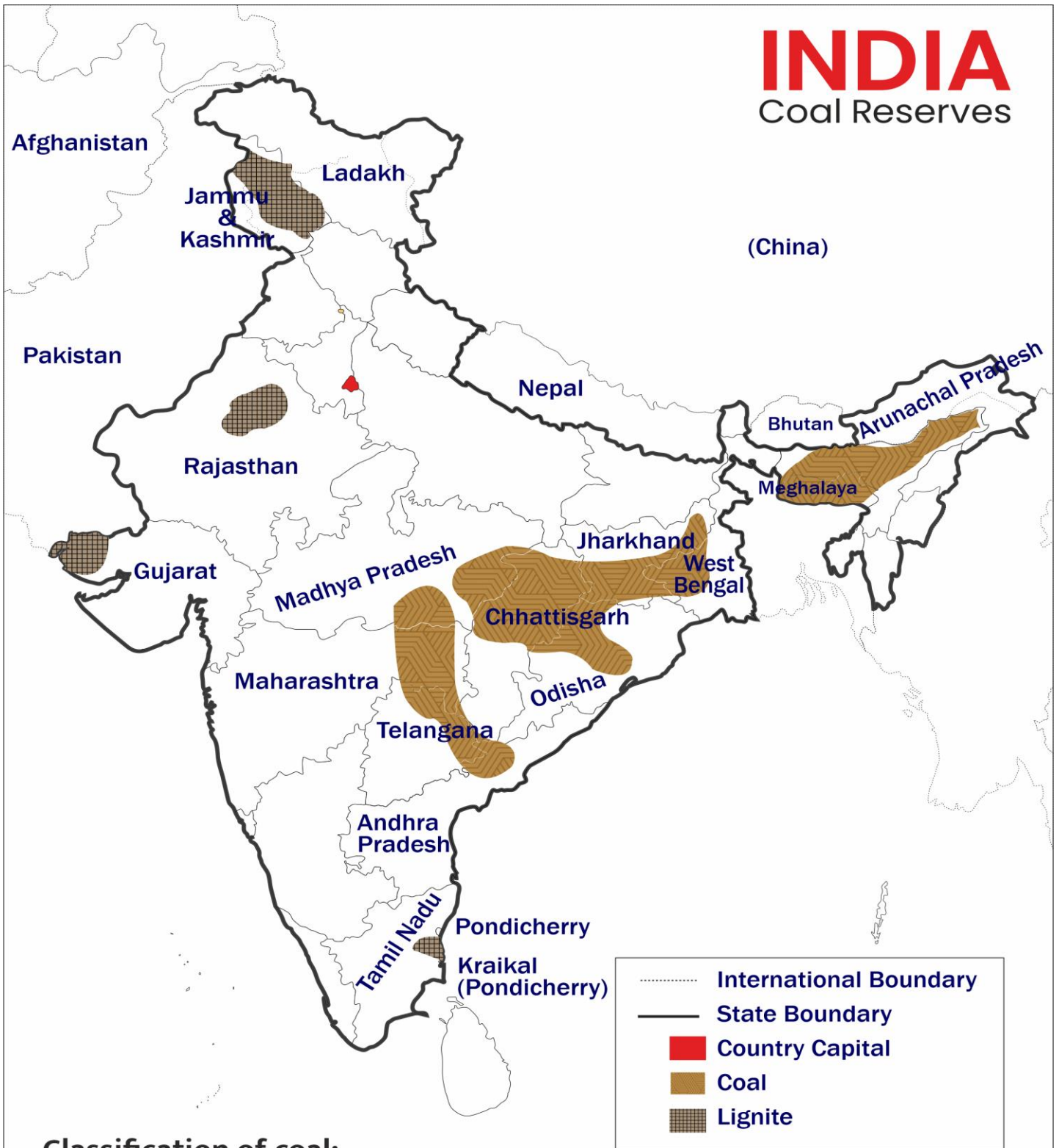
- **Sudden surge in demand:** can be attributed to the country's industries as they pick up operations after the second wave of the COVID-19 pandemic and the domestic producers of coal are unable to meet the demands.
- **Rising heatwaves:** added extra pressure on the nearly exhausted thermal power plants, as large parts of the country reeled under sweltering heat. Peak power demand is expected to hit a record high of 215-220 gigawatt (GW) in May-June.
- **High international price of coal:** The imported price of coal has shot up massively because of supply disruptions resulting from the Ukraine war. This led to a fall in imports, leading to the coal shortage.
- **Poor performance of railway:** Railway has thus far been unable to transport sufficient coal to thermal power plants to meet current demand and build up stock.
- **Cash flow problem in the electricity sector:** The inability of DISCOMs to recover costs has resulted in outstanding dues of over ₹1 lakh crore to power generation companies. Consequently, gencos default on payments to CIL.

Steps taken to address recent crisis

- Centre has allowed **States to use its captive coal reserves up to 25%** to meet growing domestic demand.
- Government **cancelled several passenger trains to allow for faster movement of coal carriages.** Indian Railways are also planning to add 100,000 more wagons to their fleet and construct dedicated freight corridors for faster delivery.
- Some states are looking to **blend domestic and imported coal to augment stocks.**

INDIA

Coal Reserves



Classification of coal:

- ▶ **Anthracite** (best quality): Carries **80 to 95 per cent carbon content**, found in small quantity in Jammu and Kashmir.
- ▶ **Bituminous**: Carries **60 to 80 per cent of carbon content** and a low level of moisture content. Found in **Jharkhand, West Bengal, Odisha, Chhattisgarh and Madhya Pradesh**.
- ▶ **Lignite**: It carries **40 to 55 per cent carbon content**. Found in **Rajasthan, Lakhimpur (Assam), and Tamil Nadu**.

3.7. SEMICONDUCTOR MANUFACTURING IN INDIA

Why in news?

The Ministry of Electronics and Information Technology (MeitY) announced the formation of an **advisory committee** to steer and guide the government's Rs 76,000 crore **semiconductor mission**.

More about news

- The Committee will be **chaired by the Minister of MeitY** with members from Government, industry and academia. The Minister of State (MeitY) will be the Vice-Chairperson.
- To develop a sustainable **semiconductor and Display ecosystem** in India, committee shall provide **key inputs** for-
 - Building a **resilient supply chain**, promoting investments,
 - **Financing mechanisms**, global engagement,
 - **Research & innovation**, and intellectual property generation for the semiconductors etc.



About Semiconductor

- A Semiconductor can be defined as a material that has the **characteristics and ability to conduct a small amount of electrical current**.
 - **Basic Electronic Components** such as Diodes, transistors, and many photovoltaic cells contain **semiconductive materials**.
- The **electrical conductivity** of a semiconductor device **can be controlled** over a wide range, either permanently or dynamically. The basic requirement of a semiconductor is that it should **not be a very good conductor of electricity, nor should it be a very bad conductor** of electricity.
- Semiconductors work due to **imbalance of electrons** that carry negative charge. This imbalance of electrons **generates positive charges** (WHERE THERE ARE EXCESS PROTONS) and **negative charges** (WHERE THERE ARE EXCESS ELECTRONS) at two **ends of surfaces** of the semiconductor material.

Significance of semiconductor manufacturing in India

- **Insulation of domestic sector from global supply disruptions:** World is facing a severe crunch of semiconductors due to **supply disruptions** triggered by the prolonged impact of the **Covid-19 pandemic**. Several companies in India have been forced to **curtail production** as a result.
 - Supplies were affected by a **sudden spike in demand** for gadgets during the coronavirus-induced lockdowns, **chip hoarding** by manufacturers, **sanctions against Chinese technology companies**, the **US-China trade war** and roll out of **5G infrastructure**.
- **Fulfil growing demand: Rapid digitization**, coupled with **technological advancements** in the capacity for **intelligent computing** and **growth of AI** has led to the **unprecedented demand of semiconductors** and chipsets across the world, including India, for manufacturing **tech-enabled products**.
 - According to MeitY, Indian semiconductor market, estimated **around \$15 billion in 2020**, is expected to grow to **around \$63 billion by 2026**.
 - The Indian government's stress on the **need for adoption of electric vehicles** has also led to an increased demand for chips. For instance, a **normal car** typically uses **roughly 300 chips**, whereas one **new electric vehicle** can have up to **3,000 chips**.
- **Reducing imports and achieving self-sufficiency:** India **imports 100% of its chips** from Taiwan, Singapore, Hong Kong, Thailand, and Vietnam. Semiconductor manufacturing in India would not only help domestic companies **reduce dependence on semiconductor imports**, but also generate **revenue from exports** to other countries.
 - It could also go a long way in establishing the country as a **global hub for electronics goods**, besides **creating jobs** and **attracting investments** from top firms around the world.

- **Multiplier effect:** Developing domestic semiconductor manufacturing capabilities will have a multiplier effect across different sectors of the economy and will contribute significantly to achieving a **USD 1 trillion digital economy and a USD 5 trillion GDP by 2025**.
- **Strategic importance:** Domestic capabilities are a key to the security of the country's **critical information infrastructure**, digital independence or **sovereignty**, and **technological leadership**. Self-sufficiency would give India a **far better global positioning** in terms of geopolitics.

Challenges in semiconductor manufacturing in India

- **Complex value chain:** The semiconductor value chain has **three major components:** Design, Fabrication, and Assembly and Testing. The **chip design** component is highly dependent on **Research and Development (R&D) and Intellectual Property (IP) protection**, and hence extremely **expensive**.
 - Though many foreign companies **have their R&D divisions** in India, **inadequate IP protection and contract enforcement** limit the extent to which such companies can **collaborate with Indian companies**.
 - Further, the semiconductor value chain is characterised by **an incredible amount of interdependence**. Companies focus on their **niche and add specific value** to different stages of production. For example, a few companies from the **United States and South Korea** dominate the **design stage**, while Taiwan holds a significant share of **fabrication and assembly markets**.
 - Thus this is an exceptional industry where **monopolies exist**, but none of them is **self-sufficient**.
- **Massive investment:** Semiconductor manufacturing is a **complex, capital and technology intensive** process. Semiconductor Fabrication facility requires many **expensive devices**. Estimates put the cost of building a new fab **over one billion U.S. dollars** with values as high as \$3–4 billion not being uncommon.
 - Further, **relatively low margins** in manufacturing of **substrates** (which transmit user instructions to a computer's chips and relay the answers), **long gestation and payback periods** also hampers investment.
- **Requirement of specific raw materials:** **Silicon** is a very basic & most commonly used raw material in semiconductor fabrication. Apart from silicon, **Germanium & Gallium arsenide and Silicon carbide** are also sometimes used in fabrication process.
 - Also numerous **types of chemicals & gases** are involved in semiconductor fabrication which may need to be **imported**.
- **Lack of uninterrupted power and water supply:** In addition to the huge cost, manufacturing even a single chip requires hundreds of **gallons of pure water**, which may also be **hard to find in India** in the required quantities. An **uninterrupted power supply** is also another major hurdle.
 - Because the process is very delicate, even a **brief outage or power spike** might cause it to come to a standstill, which can take hours or days to recover from.
- **Others:** Lack of long-term **stable policies**, **constant price pressure** from other global players, ever-changing **innovations** and rapid changes in technology etc.

Initiatives taken for semiconductor manufacturing in India

- **Semicon India Program (Program for Development of Semiconductors and Display Manufacturing Ecosystem in India):** With a total outlay of **INR 76,000 crore**, it aims to provide **financial support** to companies investing in **semiconductors, display manufacturing and design ecosystem**. Under the programme, **four schemes** have been introduced
 - **Scheme for setting up of Semiconductor Fabs in India**,
 - **Scheme for setting up of Display Fabs in India**
 - **Scheme for setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India**
 - **Design Linked Incentive (DLI) Scheme** (Chip Design Infrastructure Support, Product Design Linked Incentive and Deployment Linked Incentive)
- **India Semiconductor Mission (ISM):** It has been setup as an **Independent Business Division within Digital India Corporation** to drive **India's long term strategies** for developing semiconductors and display manufacturing facilities and semiconductor design ecosystem.
 - It will serve as the **nodal agency for efficient, coherent and smooth implementation** of the schemes.

- **Attracting Foreign capital:** In early 2021, the Indian government sought **proposals from interested applicants** to either **setup (and/or expand)** semiconductor wafer/device fabrication plants (FABs) in India or their acquisition outside India. The notification about the **Expression of Interest was available in Korean, Japanese, Hebrew, and Chinese**, an indication of the **expected investment interest from foreign players**.
 - Also, the Government has allowed **100 percent FDI under the automatic route** for the electronics sector.
- **Modified Special Incentive Package Scheme (M-SIPS):** To **boost semiconductor** industry, the Union Budget of 2017-18 increased the allocation for incentive schemes, such as the **M-SIPS and the Electronic Department Fund (EDF)**.

Road Ahead

- **Strengthening infrastructure:** Infrastructure is critical to supply chain strategy, and it must incorporate **capacity planning, logistics, and manufacturing outsourcing** in addition to production and quality control.
- **Conducive and stable policies:** Because the semiconductor value chain is **interrelated and linked with several industries**, governments must develop policies that address **all the crucial characteristics** in the long run. Government policies should also focus on **assuring and securing access** to foreign technology suppliers through **trade and foreign policy** to ensure a global level of collaboration.
- **Focus on Power semiconductors:** Power semiconductors have a different structure than ordinary semiconductors, which allows them to **withstand high voltages and big currents** without damage. They are essential for the **efficient and sustainable use of energy** because they can transfer energy across vast distances with low losses.
- **Thrust on clean energy:** Power semiconductor manufacturers believe that **Gallium Nitride (GaN) and Silicon Carbide (SiC) based devices** hold the key to addressing a primary hurdle for **expansion of renewable energy** as it provides **scalable power conversion and storage solutions**.
- **Lessons that India could learn from other countries**
 - **China.** China has a large share of the **global market in OSAT** (Outsourced semiconductor assembly and test) and is now **expanding on integrated circuit (IC) design**. This is majorly due to the **low labour and manufacturing costs and the progressive initiatives** by the government.
 - **Taiwan:** Taiwan has developed an atmosphere in which the semiconductor industry could thrive and earn an international reputation, thanks to **public policies such as subsidies, tax breaks, and public infrastructures** such as the creation of major research and industrial parks.
 - **South Korea:** The key competitive advantage of the South Korean semiconductor industry is in the production of memory semiconductors, which it achieves by utilizing its **low-cost workforce in the labour-intensive process** of semiconductor manufacturing.

3.8. NEWS IN SHORTS

3.8.1. RESERVE BANK OF INDIA RELEASES ITS ANNUAL 'REPORT ON CURRENCY AND FINANCE (RCF)' FOR THE FY 2021-22

- The theme of the Report is **"Revive and Reconstruct"** that provides a strategy for medium-term steady **economic growth of 6.5-8.5%**.
- **Key observations**
 - Indian economy is likely to take **over 12 years to overcome** the COVID-19 losses.
 - Capital infusion has **helped Public Sector Banks improve their CRAR** to 14.3 per cent by December 2021 from 11.8 per cent in March 2016.
 - Amount recovered through **Asset Reconstruction Companies (ARCs)** dipped in recent years before **getting revived to 41 per cent** in 2020-21.
 - Inflation due to **Russia-Ukraine crisis and deglobalization** are other key challenges that the economy is facing.
- **Recommendations**
 - To avoid the **moral hazard problem** in recapitalisation of PSBs, an incentive mechanism should be established and **banks with better performance** should be **given priority** in terms of access to fresh capital.
 - **Strengthen infrastructure of the Insolvency and Bankruptcy Code** by increasing the number of NCLT benches.
 - Ensure **adequate disclosures about risk factors** affecting business to **maintain investors' confidence** in the primary market.
 - Care needs to be taken to protect the stakeholders from **digital frauds, data breaches and digital oligopolies**.

- **Glossary**

- The **Capital Adequacy Ratio (CAR) or CRAR** is a measurement of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures.
- The Moral Hazard problem in banking is the idea that certain banks usually take risks to become more profitable because they know the government will bail them out in the future.

3.8.2. WAYS AND MEANS ADVANCES (WMA)

Recently, RBI lowered limit for ways and means advances (WMA) for States and UTs.

- **In view of improving pandemic situation**, RBI decided to reduce WMA for States and UTs to ₹47,010 crore from ₹51,560 crore.
 - Considering COVID-19 related uncertainties, RBI had raised WMA limit in 2021.

About Ways and Means Advances (WMA)

- WMA was introduced in 1997 and the practice of issuing ad hoc Treasury Bills to replenish Central Government's cash balance was discontinued.
- Under **RBI Act 1934**, WMAs are **temporary advances given by the RBI to Centre and States** to tide over any mismatch in receipts and payments.
 - Such advances are **repayable within three months** from the date of making that advance. **Interest is charged at existing repo rate** (rate at which RBI lends short-term money to banks).
- WMA is **not part of the Fiscal Responsibility and Budget Management Act (FRBM)** because they get paid within the year itself.
- **Two types of WMA** –special and normal
 - **Special WMA or Special Drawing Facility is provided against the collateral of the government securities** held by the state. After the state has exhausted the limit of SDF, it gets normal WMA.
 - The interest rate for **SDF is one percentage point less than the repo rate**.
- In addition to WMA, the **OverDraft facility is also provided** whenever financial accommodation to a State exceeds its SDF and WMA limits.
- There is a **State-wise limit for the funds that can be availed via WMA**. These limits depend on factors such as total expenditure, revenue deficit and fiscal position of the State.
 - Limits for WMA are **decided by the government and RBI mutually** and revised periodically.

Importance of Ways and Means Advances (WMA)

- Increased WMA limit for States to borrow short-term funds from the RBI **provides a financial cushion when there's uncertainty in revenue collections** due to stressed economic conditions.
- WMA funding is **much cheaper than borrowings from markets** and can be an alternative to raising longer-tenure funds from the markets.

3.8.3. COUNTER-CYCLICAL CAPITAL BUFFER (CCCB)

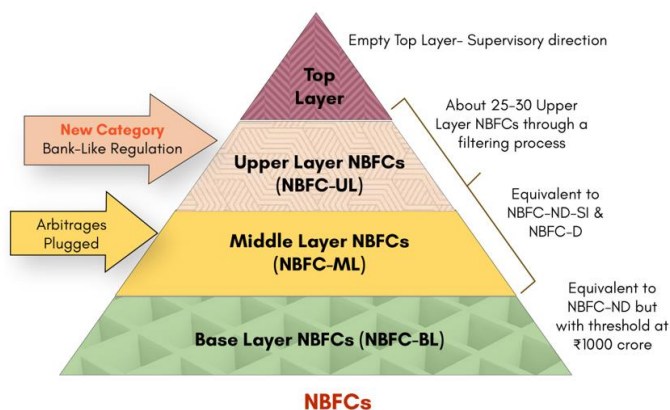
- **RBI has decided not to activate CCCB.**
 - Framework on CCCB was put in place by RBI in 2015.
- **Following Basel-III norms**, central banks specify certain capital adequacy norms for banks in a country. **CCCB is a part of such norms** and is calculated as a **fixed percentage of a bank's risk-weighted loan book**.
- **Aim of CCCB regime is two-fold:**
 - It requires banks to **build up a buffer of capital in good times** which may be used to maintain flow of credit to the real sector in difficult times.
 - **Restricting the banking sector from indiscriminate lending** in the periods of excess credit growth that have often been associated with the building up of system-wide risk

3.8.4. RBI TIGHTENS NON-BANKING FINANCIAL COMPANY (NBFC) LENDING AND DISCLOSURE GUIDELINES

- These guidelines are meant to further harmonize regulations between banks and non-banks.
 - It builds on the **RBI's scale based regulations** whereby **NBFCs are graded into 3 layers**.
- **Key highlights**
 - Aggregate exposure of an upper layer NBFC to any **entity must not be higher than 20% of its capital base**, although the board can approve an additional 5%.
 - ✓ However, **for infrastructure finance companies**, the **aggregate limit will be 30% to a single entity**.
 - **To a group of connected entities**, aggregate exposure will be limited to 25% of the capital base for all upper layer NBFCs apart from infrastructure finance companies where it will be 35%.
 - Unless sanctioned by the board, **mid-layer and upper layer NBFCs shall not lend more than Rs 5 crore to directors, CEO or relatives of directors**.
 - ✓ They also **cannot lend to any firm in which any of their directors or their relatives are interested** as a partner, manager, employee or guarantor.

- Loans can be provided to the real estate sector after the borrowers have obtained prior permission from the government or other statutory authorities for the project.

Scale Based Approach-Introducing Scale Based Framework



- Can't deal with chit funds, hire-purchase finance, leasing finance, insurance or securities business. It is strictly prohibited from accepting deposits from or lending funds to, any other person except members.
- Only individual members are allowed in Nidhi companies.

3.8.7. GUIDELINES FOR STRATEGIC DISINVESTMENT

- According to new guidelines released by Department of Investment and Public Asset Management (DIPAM), **State government or public sector enterprises (PSEs) will not be allowed to buyout another PSU.**
 - Also, in strategic sectors, **bare minimum presence of existing public sector commercial enterprises at holding company level will be retained** under government control.
- Objective** is to minimize the presence of the government in PSEs across the sectors, and to make available newer investment opportunities for the private sector
- Strategic disinvestment** implies the sale of substantial portion of the Government shareholding of a central public sector enterprise (CPSE) of up to 50%, or such higher percentage, along with transfer of management control.

3.8.5. LEGAL ENTITY IDENTIFIER (LEI)

- Recently, RBI has extended the guidelines on LEI to **large borrowers of NBFCs and Primary (Urban) Co-operative Banks (UCBs).**
- LEI is a **20-character alpha-numeric code** which is used to create a global reference data system that **uniquely identifies every legal entity in any jurisdiction that is party to a financial transaction.**
- LEI improves **the quality and accuracy of financial data reporting systems** for better risk management.

3.8.6. CENTRAL GOVERNMENT AMENDS NIDHI RULES, 2014

- Development comes amid a **sharp rise in number of 'Nidhi' companies** and is aimed at **improving their governance and safeguarding public interest.**
- Key amendments**
 - A public company set up as a Nidhi with share capital of Rs. 10 lakhs **needs to first get itself declared as a Nidhi from Union government.**
 - ✓ **Earlier, there was no such need** for a company to get declaration.
 - Promoters and Directors** of company have to **meet the criteria laid down in rules.**
- About Nidhi company**
 - Similar to a Non-Banking Financial Company, a Nidhi is formed **to borrow and lend money to its members.** It inculcates **saving habits among its members** and works on the principle of mutual benefit.
 - Not required to get an RBI licence** but need approval under the Companies Act.
 - Ministry of Corporate Affairs regulates its operational matters** and RBI has the power to issue directions for its deposit-taking activities.

3.8.8. FOREIGN EXCHANGE MANAGEMENT (NON-DEBT INSTRUMENTS) (AMENDMENT) RULES, 2022

- New rules **allow foreign investment of up to 20 per cent in LIC and other such corporate bodies.**
 - Presently, the **foreign inflows' ceiling for public sector banks is 20 per cent** under government approval route.
- Foreign Exchange Management Act (FEMA), 1999, under Finance Ministry,** consolidates and amend laws relating to foreign exchange for facilitating external trade and payments and for maintenance of foreign exchange market in India.
 - It replaced the **Foreign Exchange Regulation Act (FERA) and extends to whole of India.**

3.8.9. CHARTERED ACCOUNTANTS, THE COST AND WORKS ACCOUNTANTS AND THE COMPANY SECRETARIES (AMENDMENT) BILL, 2022

- It seeks to **strengthen the disciplinary mechanism and provide for time-bound disposal of cases against members of aforesaid professionals.**

- It will amend the Chartered Accountants Act, 1949, the Cost and Works Accountants Act, 1959, and the Company Secretaries Act, 1980.
- **Key Highlights**
 - It proposes to change the composition of the two disciplinary entities to **allow for more external representation**.
 - **Creates a Coordination Committee** headed by the Secretary of the Ministry of Corporate Affairs.
 - The **Bill increases certain fines under the three Acts**.
 - **Firms must now register with the Institutes**.
 - It provides for **disclosure of pending complaints** or actionable information against members and firms.

3.8.10. RNOR (RESIDENT BUT NOT ORDINARILY RESIDENT)

- It is a class of **residential status under the Income-tax law**. RNOR represents a person who does not qualify as an ordinary resident.
- It includes person who
 - Spends over 120 but less than 182 days, and
 - Earns ₹15 lakh or more from assets in India.

3.8.11. EXPORT PROMOTION CAPITAL GOODS (EPCG) SCHEME

- **Ministry of commerce** has relaxed various procedures under EPCG scheme to **reduce compliance requirements and facilitate ease of doing business**.
- EPCG, **zero duty scheme**, enables **import of capital goods that are used in pre-production, production, and post-production** without payment of customs duty.
 - Exporter has to export finished goods worth six times of actual duty saved in value terms in six years.
 - EPCG authorization holder can export either directly or through third party.

3.8.12. PARLIAMENTARY STANDING COMMITTEE ON FINANCE FOR PROVIDING CREDIT CARD TO MSME ENTREPRENEURS

- The **Micro, Small and Medium Enterprise (MSME)** sector contributes around **30% of India's GDP, over 48% exports, 45% of manufacturing output** and creates **11.1 crore jobs** through **6.34 crore enterprises**.
- **Observations on MSMEs and Recommendations**

Major Issues	Recommendations
<ul style="list-style-type: none"> ● Information Gap in the MSME Sector 	<ul style="list-style-type: none"> ● Regular Survey /census of MSMEs. Also, a fact-based

<p>with no survey since 2017 despite MSME definition change in 2020.</p> <ul style="list-style-type: none"> ● Over 70% MSME still function as informal entities ● Overall Credit Gap of ₹20-25 lakh crore in the MSME Sector (as per UK Sinha Expert Committee on MSMEs, ● Less than 40% borrowed from the formal financial system. <ul style="list-style-type: none"> ○ Banks are reluctant to lend due to lack of reliable data. ● Inability to meet the collateral expectation of banks/NBFCs for loans. ● Delayed Payments-forcing them to costly informal credit 	<p>Annual Financing Report from SIDBI.</p> <ul style="list-style-type: none"> ● Create a robust, Integrated Digital Ecosystem of MSMEs. ● Prepare a time-bound road map to accurately estimate and bridge the credit gap. ● Nationwide MSME Vyapar Credit Card Scheme under SIDBI, on lines of Kisan Credit Card under NABARD, with 2-3% interest subvention and card access only on sign up at Udyam Portal. <ul style="list-style-type: none"> ○ Several banks have started MSME Credit Cards/Laghu Udyami Credit Cards. ● Create 'UPI for MSME Lending' for a fully mobile-based, easy, immediate, contact-less, paperless capital loans. ● SIDBI shall develop an 'UDYAM Assist Platform (UAP)' to accelerate registration of MSMEs on UDYAM Portal and act as nodal agency for Udyam value-added financial application.
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3.8.13. ZERO DEFECT ZERO EFFECT (ZED) CERTIFICATION SCHEME

- The Ministry of Micro, Small, and Medium Enterprises (MSME) launched a **revamped ZED Certification Scheme (originally launched in 2016)**, with an aim to make **Indian companies globally competitive and help them get easier access to capital**.
- MSMEs will get **subsidy as per the following structure, on the cost of ZED certification**:
 - Micro Enterprises: 80%
 - Small Enterprises: 60%
 - Medium Enterprises: 50%
- There is also provision for **additional subsidy for Women/SC/ST Entrepreneurs** or MSMEs in NER/Himalayan/LWE/Island territories/aspirational districts.
- It will cover both **manufacturing (first phase) and services sector (2nd phase)**.

3.8.14. INDIA INVOKES PEACE CLAUSE FOR 3RD TIME

- In order to meet the domestic food security needs of poor population, India has **invoked peace clause of**

World Trade Organisation (WTO) for exceeding the 10% ceiling on support offered to rice farmers.

- India informed the WTO that value of its rice production in 2020-21 was \$45.56 billion while it gave subsidies worth \$6.9 billion, which comes out to 15.14% as against the permitted 10%.
- India became the first country to invoke peace clause in 2020 as rice subsidies exceeded cap in 2018-19.
- Under peace clause, WTO member countries are refrained from challenging any breach in prescribed subsidy ceiling given by a developing nation at dispute settlement forum of WTO.
- **Agreement on Agriculture (AoA) and Peace Clause**
 - **3 Pillars of AoA:**
 - ✓ **Under market access conditions**, both developed and developing nations were to convert all non-tariff barriers into tariffs.
 - ✓ **Domestic support** includes the classification of subsidies into ‘boxes’ depending their effects on production and trade. (refer image)
 - ✓ **Export Subsidies** and other methods used to make exports artificially competitive.
 - AoA contains a “due restraint” or “peace clause” which regulates the application of other WTO agreements to subsidies in respect of agricultural products.




- It can be used for raising finance, IT waivers, subsidy claims, farmers’ insurance etc.
- It will act as a record of land under cultivation for both the wheat and paddy crops in state.
- **J Forms can also be stored in DigiLocker.**

3.8.16. FOOD AND AGRICULTURE ORGANIZATION (FAO) FOOD PRICE INDEX (FFPI)

- The FFPI measure of the monthly change in international prices of a basket of food commodities.
 - It consists of the average of five commodity group price indices (cereal, sugar, meat, vegetable oil, and dairy) weighted by the average export shares of each of the groups in 2014-2016 (base year).
- FAO is a specialized agency of the United Nations that leads international efforts to defeat hunger.

3.8.17. WOMEN WORKFORCE

- According to Ministry of Labour and Employment (MoL&E), as of March 2022, more than 270 million workers have registered on the e-Shram portal, out of which nearly 53% are female and 47% are male.
 - Large presence of female workforce is seen in agriculture sector followed by domestic and household workers, construction, and apparel sectors.
 - Tamil Nadu, Meghalaya, and Kerala have highest registrations of female workers.
 - Nearly 62% of workers are in the age group of 18–40.
- **Reasons of increasing women registrations**
 - Intervention by grassroots organisations that work closely with women’s groups in both rural and urban areas.
 - 94% of women workers are part of informal economy.
- Started in August 2020, e-Shram portal is the first national database of unorganized workers in the country.
- **Issues associated with portal**
 - It has not been successful in collecting information on migrant workers, which was its mandate in the first place.
 - Exclusion of the most marginalized amongst the workforce.
 - Lack of clarity on data collection and how the registry will expand social and security benefits for workers.

<p>Green Box</p> <ul style="list-style-type: none"> ■ These measures are exempt from reduction commitments and, indeed, can even be increased without any financial limitation under the WTO. ■ Applies to both developed and developing country members but in the case of developing countries special treatment is provided in respect of governmental stockholding programmes for food security purposes and subsidized food prices for urban and rural poor. <p>(India's PDS does not come under Green Box)</p> 
<p>Amber Box</p> <ul style="list-style-type: none"> ■ All domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box. ■ For instance, MSP, Procurement Price, sum total of subsidies on inputs like fertilizer, water, credit, power, etc. 
<p>Blue Box</p> <ul style="list-style-type: none"> ■ These are basically Amber Box subsidies, but they tend to limit the production. Any support that would normally be in the amber box, is placed in the blue box if the support also requires farmers to limit their production. ■ These measures are also exempt from reduction commitments. 
<p>Special and Differential Treatment (STD) Box</p> <ul style="list-style-type: none"> ■ It comprises of investment subsidies like tractors and pump sets, Agricultural input services like fertilizers to farmers etc. ■ SDT box subsidies can be given by only developing and low-income countries.

3.8.15. 'J FORM'

- Punjab will be the first state in the country to provide “digitized form J” in real-time to farmers from this Rabi procurement season.
- ‘J form’ is the sale receipt of a farmer’s agricultural produce in mandis (grain market) which acts as an income proof for a farmer who sells his crop.
 - These forms were earlier issued manually by arthiyas (commission agents).

3.8.18. PRADHAN MANTRI GARIB KALYAN PACKAGE (PMGKP)

- The Union Government extended the PMGKP Insurance Scheme for Health Care Workers Fighting COVID-19 for a further period of 180 days.
- About PMGKP
 - Launched in **March, 2020 under Ministry of Health and Family Welfare**
 - Provides **comprehensive personal accident cover of Rs. 50 Lakh to 22.12 lakh health care providers** including -
 - ✓ **community health workers and private health workers** who may have been in direct contact and care of COVID-19 patients.
 - ✓ **private hospital staff/retired/volunteer/local urban bodies/contract/daily wage/ad-hoc/outsourced staff** requisitioned by states/central hospitals, AIIMS etc.

3.8.19. SMART CITIES, SMART URBANIZATION CONFERENCE ORGANISED BY MINISTRY OF HOUSING AND URBAN AFFAIRS (MOHUA)

- **Key launches during the conference:**
 - A **'virtual hub for collaborations on urban transformation'** in partnership between Smart Cities Mission and World Economic Forum to **leverage emerging technologies and innovations.**
 - **Urban Outcomes Framework 2022, Artificial Intelligence Playbook for Cities & AMPLIFI (Assessment and Monitoring Platform for Liveable, Inclusive and Future-ready urban India) portal.**
- Also MoHUA stated that **all smart cities will get Integrated Command and Control Centres (ICCC)** by August 15, 2022.
 - ICCC provide **services to citizens in areas of traffic management, health, water etc.**
 - 80 smart cities already have ICCC.
- **About Smart Cities Mission**
 - It is a **centrally sponsored scheme** (launched in 2015) to **drive economic growth and improve quality of life** of people by enabling local area development and harnessing technology.
 - **100 cities have been selected** through a two-stage National competition.
 - **Central Government to provide financial support** to the extent of ₹48000 crores over 5 years i.e. on an average ₹100 crores per city per year.
 - An **equal amount is to be provided by State/Urban Local Bodies.** Emphasis has been given on public private partnerships.

- Implementation: by a **Special Purpose Vehicle (SPV)** created for the purpose.

3.8.20. INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

- **Ministry of Electronics and Information Technology (MeitY)** has launched several applications under the Intelligent Transportation System (ITS) as part of the InTranSE- II program to improve India's traffic scenario.
- ITS are **control and information systems that use integrated communications and data processing technologies** for the purposes of:
 - **Improving mobility of people and goods.**
 - **Increasing safety, reducing traffic congestion** and managing incidents effectively.
 - **Meeting transport policy goals** and objectives.
 - Minimizing impacts of environmental, highway and human factors that contribute to accidents.

3.8.21. INDIA'S 9TH HYDROCARBON BASIN

- ONGC is on its way to **commercialize Vindhyan Basin**, a Proterozoic intercontinental basin in the **central part of Indian shield.**
 - Vindhyan Basin is bounded by **Son-Narmada Geofracture** in the south, **Great Boundary Fault** in the west, **Monghyr-Saharsa Ridge** in the east, and **Bundelkhand Massif and Indo-Gangetic Plains** in the north.
- It would be the **ninth producing Basin of India** and the eighth by ONGC.
 - Earlier, in 2020, **Bengal basin became India's eighth producing basin**, joining the ranks of **Krishna-Godavari (KG), Mumbai Offshore, Assam Shelf, Rajasthan, Cauvery, Assam-Arakan Fold Belt and Cambay.**
- Hydrocarbons **commonly occur in sedimentary basins** and are absent from intervening areas of igneous and metamorphic rocks.
 - Sedimentary basins are the **low areas in the Earth's crust and are of tectonic origin.**
 - They are **formed over hundreds of millions of years** by the combined action of **deposition of eroded material and precipitation of chemicals and organic debris** within water environment.
- **India has 26 sedimentary basins**, covering a total area of 3.4 million square kilometers with 49% of it located on land, 12% in shallow water and 39% in the deepwater area.

3.8.22. KWAR HYDROELECTRIC PROJECT

- Cabinet has approved the **540 MW Kwar Hydroelectric Project** in **Kishtwardistrict** of Jammu and Kashmir to harness the vast hydro potential of **River Chenab**.
 - **Chenab basin** is estimated to have hydro power potential of around **11,283 MW**.

- A number of hydroelectric (HE) projects (running or under-construction) are initiated to harness this potential such as:
 - **Baglihar** HE Power project; **Dulhasti** Power Station; **Salal** Power Station; **PakalDul** HE Project; **Kiru** HE Project; **Kirthai-II** HE Project.



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4. SECURITY

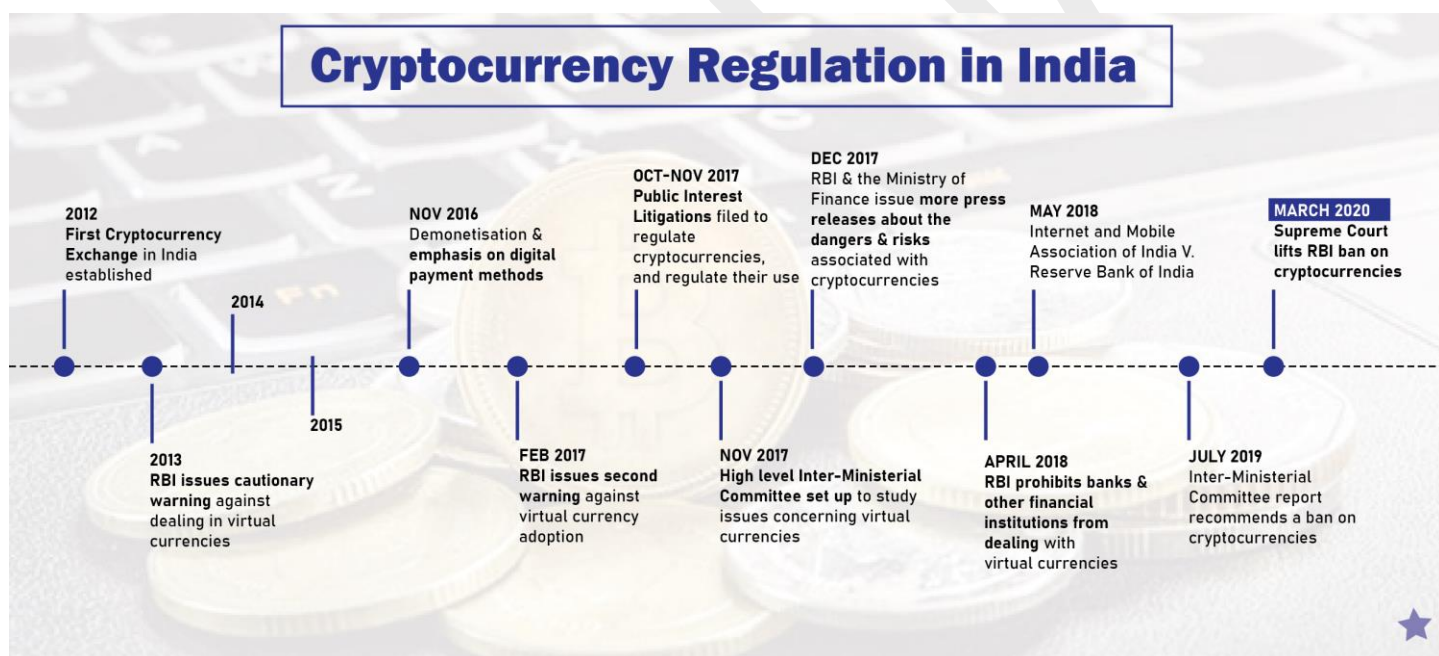
4.1. CRYPTOCURRENCY CRIMES

Why in news?

Recently, for the first time **Bureau of Police Research and Development (BPRD)**, a think tank under Ministry of Home Affairs (MHA), has **issued a standard operating procedure for law enforcement agencies** in India on how to probe crypto crimes, and seize and preserve cryptocurrencies during investigation.

More about news

- In 2021, **illicit transactions** using cryptocurrencies were **estimated to be \$14 billion**, 79% increase from \$7.8 billion the previous year.
- Currently, there are **no national guidelines on cryptocurrency related cases**, due to which enforcement agencies often struggle, particularly in seizure as well as tracing suspects.
- Cryptocurrency and the exchanges where digital currency can be traded anonymously have emerged as **key tools for the cyber extortionists**.
 - Cryptocurrencies can be used **either as a tool or target in the facilitation of cybercrimes**, including cyber money laundering, cyber extortion, phishing, hacking, cyber fraud and other financial crimes such as Ponzi and investment scams.



India's provisions to control cryptocurrency crime

- **Cryptocurrency and Regulation of Official Digital Currency Bill, 2021:** It is not yet tabled in Parliament. It seeks to ban all cryptocurrencies based on the risks associated with them such as potential use for money-laundering, risks to consumers and threat to the country's financial stability.
 - Also, it seeks to create a facilitative framework for the creation of the official digital currency to be issued by the Reserve Bank of India.
- **Prevention of Money Laundering Act 2002 (PMLA):** Provisions of PMLA has been used by ED to prosecute offenders in 2020 for **facilitating the foreign-related companies to launder the PoC (Proceeds of crime)** by converting money generated into cryptocurrency and thereafter transfer to foreign countries.
- **Indian Penal code, 1860 (IPC):** Section 420 of IPC penalizes cybercrimes like **creation of Bogus websites, cyber frauds like password thefts are punishable** with a seven-year jail term and/or fine.

- For example, **Crypto scams** include phishing websites designed to steal sensitive information from users, as well as ponzi schemes and fake investment plans like Morris Coin.
- **Information Technology (IT) Act, 2000:** Section 66C of IT Act, deals **with Identity theft using passwords, digital signatures, biometric thumb impressions** or other identifying features of another person for fraudulent purposes.
 - In 2019, the cryptocurrencies worth Rs 30.85 lakh were stolen from a West Delhi businessman's wallet.

How cryptocurrency is threat to the nation?



- **Internal security:**
 - **Terrorism:** There is wider use of cryptocurrencies on the dark net for terror acts and drug trafficking by militant organisations. For instance, ISIS, is posing a severe threat to the national security and a big challenge to security agencies in India.
 - **Money Laundering:** Cryptocurrency market isn't universally protected or regulated like Banks, thus is **increasingly used to launder money**. In 2019, criminal entities laundered approximately \$2.8 billion through crypto asset exchanges.
 - ✓ Cryptocurrencies transactions when done on the dark net like TOR, Freenet, Zero-net and Perfect-dark, becomes **untraceable for the security agencies**.
 - **Anonymity:** While all transactions are transparent on blockchain, it is difficult to pin a wallet to a physical person. As a result, it's a safe haven for criminals who carry out ransomware attacks, crypto exchanges hacks and carry out transactions in bitcoins.
 - **Extortion and Ransomware:** Cryptocurrency is sometimes used as **payment for extortion because the money trail is difficult to trace**.
 - ✓ Ransomware is software that takes over a computer and does not allow access to its files until a ransom is paid, usually in cryptocurrency.
 - **Tax evasion and avoidance:** Anonymity offered by the cryptocurrency ecosystem makes it difficult for tax authorities to **trace transactions to individuals and verify their tax liabilities**.
- **Individual: Criminals can break into crypto exchanges, drain crypto wallets and infect individual computers** with malware that steals cryptocurrency as well as steal personal information and data.
- **Environment:** Crypto miners employ sophisticated, energy intensive machines to solve complex algorithms in exchange for cryptocurrency. The energy used by these crypto operations has a large portion come from coal-fired power plants which **produce significant CO2 emissions** thus increasing ecological footprint.
- **Others:**
 - **Investment risk:** Risks associated with digital currencies vary for different stakeholders, including financial institutions, non-financial firms, and investors. The biggest threat is the investment risk as Cryptocurrencies have no fundamental value, and therefore could drop to zero at any time.
 - **Regulatory:** Countries may prevent the use of the currency or may state that transactions break anti money laundering regulation (AML). A single AML approach is difficult to design, due to the complexity and decentralized nature of the Bitcoin as well as the significant number of participants such as senders, receivers, processors, currency exchanges etc.

Way forward

- **Individual Crypto wallet:** As per BPRD guidelines, law enforcement agencies **must have their own crypto wallet to store seized virtual digital assets**, and they need for liaise with crypto exchanges to block a suspect's wallet or resetting the keys to defuse transactions in an ongoing investigation.
- **Proper regulations:** Regulatory and financial bodies should **develop regulations to minimize risk and increase compliance** in a constantly and fast-growing crypto asset industry.
 - For example, financial institutions can implement the measures recommended by the Financial Action Task Force (FATF) and stay compliant with the new and latest regulations.
- **Fraud detection:** There is need to follow obligatory guidelines for financial institutions and crypto asset business to operate in India.
 - Blockchain technologies should **implement automated AML fraud detection** that would block or flag suspicious transactions prior to them being carried out.

- **Legal framework:** There is urgent need to have a Cryptocurrency Regulation Bill in India to regulate and deal with cryptocurrency crimes.
- **Awareness:** To reduce the risk associated with cryptocurrency theft, there is need to educate and inform people about keeping their personal keys to access crypto-wallet safe.

To know more about **Cryptocurrency**, please refer to our following Weekly Focus Document.

 <p>Cryptocurrency: A tool of Economic Empowerment or a Regulatory Nightmare?</p>	<p>Cryptocurrency is having its best year yet in 2021; becoming more popular, mainstream, and accessible. But, is there a future for cryptocurrency in India? In what form cryptocurrency would be acceptable to Indian lawmakers and regulators remains to be seen. Discussing the basics of cryptocurrency, the document puts light on their role in economic empowerment of the masses and the path ahead to overcome the emerging regulatory challenges due to their increased usage.</p>	
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4.2. FINANCIAL ACTION TASK FORCE (FATF)

Why in News?

Recently, the Finance minister attended the FATF Ministerial Meeting and endorsed the FATF's strategic priorities for the years 2022-24.

About Financial Action Task Force (FATF)

- It is an **inter-governmental body** established in 1989 to **combat money laundering, terrorist financing, and other related threats** to the integrity of the international financial system.
 - It has **39 members so far, including India**.
 - FATF's **decision making body, the FATF Plenary**, meets three times per year.
- FATF **reviews money laundering and terrorist financing techniques** and continuously strengthens its standards to address new risks.
- **FATF Recommendations are recognised** as the global **anti-money laundering (AML) and counter-terrorist financing (CFT) standard**.
 - FATF also works to stop **funding for weapons of mass destruction**.
- **Decisions are made by the grouping** on a consensus basis, as they conduct **reviews of countries on AML/CFT parameters** (called "Mutual evaluations").
 - **India has faced three rounds of mutual evaluations** and cleared them and faces the fourth round this year.

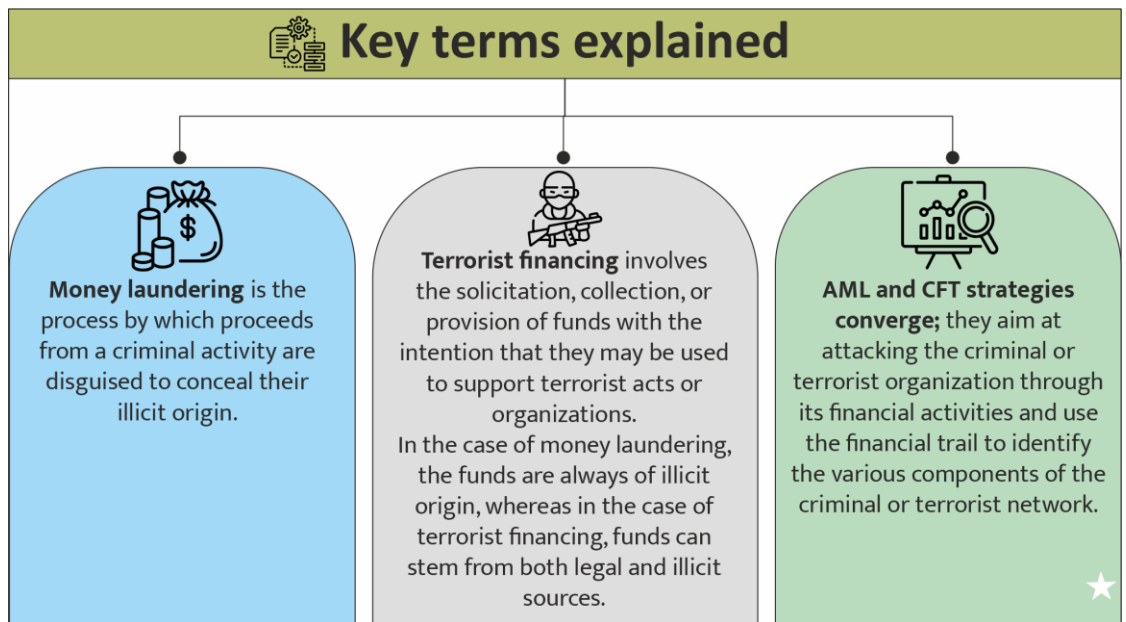
About FATF lists:

- **High-risk jurisdictions:** have significant strategic deficiencies in their regimes to counter money laundering, terrorist financing, and financing of proliferation. This list is often **externally referred to as the "black list"**.
- **Jurisdictions under increased monitoring:** are actively working with the FATF to address strategic deficiencies in their regimes to counter money laundering, terrorist financing, and proliferation financing. This list is often **externally referred to as the "grey list"**.
 - **Countries considered in the grey list may face:** Economic sanctions from IMF, World Bank, ADB; Problem in getting loans from IMF, World Bank, ADB and other countries; Reduction in international trade; International boycott.
- At present (March 2022), **only Iran and North Korea are on the blacklist**, while several countries, including **Pakistan, Syria, Yemen, UAE, Jamaica, Myanmar, Turkey and Cambodia are on the grey list**.

Significance of FATF

- **Combating terrorism and money laundering:** It helps countries to build the capacity to fight terrorism and trace terrorist money and to successfully investigate and prosecute money laundering and terrorist financing offences.

- **Promote international cooperation:** The FATF process will also help in co-ordination of AML/CFT efforts at the international level as most of these activities are global in nature.
- **Better legislations for AML/CFT:** As a policy-making body, FATF works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.



- **Act against new and emerging threats:** FATF identifies emerging trends and methods used to launder money and it suggests measures to combat them.
- **More focused approach:** FATF runs differently from other multilateral agencies, as its primary focus is on reviewing all actions through a “technical” not a political prism, and frowns upon countries bringing bilateral issues to the forum.

Challenges faced by FATF

- **Project interest of selected nations:** Critics believe that on behalf of the interests of a few select states (EU Member States, US) it imposes regulations that are illegitimate and costly.
- **Lack of transparency in working:** Meetings of the group are carried out behind closed doors, and deliberations are not publicised. FATF has also penalised countries that have disclosed the contents of its meetings.
- **Difficulty in domestic coordination:** A large part of this difficulty arises from the challenges in reaching a mutual understanding of what the FATF recommendations mean and how a country should judge its performance relative to the recommendations.
- **Capacity constraints of countries:** This includes difficulties in investigating and prosecuting high-profile cross-border cases and preventing anonymous shell companies and trusts being used for illicit purposes
- **Operational challenges:** Inadequate, weak and selective enforcement of AML/CFT provisions, unclear confiscation Regime, Ineffective penalties etc. are some of the reasons why the FATF strategy has not been more successful.
- **New-age Challenges:** including bitcoins and cyber currencies, illegal trafficking of wildlife as a source of funding, use of artificial intelligence in terror attacks and biowarfare have emerged as part of the wider challenge of the coronavirus pandemic.



Way Forward

- **Better regulatory framework:** Continue to broaden regulatory frameworks to include non-financial sectors, ensuring adequate supervision and implementation of adequate, proportionate, and dissuasive sanctions when needed.
- **Improved international cooperation:** Countries should establish dedicated liaison officers overseas to facilitate exchanges and joint investigations into complex cases involving multiple jurisdictions.
- **Better Compliance mechanism:** Compliance with AML/CFT legislation requires a multi-layered and coordinated response from financial institutions and government.
- **Enhanced cooperation with private sector:** It will provide ability to better identification, understanding and management of money laundering, terror financing; greater auditability and accountability; Reduce costs and maximise human resources to more complex areas of AML/CFT etc.
- **Adopting new technologies:** such as AI, Data analytics etc can improve the speed, quality and efficiency of measures to combat money laundering and terrorist financing. They can help financial institutions and supervisors, assess these risks in ways that are more accurate, timely and comprehensive.

India's anti-money laundering and countering terrorist financing measures

- Guidelines and rules framed under the **Prevention of Money Laundering Act (PMLA)**
- **Strict adherence to Know Your Customer (KYC)** procedures
- **Enactment of the Fugitive Economic Offenders Act** in 2018
- **Anti-black money Act of 2015**
- New compliance regime brought in by the **Financial Intelligence Unit (FIU) for banks, other financial institutions.**

4.3. ARMED FORCES (SPECIAL POWERS) ACT (AFSPA) IN NORTH EAST

Why in news?

Recently, the Union Government has partially withdrawn the Armed Forces Special Powers Act (AFSPA), 1958 from parts of three Northeast states— Assam, Nagaland and Manipur.

About AFSPA

- AFSPA grants **extra-ordinary powers and immunity to the armed forces** to bring back order in the “disturbed areas”.
 - A disturbed area is one which is declared by notification under **Section 3 of the AFSPA**.
 - An area can be disturbed due to differences or disputes between members of different religious, racial, language or regional groups or castes or communities.
 - ✓ The **Central Government, or the Governor of the State or administrator of the Union Territory can declare** the whole or part of the State or Union Territory as a disturbed area.
- **Section 4 of the AFSPA** empowers armed forces with provisions like **legal immunity for their actions, arrest anyone without warrant, stop and search any vehicle etc.**
- Presently, AFSPA is operational in **Assam, Jammu and Kashmir and Ladakh, Nagaland, Manipur** (except Imphal Municipal area) and **parts of Arunachal Pradesh**.
 - Jammu and Kashmir and Ladakh were brought under the Act by way of **The Armed Forces (Jammu and Kashmir) Special Powers Act, 1990**.

DID YOU KNOW?

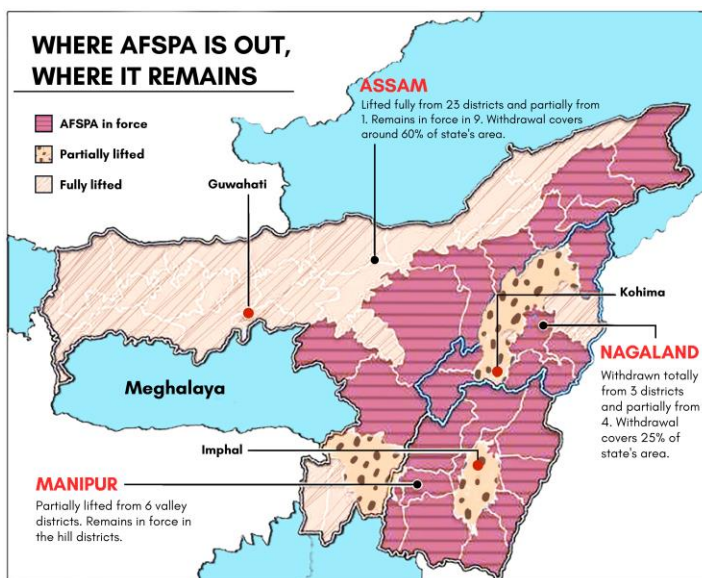


The AFSPA was first enacted as an ordinance in the backdrop of the Quit India Movement in 1942 by **Viceroy Linlithgow** which gave the Armed Forces a “license to kill” when faced with internal disturbances.

AFSPA in North East

- **Insurgency in Nagaland:** Naga nationalist movement kicked off in the 1950s with the setting up of the Naga National Council (NNC)— Assam police forces allegedly used force to quell the movement.
 - Subsequently, AFSPA was passed in Parliament in 1958, and imposed on the entire state.
- **Imposition in Manipur:** In Manipur it was imposed in 1958 in the three Naga-dominated districts of Senapati, Tamenglong and Ukhrul, where the NNC was active. It was imposed in the 1960s in the Kuki-Zomi dominated Manipur district of Churachandpur, which was under the sway of the Mizo insurgent movement, and extended to the rest of the state in 1979, when groups in the Meitei-dominated Imphal Valley groups began an armed insurgency.

- **Extension in other Northeastern States:** As secessionist and nationalist movements started sprouting in other Northeastern states, AFSPA started being extended and imposed in other states as well.
- **Gradual withdrawal:** With many militant outfits inking peace agreements or joining negotiations with the Centre government, militancy in the Northeast has appreciably declined in many states.
 - Resultantly AFSPA was completely withdrawn in Mizoram in the 1980s, Tripura in 2015 and Meghalaya in 2018.



Significance of the AFSPA

- **Tool to deal with extraordinary law and order situation:** The AFSPA is applied to an area only when the ordinary laws of the land are found to be inadequate to deal with the extraordinary situation perpetrated by insurgents spreading terror.
- **Necessary to deal with insurgency:** Insurgent movements in India have more or less been proxy-wars being waged against India by external actors and this makes the deployment of armed forces in a counter-insurgency role with enhanced legal protection necessary.
- **To prevent security gap:** The army needs special powers to tackle homegrown and as well as foreign terrorists. The underlying point is that the army cannot operate in militancy-hit areas without the AFSPA and if AFSPA is repealed, the army would have to be withdrawn from that state or area. That will create a huge gap in the security grid in sensitive areas.

Reasons for opposition against AFSPA

- **Violation of human rights:** With special powers accorded to the armed forces, there have been multiple allegations of "fake encounters" and other human rights violations by the security forces in 'disturbed' areas.
 - A public interest litigation (PIL) filed in the Supreme Court claimed that at least 1,528 extra-judicial killings took place in Manipur between 2000 and 2012.
 - Recently, 14 villagers were killed during an anti-insurgency operation in Nagaland's Mon district.
- **Violation of fundamental rights:** The power of arbitrary arrest and detention given to the armed forces goes against the fundamental right vested in Article 22, which provides safeguards for preventive and punitive detentions.
- **Blanket immunity to security personnel:** There can be no prosecution or legal proceedings against personnel involved in above such operations without the prior approval of the Centre.

Steps taken by various agencies to reach a middle ground

Supreme Court Verdicts	<ul style="list-style-type: none"> • Naga People's Movement of Human Rights vs. Union of India (1998): The Court held that the act cannot be considered as violative of the Constitution and the powers conferred under the section 4 and 5 of the Act are not arbitrary and unreasonable and therefore not in violation of the provisions of the Constitution. <ul style="list-style-type: none"> ○ However, the court held that the army personnel are required to strictly follow minimum force under Section 4 against suspected of violating prohibitive orders. Also, the act has to be reviewed every six months by the state. • July 2016 judgement: The Supreme Court directed the armed forces and police not to use "excessive or retaliatory force" in even areas declared 'disturbed' where the AFSPA is applicable. • July 2017 judgement: Supreme Court's judgement on alleged unlawful encounter killings in Manipur marked an important institutional step – <ul style="list-style-type: none"> ○ The Supreme Court overruled the objections of the Centre and the Army and ordered the Central Bureau of Investigation to set up a special investigation team to probe encounter deaths.
Formation of various committees	<ul style="list-style-type: none"> • B P Jeevan Reddy Committee (2005): The committee was also of the view that the act is inadequate in several provisions. The committee also said that the law must be reviewed and security forces must be brought under the purview of ordinary criminal law rather than under army law.

	<ul style="list-style-type: none"> • Santosh Hegde committee (2013): The committee was of the view that if greater power was given then greater would be the restraint and stricter would be the mechanism to prevent its misuse or abuse.
Other prominent steps:	<ul style="list-style-type: none"> • The 5th report of the Second Administrative Reforms Commission on public order has also recommended the repeal of the AFSPA. • Both the National Human Rights Commission and the Supreme Court in 2014 have laid down the guidelines to be followed by the state in case of encounter deaths. • Activists such as Irom Sharmila have protested the existence of the AFSPA. She undertook a 16-year-long hunger strike against the law.

Way ahead

- **Ensuring justice for victims:** The security forces and the government should fast track existing cases and should adopt a transparent process to deal with allegations of human rights violations by the forces.
- **Building trust among the populace:** The armed forces must build the necessary trust amongst the locals to ensure their support. The state bureaucracy, army, and the grass-root civil society organization should come together in the developmental activities of the state hence making the law a positive aspect for the society there.
- **Case by case basis application:** The government should consider the imposition and lifting of AFSPA on a case-by-case basis and limit its application only to a few disturbing districts instead of applying it for the whole state. The government and the security forces should also abide by the guidelines set out by The Supreme Court, Jeevan Reddy Commission, and the NHRC.
- **Strengthening local level law and order machinery:** A part of the problem is also attributed to the failure of respective state governments to maintain law and order. It is argued that if the local police can effectively handle the situation, then the need of AFSPA would not arise, and it can be withdrawn from the region.
- **Important to ensure normalcy:** If India is to actualize its Act East policy and use the Northeast as a bridge to Southeast Asia, there is a need to demilitarize the region and restore normalcy.

4.4. NEWS IN SHORTS

4.4.1. INDIA THIRD HIGHEST MILITARY SPENDER IN 2021

- Findings are part of new **data published by Stockholm International Peace Research Institute (SIPRI)**.
 - SIPRI is **an independent international institute** dedicated to research into conflict, armaments, arms control and disarmament.
- **Key highlights**
 - **World military spending** continued to grow in 2021, **reaching an all-time high of \$2.1 trillion** despite economic fallout of the pandemic.
 - **Five largest spenders were U.S., China, India, U.K. and Russia.** U.S. and China alone accounted for 52% spending.

4.4.2. SCHEMES FOR DEFENCE START-UPS

- Minister of Defence rolled out schemes for defence start-ups during DefConnect 2.0.
- DefConnect aims **to attract innovators and investors from India's leading industries** in the defence sector.
- **Following schemes were launched**

Innovations for Defence Excellence (iDEX) Prime	<ul style="list-style-type: none"> • iDEX-Prime aims to support projects, requiring support beyond Rs 1.5 crore up to Rs 10 crore, to help ever-growing start-ups in the defence sector. • Core objective of iDEX is to create an ecosystem, essentially to foster innovation, entrepreneurship and technology development, specifically in the Defence and Aerospace sector. • iDEX is the operational framework of the Defence Innovation Organization (DIO), a special purpose vehicle under Ministry of Defence (MoD).
Sixth Defence India Start-up Challenge (DISC 6)	<ul style="list-style-type: none"> • DISC is aimed at supporting Startups/MSMEs/Innovators to create prototypes and/or commercialize products/solutions in the area of National Defence and Security. • DISC has been launched by MoD in partnership with Atal Innovation Mission.

Third edition of Innovate4Defence internship (i4D)

- i4D is a **two-months-long acceleration program** for students of Higher Educational Institutions (HEIs) of India.

- **Significance of Private sector participation in the Defence Sector**
 - **Harnessing Tech Development Expertise** for Defence innovation,
 - **Cutting Red Tape** in the defence industry,
 - **Help youth to contribute** towards India's defence needs.
- **Other measures taken in this direction**
 - **SRIJAN portal** to provide development support to MSMEs/Startups/Industry for import substitution.
 - **Aerospace & Defence Policies to attract private players** as well as foreign companies including Original Equipment Manufacturers (OEMs) in Defence corridors.
 - **Reforms in Offset policy in Defence Acquisition Procedure (DAP) 2020**, with thrust on attracting investment and Transfer of Technology for Defence manufacturing.

4.4.3. NEW CYBERSECURITY GUIDELINES

- **Indian Computer Emergency Response Team (CERT-In)** has issued **directions** relating to information security practices and reporting of cyber incidents under provisions of **section 70B of Information Technology (IT) Act, 2000**.
 - **According to CERT, there has been a three-fold increase in incidents in 2020** compared to 2019, recording 1.16 million breaches.
- **Key guidelines**
 - All government and private agencies will **mandatorily have to report all cyber breach incidents to CERT-In within six hours**.
 - All service providers, intermediaries, data centres, and government organisations shall **mandatorily enable logs of all their ICT systems and maintain them securely for a rolling period of 180 days** and same shall be **maintained within Indian jurisdiction**.
 - Virtual private server (VPS) providers, cloud service providers need to **register accurate information related to subscriber names, customer hiring services, etc and maintain them for five years or longer duration as mandated by law**.
- It is a step in the direction to make India Cyber secure. India has **jumped 37 places to 10th position in Global Cyber Security Index (GCI) 2020 (by International Telecommunication Union)** which showcases country's commitment towards cyber security.
- **Steps taken to improve cybersecurity**

- National Cyber Security Policy, 2013.
- National Cyber Security Strategy 2020.
- Indian Cyber Crime Coordination Centre (I4C) by Ministry of Home Affairs.
- National Cyber Coordination Centre (NCCC) under CERT-In.
- Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre).

4.4.4. NATIONAL CYBER SECURITY INCIDENT RESPONSE EXERCISE (NCX INDIA)

- NCX India **aims to train senior management and technical personnel** of Government/Critical Sector organisations **on contemporary cyber threats and handling cyber incidents** and response.
- NCX India will help strategic leaders to **better understand cyber threats, assess readiness, and develop skills** for cyber crisis management and cooperation.
- It is being **conducted by the National Security Council Secretariat (NSCS)**.

4.4.5. EXERCISES IN NEWS

- **LAMITIYE-2022**: It is an **India - Seychelles** Joint Military Training Exercise.
- **VARUNA**: It is a bilateral Naval Exercise between **Indian and French Navies**.

4.4.6. INDIAN NAVAL SHIP (INS) VAGSHEER

- Vagsheer, **sixth and last submarine of Project 75**, has been launched.
 - Vagsheer is a **diesel attack submarine**, designed to perform sea denial as well as access denial warfare.
 - It is also capable of performing **anti-surface warfare, anti-submarine warfare, intelligence gathering, mine laying and area surveillance** related operations.
- **P 75** is one of two lines of submarines, other being P75I, as **part of a plan for indigenous submarine construction** with technology taken from overseas firms.
 - Under P75, **Kalvari, Khanderi, Karanj and Vela have been commissioned**. Sea trials are on for Vagir.
 - **Constructed by**: Mazagon Dock Ltd.

4.4.7. PINAKA MISSILE SYSTEMS

- **Pinaka Mk-I (Enhanced) Rocket System (EPRS) and Pinaka Area Denial Munition (ADM)** rocket systems have been successfully flight-tested by Defence

Research and Development Organisation and Indian Army at Pokhran.

- The new Pinaka ER gives it a range of around 70 km, over the 45 km existing range of the missile which has been with the Indian forces for nearly a decade.
- The Pinaka is a **Multi-Barrel Rocket-Launcher (MBRL) system** which can fire a salvo of **12 rockets over a period of 44 seconds**.

4.4.8. HELINA

- **Recently, indigenously developed helicopter launched Anti-Tank Guided Missile 'HELINA'** was successfully flight tested.
- **About HELINA (Helicopter based NAG):**
 - It is **third generation** fire and forget class **anti-tank guided missile (ATGM)** system mounted on the Advanced Light Helicopter (ALH).
 - The system has **all weather day and night** capability.
 - It can defeat battle tanks with **conventional armour as well as explosive reactive armour**.
 - **Developed by:** Defence Research and Development Organisation (DRDO).

4.4.9. BOEING P-8I AIRCRAFT

- Indian Navy has commissioned its **second P-8I aircraft Squadron- Indian Naval Air Squadron (INAS) 316**.
- P-8I aircraft, a variant of multi-mission patrol aircraft **P-8A Poseidon**, is a multi-role **Long Range Maritime Reconnaissance Anti-Submarine Warfare (LRMR ASW)** aircraft.
 - It can carry out operations in Indian Ocean as well as on land.

4.4.10. DORNIER (DO-228) AIRCRAFT FLIGHT

- **Ministry of Civil Aviation** has announced the launch of **first commercial flight of the made-in-India Dornier-228**.
 - Do-228 has been made by **Hindustan Aeronautics Limited (HAL) delivered to Alliance Air**.
 - **Alliance Air** will be India's first commercial airline to fly an India-made aircraft for civil operations.
 - Aircraft will link **five remote towns of Arunachal Pradesh to Assam's Dibrugarh**, boosting air connectivity in the north-eastern region of the country.
- It is part of government's **UdeDeshkaAamNaagrik (UDAN) regional connectivity scheme**.

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5. ENVIRONMENT

5.1. IPCC'S SIXTH ASSESSMENT REPORT: PART III


Why in news?

The IPCC released the second part of the Sixth Assessment Report (AR6), titled '**Climate Change 2022: Mitigation of Climate Change**', the Working Group III contribution to the Sixth Assessment Report.

About the report

- The Working Group III report provides an updated global assessment of climate change mitigation progress and pledges and examines the sources of global emissions.
- It explains developments in emission reduction and mitigation efforts, assessing the impact of national climate pledges in relation to long-term emissions goals.
- It is a part of **IPCC's Sixth Assessment cycle**. Other reports of AR6 include-
 - Report of Working Group I titled '**Climate Change 2021: The Physical Science Basis**', released in August 2021.
 - Report of Working Group II titled '**Climate Change 2022: Impacts, Adaptation and Vulnerability**' released in February 2022.
 - '**Synthesis Report**' scheduled to release in September 2022.

Intergovernmental Panel on Climate Change

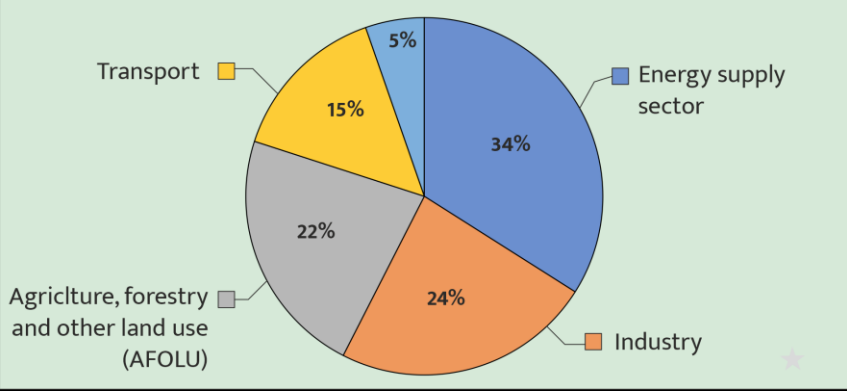
Is India a member? 

- **Genesis:** An intergovernmental organization created in 1988 by the **World Meteorological Organization (WMO)** and the **United Nations Environment Programme (UNEP)**.
- **Objective:** To provide governments at all levels with scientific information that they can use to develop climate policies.
 - IPCC is the UN body for assessing the science related to climate change
- **Headquarter:** Geneva, Switzerland
- **Membership:** 195 members
- **Other key information:**
 - Its main activity is to prepare Assessment Reports, special reports, and methodology reports assessing the state of knowledge of climate change.
 - ✓ However, the IPCC does not itself engage in scientific research. Instead, it asks scientists from around the world to go through all the relevant scientific literature related to climate change and draw up the logical conclusions.
 - In 2007, the **IPCC and U.S. Vice-President Al Gore were jointly awarded the Nobel Peace Prize** for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.

**For more information regarding AR6 reports of Working group I and II refer to August 2021 and March 2022 VISION IAS Current Affairs magazines.*

Key Findings and Observations of the report

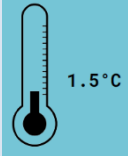
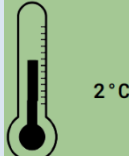
Emission trends	<ul style="list-style-type: none"> • Total net anthropogenic GHG emissions continued to rise during 2010–2019, as have cumulative net CO₂ emissions since 1850. • Average annual GHG emissions during 2010-19 higher than any previous decade. <ul style="list-style-type: none"> ○ But rate of growth between 2010 and 2019 lower than that between 2000 and 2009.
Variation in Regional contributions to global GHG emissions	<ul style="list-style-type: none"> • At least 18 countries have sustained GHG emission reductions for longer than 10 years. • Least Developed Countries (LDCs) and Small Island Developing States (SIDS) have much lower per capita emissions than the global average (6.9 tCO₂-eq), excluding CO₂ emitted from land use, land-use change and forestry (LULUCF). • 10% of households with the highest per capita emissions contribute a disproportionately large share of global household GHG emissions.
Sectoral Emissions	<ul style="list-style-type: none"> • Net anthropogenic GHG emissions have increased since 2010 across all major sectors globally. • Global share of emissions from urban areas is increasing. • Emissions reductions in CO₂ from fossil fuels and industrial processes, due to improvements in energy intensity of GDP and carbon intensity of energy, have been less than emissions increases from rising global activity levels in industry, energy supply, transport, agriculture and buildings.

	<p style="text-align: center;">Sectoral share of total net anthropogenic GHG emissions in 2019 (in GtCO₂-eq)</p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Sectoral share of total net anthropogenic GHG emissions in 2019</caption> <thead> <tr> <th>Sector</th> <th>Share (%)</th> </tr> </thead> <tbody> <tr> <td>Energy supply sector</td> <td>34%</td> </tr> <tr> <td>Industry</td> <td>24%</td> </tr> <tr> <td>Agriculture, forestry and other land use (AFOLU)</td> <td>22%</td> </tr> <tr> <td>Transport</td> <td>15%</td> </tr> <tr> <td>Other</td> <td>5%</td> </tr> </tbody> </table>	Sector	Share (%)	Energy supply sector	34%	Industry	24%	Agriculture, forestry and other land use (AFOLU)	22%	Transport	15%	Other	5%	
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Transport	15%													
Other	5%													
Adoption and cost of low emission technologies	<ul style="list-style-type: none"> • Unit costs of several low-emission technologies have fallen and their global adoption risen continuously since 2010, enabled by innovation policy packages. • Innovation has lagged in developing countries due to weaker enabling conditions including limited finance, technology development and transfer, and capacity. • Digitalisation can enable emission reductions, but can have adverse side-effects unless appropriately governed e.g., increasing electronic waste, negative impacts on labour markets, and exacerbating the existing digital divide. 													
Mitigation	<ul style="list-style-type: none"> • Consistent expansion of policies and laws addressing mitigation since AR5 leading to the avoidance of emissions. • Limited Policy coverage for emissions from agriculture and the production of industrial materials and feedstocks. • Slow progress on the alignment of financial flows towards the goals of the Paris Agreement. • Uneven distribution of climate finance flows across regions and sectors. 													
Current policies inadequate to meet targets of Paris climate agreement	<ul style="list-style-type: none"> • Emission gap: Global GHG emissions in 2030 associated with the implementation of nationally determined contributions (NDCs) announced prior to COP26 would likely lead to warming exceeding 1.5°C during the 21st century. • Limiting warming to below 2°C would need rapid acceleration of mitigation efforts after 2030. • Implementation gap: Policies implemented by the end of 2020 are projected to result in higher global GHG emissions than those implied by NDCs. • Without a strengthening of these policies, GHG emissions are projected to rise beyond 2025, leading to a median global warming of 3.2°C by 2100. • Future CO₂ emissions over the lifetime of existing and currently planned fossil fuel infrastructure (without additional abatement) exceed the CO₂ emissions needed to limit warming to 1.5°C. • They are approximately equal to total cumulative net CO₂ emissions in pathways that limit warming to 2°C. 													

Other Observations

Climate finance	<ul style="list-style-type: none"> • Financial flows are 3-6 times lower than levels needed by 2030 to limit warming to below 1.5°C or 2°C. <ul style="list-style-type: none"> ○ Challenge of closing gaps is widest for developing countries.
Linkages between mitigation, adaptation, and sustainable development	<ul style="list-style-type: none"> • Accelerated and equitable climate action in mitigating, and adapting to, climate change impacts is critical to sustainable development. <ul style="list-style-type: none"> ○ Climate change actions can also result in some trade-offs e.g., increasing urban density to reduce travel demand, could imply high vulnerability to heat waves and flooding. ○ Strong link between sustainable development, vulnerability and climate risks: <ul style="list-style-type: none"> ✓ Several climate response options deliver both mitigation and adaptation outcomes, especially in human settlements, land management, and in relation to ecosystems. E.g., restoration of mangroves and coastal wetlands sequester carbon, while also reducing coastal erosion and protecting against storm surges. ✓ Land and aquatic ecosystems can be adversely affected by some mitigation actions, depending on their implementation. E.g., large-scale or poorly planned deployment of bioenergy, biochar, and afforestation of naturally unforested land.

What needs to be done

To limit global warming to 1.5°C <ul style="list-style-type: none">• Global GHG emissions peak before 2025, reduced by 43% by 2030.• Reach Global net zero CO₂ emissions in the early 2050s.• Methane reduced by 34% by 2030. 	To limit global warming to 2°C <ul style="list-style-type: none">• Global GHG emissions peak before 2025, reduced by 27% by 2030.• Reach Global net zero CO₂ emissions around the early 2070s. 
For both- <ul style="list-style-type: none">• Rapid and deep GHG emissions reductions immediate GHG in all sectors follow throughout 2030, 2040 and 2050.• Negative CO₂ emissions after the point of net zero.	

Recommendations of the report

The report suggests following mitigation strategies to achieve rapid and deep GHG emissions reductions-

- **Deploying Carbon Dioxide Removal** can counterbalance hard-to-eliminate emissions through biological methods: reforestation, and soil carbon sequestration.
 - It requires new technologies require more research, up-front investment, proof of concept at larger scales and agreed methods for measuring, reporting and verification.
- **Policies, regulatory and economic instruments:** can maximise synergies and minimise trade-offs and thereby enhance the support for climate action.
 - **Coordinated policies:** Mitigation efforts can be embedded within the wider development context.
 - **Equitable partnerships:** built on engagement with civil society actors, political actors, businesses, youth, labour, media, Indigenous Peoples and local communities.
 - **Integration of adaptation and mitigation within and across sectors.**
 - **Scaling up mitigation financial flows** supported by clear policy choices and signals from governments and the international community.
 - **Policy packages that enable innovation and build capacity.**
 - **International cooperation through Partnerships, agreements, institutions and initiatives** operating at the global, sub-global and sectoral levels and engaging multiple actors.

5.2. UNIFORM CARBON TRADING MARKET

Why in news?

The central government is considering implementation of a carbon trading scheme that will subsume all carbon trading mechanisms in India.

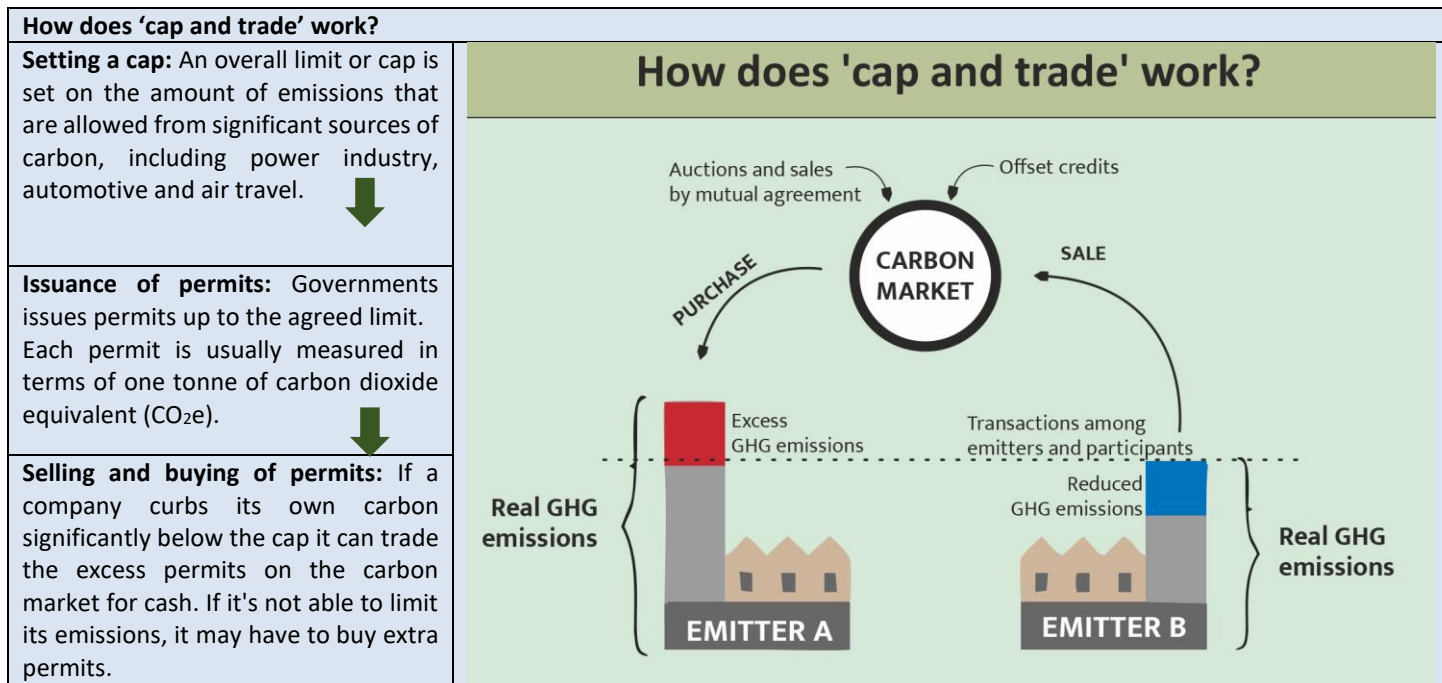
More on the news

The government proposes to begin with a voluntary carbon market and gradually shift to 'cap and trade', where industries are given emission targets like in EU emission trading system markets.

What is carbon trading?

- Carbon trading, also referred to as carbon emissions trading, is a **market-based system of buying and selling permits and credits** that allow the permit holder to emit carbon dioxide.
 - The model used in most carbon trading schemes is called '**cap and trade**'.
- The carbon credits and the carbon trade are authorized by governments with the **goal of gradually reducing overall carbon emissions and mitigating their contribution to climate change.**
- The idea of applying a cap-and-trade solution to carbon emissions **originated with the Kyoto Protocol.**
 - Kyoto Protocol created three such "market mechanisms: Emissions Trading, Clean Development Mechanism, Joint implementation.
 - Under Article 6 of the Paris Agreement, parties agreed to create a new market mechanism and a framework for non-market approaches mechanism.

- Carbon marketplaces associated with carbon trading can exist at international, national, state or local level.
 - For instance, in 2021, China launched the world's largest market for carbon emissions trading.



Significance of an efficient Carbon trading market in India

- Financial gains:** India is the largest exporter of carbon credits the country and could stand to gain \$11 trillion over 50 years by limiting rising global temperatures and realising its potential to 'export decarbonisation' to the world.
- Help achieve India's net zero targets:** Carbon markets can help in reducing green-house gas emissions by incentivizing the adoption of innovative low carbon technologies and assigning financial accountability to high emitters to reduce emissions.
- Finance avenues for carbon transition:** The market will let green plants and energy efficient units estimate earnings through carbon trade. This will help boost and finance more such projects.
- Enhance private sector participation in climate actions:** Giving voluntary players an opportunity to trade in carbon instrument could enhance GHG emission reduction commitments in the private sector.

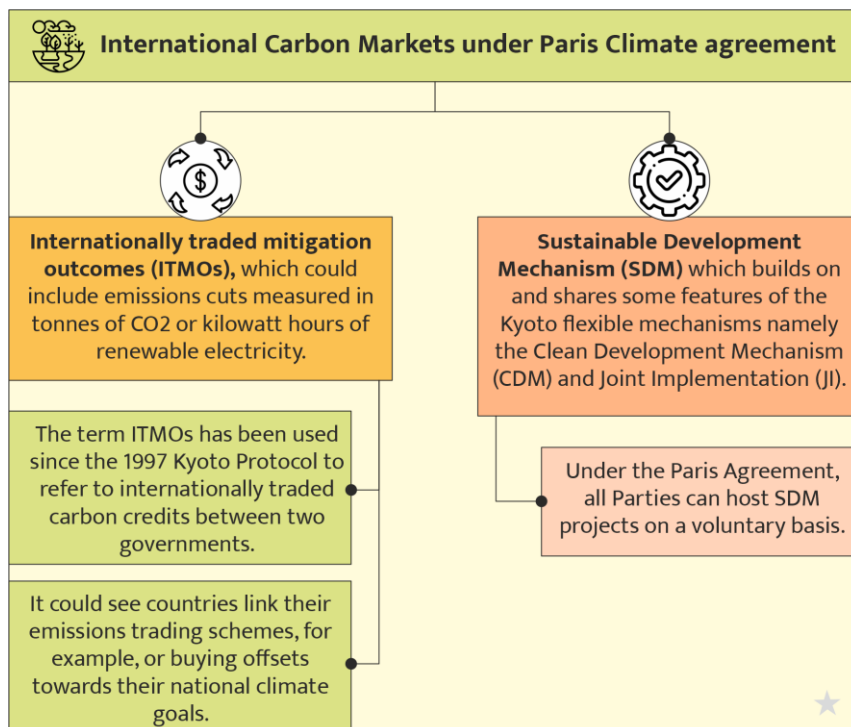
Challenges in existing carbon trading market in India

- Poor demand and Low bids:** Current carbon trade suffers from low compliance and poor demand, which leads to surplus of permits and hence low price. This further disincentivizes active participation.

Existing carbon trading mechanisms in India

- Renewable Energy Certificate (REC) mechanism** is a market-based instrument to promote renewable energy and facilitate compliance of renewable purchase obligations (RPO) by obligated entities.
 - One REC is treated as equivalent to 1 MWh.
 - RECs can also be bought voluntarily by entities.
 - There are two categories of RECs, viz., **solar RECs and non-solar RECs**.
 - They are **traded only on the Central Electricity Regulatory Commission (CERC) approved power exchanges** like- Indian Energy Exchange (IEX) and Power Exchange India (PXIL).
- Energy Saving Certificates (EScerts) under Perform, Trade and Achieve (PAT) scheme:** are market based regulatory instruments to reduce the specific energy consumption (SEC) in energy intensive industries.
 - It covers **13 sectors (Designated Consumers)** including- Aluminium, DISCOMs, Hotels (under commercial buildings), Cement, Fertilizer, Pulp & Paper, Thermal Power Plant, Iron & Steel etc.
 - As per PAT rules, when a designated consumer overachieves the notified SEC targets in compliance year, the **EScerts are to be issued by Central Government** for the difference of quantity between notified target and achieved SEC.
 - EScerts are traded on Indian Energy Exchange (IEX) and Power Exchange India Limited (PXIL).

- **Limited participation and coverage:** For instance, in EScerts trading, only designated consumers, having targets under PAT cycle can participate and does not include other private enterprises in India that have voluntarily committed to emission reduction targets.
- **Compatibility challenge:** The RECs and EScerts are not denominated in terms of GHG reductions, which is the de-facto trading unit of most compliance based as well as Voluntary carbon markets around the world.
- **Other issues-**
 - Lack of transparent price discovery mechanism
 - Short trading period.
 - Lack of integration with other international and regional trading mechanisms.



Way forward

- **Examination of present trade of various environmental instruments** to observe trading trends.
- **Calibration and effective management of demand and supply** of instruments.
- **Making the instrument more fungible:** Developing a provision for fungibility of the unit trading to emission reduction may attract voluntary buyers and lead to international participation in the market.
- **Adding more participant into the pool:** like State Designated Agencies (SDAs), airlines industry, Indian private companies participating in the Science-Based Targets initiative's (SBTi) who have set targets under their 'Business Ambition for 1.5 C' campaign etc.
 - This will **require updating of PAT market rules to allow voluntary players** to be part of the buyer/seller pool.
- **Regularizing trading period:** For instance, in the EU-ETS system, auctioning of allowances happens monthly on the European Energy Exchange (EEX).
- **Supply of verifiable permits:** by enabling project level registration and their proper validation, verification and issuance of emission reduction units (ERU).
- **Developing Institutional and policy mechanisms for-**
 - Fair and transparent price discovery.
 - Linking other carbon trading market.
 - Registry management and operation
 - Participation protocol and methodology.
 - Monitoring and reporting of carbon market performance.
- **Gradually moving to moving to a cap and trade system** wherein sectors and within sectors specific companies are earmarked for only a specific amount of emissions.

5.3. PRADHAN MANTRI URJA SURAKSHA EVAM UTTHAAN MAHABHIYAAN (PM KUSUM) SCHEME

Why in News?

Reports from various states highlight that PM KUSUM scheme has been off to a slow start.

About PM KUSUM Scheme

- The scheme was launched with the **objective of providing financial and water security to farmers.**

- It is one of largest initiatives of the world to **provide clean energy to more than 35 lakh farmers by solarising their agriculture pump.**
- **The Scheme consists of three components:**

Component	Features
Component-A (Harvesting Solar Energy): Installation of Decentralized Ground Mounted Grid Connected Renewable Power Plants	<ul style="list-style-type: none"> • Small solar power plants of capacity up to 2 MW can be set-up by individual farmers/ cooperatives / panchayats / Farmer Producer Organisations (FPO) on barren/ fallow/marshy/ pasture or cultivable lands. • Power generated from solar plants will be purchased by the Distribution Companies (DISCOMs) at tariffs determined by the respective State Electricity Regulatory Commissions (SERCs). • The plant can be installed by the farmer, or he can provide his land on lease to a developer. • RBI has included this Component under priority sector lending. • Solar power purchased under this component will also help the DISCOMs to meet their Renewable Energy Purchase Obligation (RPO) target
Component-B (De-dieselisation of Farm Sector): Installation of standalone Solar Powered Agriculture Pumps	<ul style="list-style-type: none"> • Individual farmers, Group of farmers, such as Water User Associations and community/cluster-based irrigation systems will also be covered. • It will benefit farmers in off-grid areas, where there is no source of electric power for irrigation. • Central Financial Assistance (CFA) of 30 per cent of the benchmark cost (fixed by MNRE every year) of the stand-alone solar agriculture pump will be provided. • The State Government will give a subsidy of 30 per cent and the remaining 40 per cent will be provided by the farmer. • All solar pumps installed under this Component will be provided with remote monitoring systems for monitoring on a real-time basis.
Component-C: Includes Solarisation of Grid-connected Agriculture Pumps	<ul style="list-style-type: none"> • Under this Component, individual farmers having grid connected agriculture pump will be supported to solarise pumps. • Government of India will provide 30% subsidy for solarisation of agricultural feeders. • The farmer will be able to use the generated solar power to meet the irrigation needs and the excess solar power will be sold to DISCOMs at pre-fixed tariff

- The initially approved scheme aimed to add solar capacity of 25.75 GW by 2022. **In the Budget for 2020-21, expansion of the scheme** was announced. With the expansion, the **targeted solar capacity addition would be 30.8 GW.**
- **State Nodal Agencies (SNAs) of MNRE will coordinate** with States/UTs, Discoms and farmers for implementation of the scheme.

Potential benefits of the scheme

- **Employment generation:** The scheme is likely to generate employment opportunities equivalent to 7.55 lakh job-years for skilled and unskilled workers.
- **Day-time reliable power for irrigation:** Providing solar panels for irrigation would result in day-time reliable power to farmers making irrigation easier for them and also avoiding over-use of water and power.
- **De-dieselization of farm sector:** By replacing diesel pumps with solar pumps and panels, the farmers will get **cheaper and more reliable power** for irrigation resulting savings in diesel cost.
- **Enhancing Farmers' Income:** By replacing high-cost diesel with **less expensive solar energy** under Component-B and by **enabling farmers to sell surplus solar power** at a pre-determined rate to DISCOMs under Component-C.
- **Reducing the agriculture electricity subsidy burden** on states and improving the financial health of DISCOMs by reducing subsidy required from states for electricity supply to agriculture.
- **Curbing Climate Change:** PM-KUSUM will lead to **reduced carbon emissions** by as much as 32 million tonnes of CO2 per annum.
- **Boosting Domestic Solar Manufacturing:** It has a mandatory **requirement for deploying domestically produced solar cells and modules** under Component B and C. This will create demand for domestically produced solar cells and modules.
- **Reducing the Import Bill:** PM-KUSUM will lead to an annual reduction in diesel consumption of 1.38 billion litres per annum, thus **reducing the import bill on account of petroleum products.**

Challenges/limitations of KUSUM Scheme

- **Inadequate attention to groundwater concerns:** Without monitoring of pump use and groundwater withdrawal, large-scale distribution of solar pumps could result in excessive water withdrawal and have a significant impact on the already depleting water tables.
- **May not help reduce DISCOMs subsidy burden** because the installation of pumps is not mandatorily tied to decrease in subsidised agricultural power supply.
- **Weak beneficiary targeting:** experience suggests that large farmers are primary beneficiaries of solar pump schemes implemented by various states, due to inability of poor farmers to pay even 10 per cent of the upfront cost, or due to lack of awareness, social exclusion or corruption.
- **Land regulations challenges:** Challenges related to leasing or conversion of agricultural land for non-agricultural uses emerged as another key barrier to the uptake of Component-A. Land leasing is either not permitted or strictly regulated in many states.
- **Gaps in inter-departmental coordination:** Many developers had to face delays in obtaining all the requisite approvals in the absence of institutional coordination. Consequently, such developers could not commission the projects in time.

About Solar Water Pumps

- A solar water pump or a solar photovoltaic water pumping system is a system powered by solar energy.
- **Main types of stand-alone solar pumping systems include**
 - **Rotating:** Centrifugal pumps which are designed for fixed head applications.
 - **Positive displacement pump:** in which pumping action is cyclic and can be driven by pistons, screws, gears, rollers, etc
- **Additionally, pumps are also classified as:**
 - **Submersible pumps:** It is located deep below the ground level and remains submerged under water.
 - **Surface pumps:** The surface pumps remain out of water and in the open. As they need to be on the surface, these pumps are easier to install and maintain.
 - **DC pump:** This pump runs on a motor which operates on direct current; therefore no battery or inverter is needed in this type of pump.
 - **AC pump:** The motor of this pump operates on alternating current, which means the direct current produced by the solar panels gets converted to AC using the inverter.

Way Forward

- **Manage groundwater extraction:** Solar pump schemes should accompany explicit and strict **measures of monitoring and control to manage groundwater extraction.**
- **Rationalize tariff:** Solarisation of feeders may be the most economical solution but needs to be accompanied by **gradual increase in agricultural tariffs and limits on hours of power supply.**
- **Ensure Financial support:** Clear targets must be set to provide solar pumps to small and marginal farmers. Providing access to financing is a crucial support needed by this segment.
- **Operational efficiency:** **Simplifying the process for clearances, reducing delays in various stages of approvals,** correctly attributing loss in generation and a partnership between distribution companies and developers is required.
- **Efficient DISCOMs operations should be ensured by regulatory mandates** for regular reporting on installations, operations, evacuation, billing and payment to farmers.

5.4. STATE ENERGY & CLIMATE INDEX

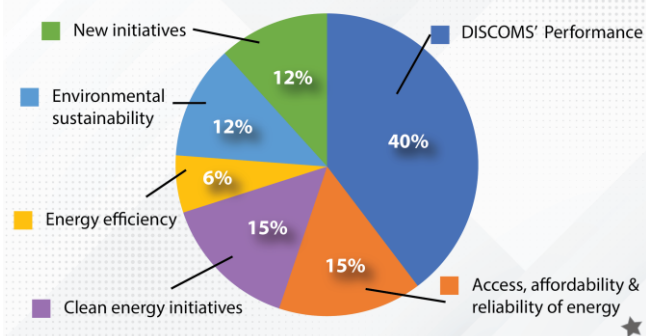
Why in news?

NITI Aayog has recently launched the State Energy & Climate Index (SECI)-Round I.

About the Index

- It is the first index that aims to track the efforts made by states and union territories (UTs) in the climate and energy sector.

WEIGHTAGE OF PARAMETERS IN THE SECI



- **Objectives of the index:**
 - **Ranking the States based on their efforts** towards improving energy access, energy consumption, energy efficiency, and safeguarding environment;
 - Helping **drive the agenda of affordable, accessible, efficient and clean energy transition at the State level;**
 - **Encouraging healthy competition among the states** on different dimensions of energy and climate.
- **Parameters:** SECI rank states and UTs on **six parameters** which include a total of **27 indicators**

Classification of states as Larger states, Smaller states and UTs

Category	No. of States/UTs	States/UTs
Larger states	20	Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Rajasthan, Madhya Pradesh, Maharashtra, Odisha, Punjab, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal
Smaller States	8	Arunachal Pradesh, Goa, Manipur, Mizoram, Nagaland, Meghalaya, Sikkim, Tripura,
Union Territories	8	D&N and D&D, Chandigarh, Delhi, J&K, Puducherry, A&N, Lakshadweep

- **Classification of States:** For better comparison, the states have been classified based on size and geographical differences as larger states, smaller states, and UTs.

- **Categorization of State and UTs based on the outcome of SECI Round-1 scores:** States and UTs have been categorized into three groups: 'Front Runners', 'Achievers', and 'Aspirants'.

Category	SECI score
Front-runners (Top one-third)	Composite SECI score >=46
Achievers (Middle one-third)	Composite SECI score between 36 and 46
Aspirants (Lowest one-third)	Composite SECI score <=36

Performance of States and UTs

- **More than half the states scored higher than the average.**
- **Overall performance-**
 - **Top Scorer-** Chandigarh
 - **Lowest scorer-** Lakshadweep
- **Top 3 performers based on classification**
 - **Larger States:** Gujarat, Kerala, and Punjab.
 - **Smaller States:** Goa, Tripura, and Manipur.
 - **UTs:** Chandigarh, Delhi, and Daman & Diu/Dadra & Nagar Haveli.

Conclusion

The learnings that emerged during the preparation of the report will help policymakers to improve performance in the energy sector and promote peer-to-peer learning among states. The SECI with thus help India reach net-zero emissions by 2070, one of the Panchamrit declared by the Prime Minister at the COP26 UN Climate Change Conference held in Glasgow.

Other Energy Indexes across the globe and India's performance				
Index	World Energy Trilemma Index (WETI)	Energy Transition Index (ETI)	Renewable Energy Country Attractiveness Index (RECAI)	Climate Change Performance Index (CCPI)
Publishing Agency	World Energy Council	World Economic Forum (WEF)	Ernst & Young (EY)	Germanwatch eV.
What it measures	Measures energy system performance in terms of Energy Security, Energy Equity, Environmental Sustainability in Country context	Checks nation's energy system information	Ranks performance of economies based on the investment made in the renewable energy sector -energy supply, renewable technologies, & ease of doing business	Measures country's progress towards the NDC 2030 targets and compares climate protection performance of countries
India's Rank	75/127 (2021)	87/115 (2021)	3/40 (2021)	10/63 (2022)
Best performing countries	Top 3: Sweden, Switzerland, Denmark	Top 3: Sweden, Norway, Denmark	Top 2: USA & Mainland China	Top 6: Denmark (4 th), Sweden (5 th), Norway (6 th)

5.5. SUSTAINABLE SAND MANAGEMENT

Why in news?

A report titled '**Sand and Sustainability: 10 strategic recommendations to avert a crisis**' was recently released by United Nations Environment Programme (UNEP).

About the report

- **Aim of the report:**
 - **Raise awareness** around the world on sand extraction and use, and its related impacts.
 - **Urge policymakers** to explore and adopt policies on sand extraction and use that are appropriate to their contexts and jurisdictions.
 - **Shape common goals** across sectors that will help achieve just and responsible sand governance and management everywhere.
 - **Propose solutions** for finding pathways toward a more sustainable use of sand.
- **Key highlights of the report**
 - **Sand, gravel, crushed stone and aggregates (sand resources) are the second most exploited natural resource** in the world after water.
 - **The use of sand resources and their use has tripled in the last two decades** to reach an estimated 40-50 billion metric tons per year.
 - **Current extraction exceeds the replenishment rates** of naturally occurring sand.
 - Sand is a material that holds significant environmental, social, and economic value and it is **central to achieving the SDGs**.

Key Recommendations

The report provides following recommendations on how sand resources can be governed and managed in a responsible, sustainable, and just manner.

- **Recognise sand as a strategic resource** delivering critical ecosystem services and enabling construction of vital infrastructure.
 - Understand, formalise, and evaluate the strategic value of sand.
 - Anticipate increasing demand to enable planning.
 - Consider the strategic role of sand with respect to climate change and biodiversity loss.
- **Include place-based perspectives for just sand transitions**, ensuring the voices of all impacted people are part of decision-making, agenda-setting and action.
 - Avoid any deterioration in workers' rights, increased hardship, or poverty.
 - Solutions and decision-making should be scaled so that decisions are retained by the lowest possible level of governing body consistent with their resolution.
- **Enable a paradigm shift to a regenerative and circular future.**

About Sand

- It's a mineral granular material that does not stick together when wet and remoulded (i.e., noncohesive) and where the combined weight of 50% of the particles is smaller than 4.75mm, with less than 15% of material smaller than 75µm.
- **Natural sources of sand-**
 - rock quarries,
 - terrestrial sand deposits,
 - the riverine and lacustrine environment,
 - the beach systems and
 - the marine environment.



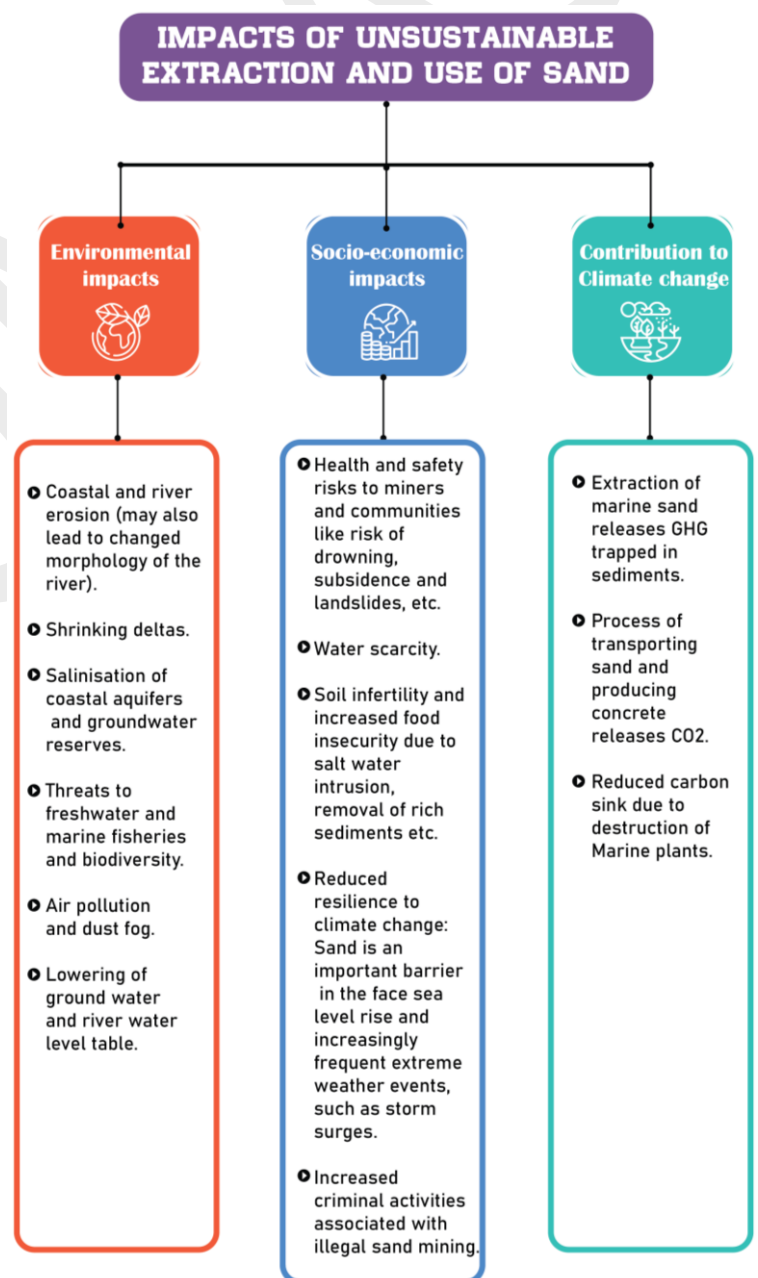
- Establish a baseline map of all sand-dependent industries and potential markets within each country.
- **Boost consumer confidence in the regenerated resource** through certifications and public procurement.
- **Realign professional education** towards a regenerative and circular economy.
- Remove regulatory and insurance barriers for regenerative materials.
- **Embrace diversity of building materials, methods, and business models**, like preference to densely built, low-rise buildings over skyscrapers
- **Create incentives for public and private investment** in sustainable activities related to sand.

✓ For instance, building materials manufactured by repurposing and upcycling waste streams in India attract a Goods and Services Tax (GST) rate from 5% to 12% in comparison, materials for concrete construction such as concrete blocks and cement which attract a GST of 18 to 28%. This has led to emergence of start-ups upcycling waste for building materials.

- **Source responsibly** by actively and consciously procuring sand in an ethical, sustainable, and socially conscious way through steps like-
 - Adoption of a responsible sourcing framework.
 - Requiring 'construction material resource and supply chain plans' for all new major infrastructure projects.
 - Implementing the principle of supply chain accountability.
- **Other measures-**
 - **Adopt strategic and integrated policy and legal frameworks** horizontally, vertically and intersectionally, in tune with local, national, and regional realities.
 - **Establish ownership and access to sand resources** through mineral rights and consenting.
 - **Map, monitor and report sand resources** for transparent, science-based and data-driven decision-making.
 - **Establish best practices and national standards**, and a coherent international framework.
 - **Restore ecosystems and compensate for remaining losses** by advancing knowledge,

Sand management in India

- Sand is a **minor mineral** defined under Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act).
- The act empowers **state governments** to frame rules to prevent illegal mining, transportation, and storage of minerals (both major minerals and minor minerals) and for purposes connected therewith.
- The Ministry of Environment Forest & Climate Change formulated the **Sustainable Sand Management Guidelines 2016** which focuses on the Management of Sand Mining in the Country. But it failed to curb the practice, illegal and unsustainable sand mining has continued to be common.
- In 2020, Ministry of Environment, Forests and Climate Change had released **Enforcement and Monitoring Guidelines for Sand Mining 2020** to check illegal sand mining in the country.



mainstreaming the mitigation hierarchy, promoting nature-based solutions and facilitating the adoption and enforcement of compensation mechanisms.

- **Promote resource efficiency & circularity** by reducing the use of sand, substituting with viable alternatives and recycling products made of sand when possible.

<h3 style="text-align: center;">Alternative sand or manufactured sand</h3> <p style="text-align: center;">It is the sand made from other than natural sources, by processing materials, using thermal or other processes such as separation, washing, crushing and scrubbing. It is mainly classified into-</p>	
 <p>Co- and by products of industrial & extractive processes</p>	<ul style="list-style-type: none"> ■ They are a group of secondary materials, derived from the manufacturing or synthesising of another material, and could be used to replace sand and/or grave. ■ E.g., blast furnace slag, waste foundry sand, coal bottom ash, cement kiln dust, wood ash, Ore-sand (O-sand) etc. ■ O-sand is a type of processed sand sourced as a co-product or by-product of mineral ores.
 <p>Crushed Rock Sand</p>	<ul style="list-style-type: none"> ■ It is produced by crushing virgin rocks, is generally more angular and has a rougher surface texture than naturally weathered sand particles. ■ Diorite, metamorphic siltstone, granite, limestone, sandstone, feldspathic quartzite etc. are some of the parent rocks used for its production.
 <p>Recycled Fine Aggregate (RFA)</p>	<p>It is produced from the re-processing of mineral waste materials with the largest source from Construction & Demolition waste.</p>

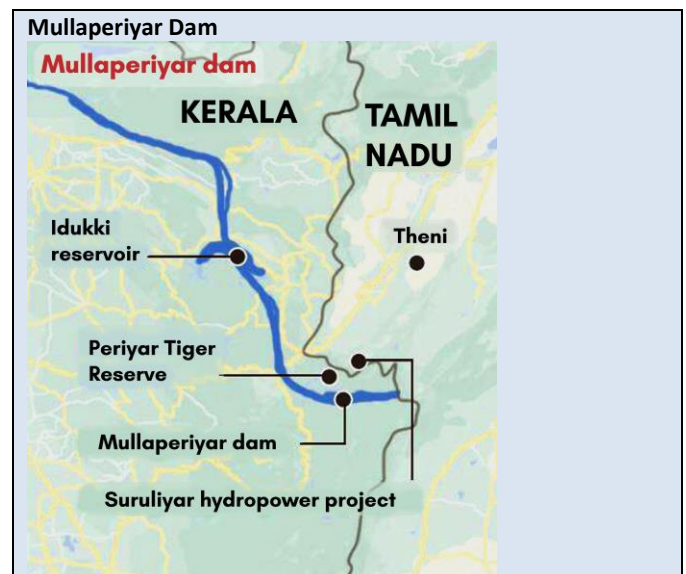
5.6. NEWS IN SHORTS

5.6.1. SCOPE OF AUTHORITY UNDER DAM SAFETY ACT 2021

- Supreme Court asked the Centre to **specify the plan as regards making functional the National Dam Safety Authority (NDSA) and the other bodies under the Dam Safety Act 2021.**
 - During the hearing, SC cited that the **Dam Safety Act of 2021 is a panacea to end the “perennial” legal battle** between Tamil Nadu and Kerala over the Mullaperiyar dam.
- **About the Dam Safety Act**
 - It is a comprehensive act postulation **for surveillance, inspection, operation, and maintenance of dams to prevent disasters.**
 - The act mandates the **setting up of 2 specialized bodies** to evolve policies, recommend regulations for dam safety standards, and resolve disputes between the States:
 - ✓ National Committee on Dam Safety
 - ✓ NDSA
 - Under the Act, **Dam owners will be required to prepare an emergency action plan**, and carry out risk assessment studies for each dam at specified regular intervals.

- **Importance of Dams and Dams Safety**

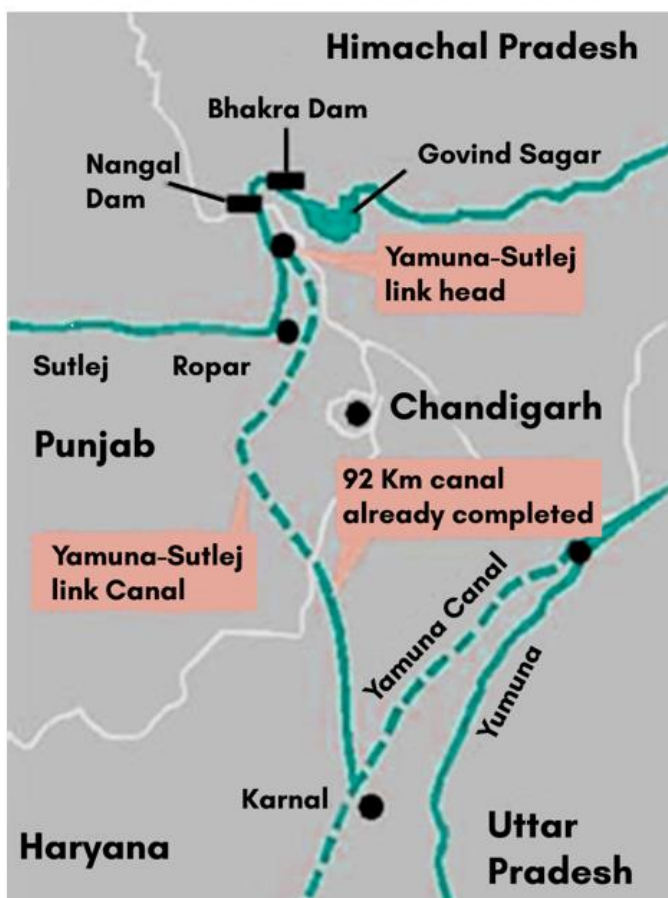
- Dams play a **vital role in the overall water security** and energy needs of a country.
- India ranks **third**, after **US and China**, in the number of **large dams (5,334)**.
- Exposing downstream areas to risks of catastrophic flooding, Dams and Dams Safety in India suffer from various issues.



- It is a **126-year-old dam** owned, operated, and maintained by Tamil Nadu Government.
- It is located in the upper reaches of the river Periyar, which flows into Kerala after originating in Tamil Nadu. The reservoir is within the Periyar Tiger Reserve.
- **Dispute**
 - In 1886, the then Maharaja of Travancore sign a 999-year **lease agreement** with British rule that the operational rights were handed over to Tamil Nadu.
 - **Kerala says that the dam structure is weak** and can give way at any moment, causing the deaths of thousands in the state, Tamil Nadu claims Mullaperiyar is safe and well-maintained.

5.6.2. PUNJAB-HARYANA DISPUTE OVER RIVERS WATERS

SUTLEJ-YAMUNA LINK CANAL

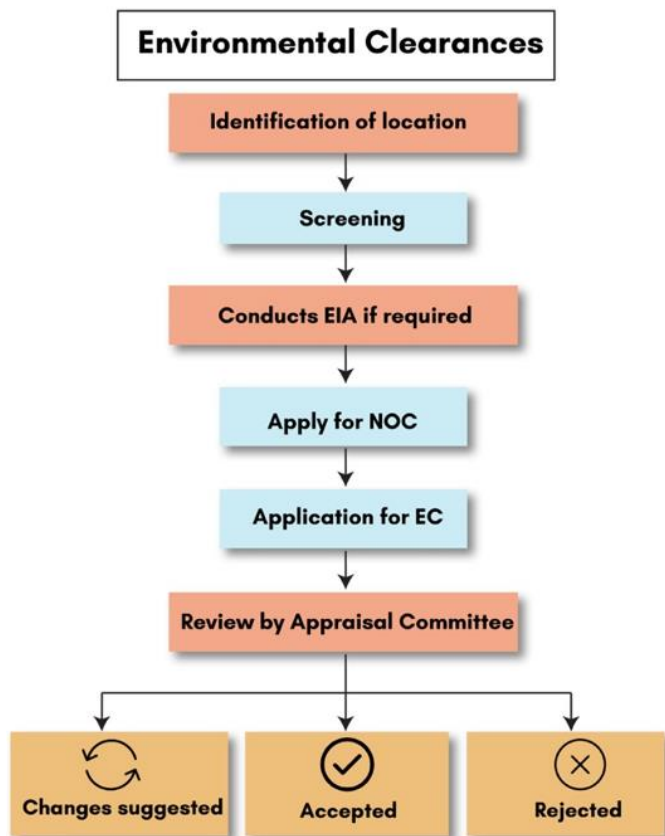


- Haryana Vidhan Sabha has passed a **resolution seeking completion of SYL Canal.**
- **SYL canal**
 - It is a proposed **214-kilometer long canal** connecting Sutlej and Yamuna rivers which was planned in 1966 after the state of Haryana was formed out of Punjab.
 - It seeks to **provide Haryana its average annual share of surplus Ravi-Beas water.**

- **Haryana completed its stretch** of SYL Canal in 1980, while **Punjab kept delaying the construction** on the pretext of non-availability of spare water.
 - ✓ SYL canal will help in **addressing water shortage in southern parts of Haryana.**
 - ✓ **Punjab has concerns over the state becoming dry** by 2029 (based on a state government study) due to over-exploitation of groundwater.
- **Mechanism for resolution of interstate water disputes:**
 - Article 262 enables Parliament to provide for **adjudication** of dispute with respect to use, distribution or control of waters of inter-State river or river valley.
 - Under **Inter-State River Water Disputes Act (ISWD), 1956** provides for setting up of tribunals for adjudication of an inter-state river dispute.
 - **Inter-State River Water Disputes (Amendment) Bill, 2019** was introduced to amend ISWD Act.

5.6.3. MINISTRY OF ENVIRONMENT EXTENDS TENURE OF GREEN PERMITS

- The tenure of Environmental Clearances (EC) given has been extended for the following projects -
 - **River valley projects** to have **13-year validity**
 - **Nuclear power projects** or those involving the processing of nuclear fuel to have **15 years validity**
 - For projects and activities **other than mining and river valley projects** will valid for **10 years.**
- EC for mining leases is also under review as presently, mining leases are granted for **50 years** and EC is valid for **30 years.**
- **Need for the extension arose as -**
 - **Nuclear power and hydropower projects have high gestation period** due to geological surprises, delays in forest clearance, etc.
 - **Considering the time taken for addressing local concerns** including environmental issues relating to implementation of such projects.
- **About EC**
 - It was first made mandatory under the **Environmental (Protection) Act 1986** for expansion or modernisation of any activity or for setting up new projects listed in Schedule 1 of the notification.
 - **The EIA legislation of 2006, made it mandatory for projects such as mining, thermal power plants, river valley, infrastructure and industries** including very small electroplating or foundry units to get environment clearance.



- Parties have agreed to hold fourth meeting of working group in Kenya in June, before adoption of framework at resumed COP-15.



CBD Convention on Biological Diversity (CBD)

- It is an international treaty for the **conservation of biodiversity**, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources.
- It opened for signature in 1992 at the **Earth Summit in Rio de Janeiro** and entered into force in 1993.
- With 196 Parties, it has near universal participation among countries.

Is India a Party?



- The COP15 of CBD, initially scheduled to take place in 2020, was delayed due the pandemic and is now **taking place in two segments in Kunming, China**- First part of the meetings took place virtually in October 2021, and the second part will convene in face-to-face meetings in May 2022.

**For more details on the Post-2020 Global Biodiversity Framework and 15th COP to the Convention on Biological Diversity refer to the Vision IAS October, 2021 Current Affairs Magazine.*

5.6.4. GENEVA BIODIVERSITY MEETINGS

- The **United Nations Geneva Biodiversity Meetings** recently concluded.
- It included the meetings of Open-ended Working Group on the Post-2020 Global Biodiversity Framework ; Subsidiary Body on Scientific, Technical and Technological Advice and Subsidiary Body on Implementation.
- The meetings were held in Geneva, Switzerland to discuss the **post-2020 Global Biodiversity Framework** before 15th meeting of the Conference of the Parties (CoP15) of the United Nations Convention on Biological Diversity (CBD).
 - The framework will replace and update the Strategic Plan for Biodiversity (SBP) 2011-2020 and Aichi Biodiversity Targets adopted in the COP10 of CBD.
- **Major outcomes of the meetings-**
 - **Release of first negotiated text** of goals, targets and supporting mechanisms for a Post-2020 framework for nature.
 - Progress made towards a **solution for the fair and equitable sharing of benefits from Digital Sequence Information on the use of Genetic Resources**;
 - Agreement to address **resource mobilization and monitoring framework, marine and coastal biodiversity**, and other issues;

5.6.5. MOTHER NATURE' A 'LIVING BEING' WITH LEGAL ENTITY: MADRAS HIGH COURT (HC)

- Invoking '**parens patriae jurisdiction**', the HC bestowed '**legal entity status upon nature** and directed the State and Central governments to protect it.
 - **Parens Patriae in Latin means "parent of the nation"**. It allows the **guardianship of the State of the rights of entities** that are unable to fight for their own rights.
 - Earlier, in 2017 Uttarakhand HC, granted the **Ganga and Yamuna rivers had the same legal status** as human beings, however **Supreme Court overruled** this order.
 - Also, in 2018, Uttarakhand HC declared the "**entire animal kingdom including avian and aquatic**" as legal entities.
- **Significance:**
 - The court ruled that Mother Nature will have **rights, duties and liabilities enjoyed by a living person**.
 - ✓ The court further observed that **natural environment is part of basic human rights, of 'right to life'** itself.

- Expansion of **environmental law and attitudinal & behaviour change** in utilisation of natural resources.
- **Issues**
 - **Ambiguity in defining**, as what constitutes nature in the absence of its proper definition.
 - In the court of law, loco parentis (the human face) will be required to **represent Nature**, thus the **issue of its funding and legality** in enforcement would arise.
 - It may **clash with other rights granted to humans** e.g., rights to water and land.

5.6.6. PRAKRITI

- Union Minister of Environment, Forest & Climate Change (MoEFCC) launched **Prakriti mascot to spread awareness among masses** about small changes that can be sustainably adopted for a better environment.
- Also, **following initiatives were launched for plastic waste management:**
 - **National Dashboard** on Elimination of Single Use Plastic (SUP) and Plastic Waste Management (MoEFCC)
 - **Extended Producer Responsibility (EPR) Portal** for Plastic Packaging (CPCB) for improving accountability, traceability, transparency and facilitating ease of reporting compliance to EPR Obligations.
 - **Mobile App for SUP** Grievance Redressal (CPCB) to empower citizens to check sale/usage/manufacturing of SUP in their area and tackle the plastic menace.
 - **Monitoring module for SUP** (CPCB)
 - **Industrial production of Graphene** from Waste Plastic.

5.6.7. DISTRICT GANGA COMMITTEES (DGCS)

- Minister for Jal Shakti launched **Digital Dashboard for DGCs Performance Monitoring System**.
- DGCs were **constituted in districts on Ganga River basin** to ensure people's participation in **management and pollution abatement in Ganga and its tributaries**.
- DGCs are **mandated to**
 - Ensure proper **utilization of assets created under Namami Gange**,
 - **Monitor drains/sewage** falling in Ganga and its tributaries,
 - **Create strong connect of people** with Ganga rejuvenation.
- **District Collector is the Chairperson** of DGC.

5.6.8. 'TREE CITY OF THE WORLD' (TCW) TAG

- **Mumbai and Hyderabad** have been jointly recognised as '**2021 TCW**'.
- TCW programme started by **United Nations' Food and Agriculture Organisation** and American non-profit organisation **Arbor Day Foundation**.
 - It provides **direction, assistance, and worldwide recognition for a community's dedication** to its urban forest.
 - Also, provides framework for healthy, sustainable urban forestry programme in town or city.
 - City was evaluated based on five standards i.e. **Establish Responsibility, Set the Rules, Know What You Have, Allocate the Resources, and Celebrate the Achievements**.

5.6.9. OLIVE RIDLEY TURTLE

- Tamil Nadu will set up an **international olive ridley turtle protection and rehabilitation centre** in Chennai.
- **About Olive Ridley turtle:**
 - Smallest and most abundant of all sea turtles.
 - **Inhabits** warm waters of the **Pacific, Atlantic and Indian oceans**.
 - **Diet: Carnivores**, feed on jellyfish, shrimp, snails, crabs etc.
 - **Threats: Unintended capture** in fishing gear, **Direct Harvest** of Turtles and Eggs, **loss and degradation** of habitat, marine debris, climate change etc.
 - **IUCN status:** Vulnerable

5.6.10. INDIAN TENT TURTLE

- Indian Tent Turtle (Pangshura Tentoria) is a **Schedule – I** species in India under the **Wild Life (Protection) Act, 1972**.
 - **IUCN Status:** Least Concern;
 - **CITES:** Appendix II.
- It is native to India, Nepal and Bangladesh and found in freshwater rivers, Swamps and ponds.
- The common habitats in India include- **Orissa, Maharashtra, Andhra Pradesh, Assam, Madhya Pradesh** etc. E.g. the Narmada River in Madhya Pradesh.
- They are active swimmers and mainly herbivorous.

5.6.11. SEAWEED PARK WITH SPECIAL ECONOMIC ZONE STATUS IN TAMIL NADU

- As per Minister of State for Fishing, Animal Husbandry and Dairying, **for the first time in country**, a seaweed

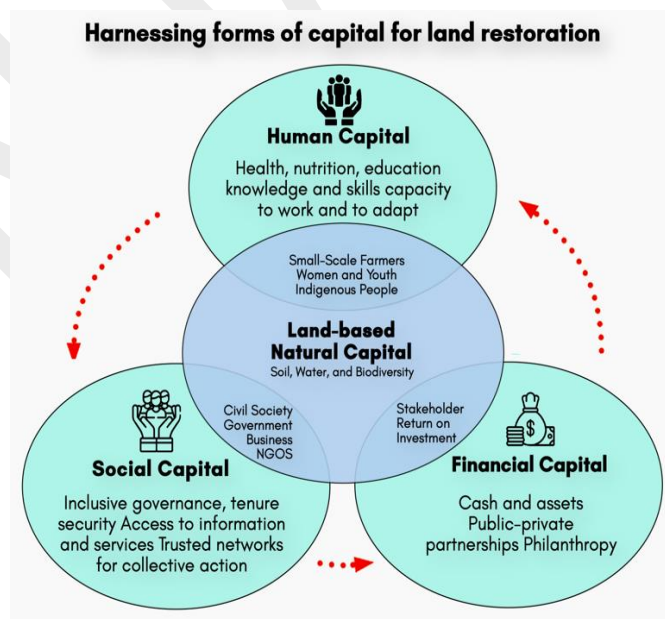
park will be set up in Tamil Nadu to improve the livelihood of fishermen.

- It will be implemented under the Prime Minister's Matsya Sampada Yojana.
- Seaweeds, the primitive, marine non-flowering marine algae without root, stem, and leaves, plays a major role in marine ecosystems.
 - Range in colors from red, green, brown and black and also vary in size, from microscopic to large underwater forests.
 - Large seaweeds form dense underwater forests known as kelp forests, which act as underwater nurseries for fish, snails and sea urchins.
 - Found mostly in intertidal region (Southern Gulf of Mannar), shallow and deep waters of the sea and estuaries and backwaters.
- Significance of seaweeds
 - Storehouse of nutrients like iron, zinc, magnesium, riboflavin, thiamine, vitamin A, B, C & K etc.
 - Act as a bio-indicator and balance out the ecosystem.
 - Mitigating climate change.
 - Used as fertilizers and to increase fish production.
 - Can be buried in beach dunes to combat beach erosion.
 - Used as an ingredient in preparing toothpaste, cosmetics and paints.
- Government also runs a Seaweed Mission, launched by Technology Information, Forecasting and Assessment Council (TIFAC), for commercial farming of seaweeds and its processing.

5.6.12. GLOBAL LAND OUTLOOK 2: LAND RESTORATION FOR RECOVERY AND RESILIENCE

- The report titled “Global Land Outlook 2: land Restoration for recovery and resilience” released by the United Nations Convention to Combat Desertification (UNCCD).
- Key observations
 - Humans have transformed more than 70 % of the earth’s land area from its natural state causing environmental degradation.
 - Modern agriculture is major factor for degradation land.
 - Approx. 69 gigatonnes of carbon emission from 2015 to 2050 due to land use change and soil degradation and a slowing in growth of agricultural yields.
 - Carbon stocks will also rise by a net 17 gigatonnes between 2015 and 2050 due to gains in soil carbon and reduced emissions.

- Up to 40 per cent of the planet’s land is degraded, directly affecting half of humanity and affect half of global GDP.
- Recommended Measures
 - Conservation agriculture (low- or no-till farming), agroforestry and silvopasture, improved grazing management and grassland rehabilitation, forest plantations.
 - ✓ If land restoration is done crop yields will increase by 5-10 percent in most developing countries.
 - Combating desertification, land degradation, and drought – and achieving Land Degradation Neutrality (LDN) – is an effective pathway.
- LDN is defined by the UNCCD as “a state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems.



5.6.13. NITROGEN LEVELS ON A DECLINE

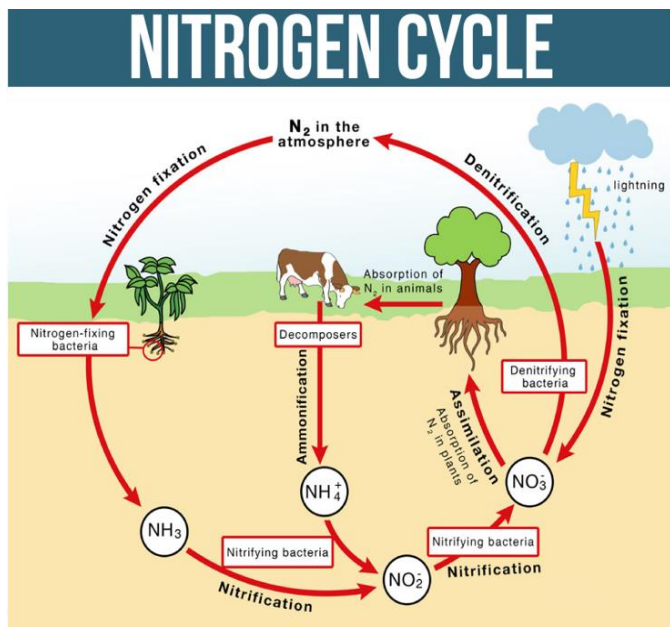
- As per a new study, an imbalance in nitrogen availability has been reported across the globe, with some places having an excess and others a shortage.
- Nitrogen (N) is one of the building blocks of life and is essential for all plants and animals to survive.
 - Without nitrogen plants grow slowly and produce smaller flowers and fruits.
 - Nitrogen is also a core component of amino acids (building blocks of proteins) and of nucleic acids (building blocks of genetic material RNA and DNA).
- When excessive nitrogen accumulates in the streams, inland lakes and coastal bodies of water, it could result

in **eutrophication**, leading to harmful algal blooms, dead zones and fish kills.

- **Movement of nitrogen** between the atmosphere, biosphere, and geosphere in different forms is called the **nitrogen cycle**.
 - Bacteria in the soil "**fix**" **atmospheric nitrogen** into **ammonia**, which plants need in **order to grow**.
 - Other bacteria convert the **ammonia into amino acids and proteins**. Then animals **eat the plants** and consume the protein.
 - Nitrogen compounds **return to the soil** through animal waste. Bacteria convert the waste nitrogen back to **nitrogen gas**, which **returns to the atmosphere**.

About Nitrogen

- **Earth's atmosphere** constitutes **78 percent of Nitrogen gas**.
- In its gaseous form, nitrogen is **colorless, odorless** and generally **considered as inert**.
- In liquid form it **looks similar to water**.



5.6.14. WORLD BANK PUBLISHED "CARBON REVENUES FROM INTERNATIONAL SHIPPING" REPORT

- Report explores options for **implementing carbon pricing in shipping industry** and how carbon revenues could be used to **enable energy transition** in and beyond the sector.
 - Maritime transport accounts for **about 70% of global trade by value** and **about 80% by volume** and is responsible for **about 2.5% of global greenhouse gas (GHG) emissions**.

- **International Maritime Organization (IMO)** is considering measures to meet targets of its **Initial Greenhouse Gas Strategy** that aims to cut absolute **GHG emissions from ships by at least 50% from the 2008 level by 2050**.
 - **Carbon pricing**, either in the form of a carbon levy or by capping GHG emissions and allowing operators to buy and trade emissions allowances, **could boost the revenue as well as green transition** of the sector.
- **Benefits of using carbon pricing**
 - Bulk of revenues **could be allocated to countries with lower ability to address climate change** or shipping emissions.
 - **Could help in decarbonization of the shipping industry** by supporting the development of zero-carbon vessels, zero-carbon fuels etc.
 - **Improving overall resilience of maritime ports** suffering from climate-induced extreme weather events, congestion, poor digitalization, or a lack of skilled workers.
 - y products.

5.6.15. TREM STAGE-IV EMISSION NORMS

- Centre may again defer the date for **implementing Trem Stage-IV emission norms for farm equipment**.
- From April 2022, **new TREM IV emission norms will be applicable to tractors** with engines bigger than 50 HP (horsepower), while big proportion of overall industry of less than 50 HP will continue to be governed by TREM III A norms.
 - At present, **TREM III A emission norms are applicable for tractors across various HP categories** and were implemented in April 2010/2011.
 - **Bharat Stage (CEV/Trem) V standards**, starting from April 1, 2024, cover a wider range of engines, including those smaller than 8 kW and those larger than 560 kW.

5.6.16. FIRST CARBON-NEUTRAL PANCHAYAT

- **Palli in Jammu** becomes India's first carbon-neutral panchayat.
- Carbon neutrality means having a **balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks**.
 - Removing carbon oxide from the atmosphere and then storing it is known as **carbon sequestration**.

5.6.17. STEEL SLAG ROAD

- **Surat has become the first city** in the country to get a **processed steel slag (industrial waste) road**.
- Steel slag, a by - product of steel making, is **produced during the separation of the molten steel from impurities** in steel -making furnaces.
- **Benefits of using steel slag:** Construction cost is 30 per cent cheaper, less thicker, more durable and lower carbon footprint than roads built from natural aggregates.
- **Other areas where steel slag can be used:** agricultural sector due to its ability to correct soil acidity, as silicate fertilizer that can provide silicon to the plants, in manufacturing cement, to treat acidic water.

5.6.18. MISSION INTEGRATED BIO-REFINERIES

Union Minister of Science & Technology recently launched Mission Integrated Bio-refineries to accelerate Clean Energy solutions through Public -Private Alliances.

About Mission Integrated Bio-refineries

- It was launched, under Mission Innovation, with the goal of **replacing 10% of fossil-based fuels, chemicals, and materials with bio-based alternatives by 2030**.
 - This is the **sixth Mission launched by Mission Innovation**.
 - **Other five missions launched are:** Clean Hydrogen, Green Powered Future, Zero-Emission Shipping, Carbon Dioxide Removal and Urban Transitions.
- **Integrated Bio-refineries Mission will support**
 - Development and commercialization of bio-based fuels, chemicals, and materials.
 - De-risking new and emerging technology, while improving the cost-competitiveness of bio-based alternatives, notably biofuels.

About Mission Innovation (MI)

- It is a **global initiative to catalyze action** and investment in research, development and demonstration to **make clean energy affordable, attractive and accessible** to all this decade.
 - It consists of 22 countries and EU. **India is a founding member**.
 - **First phase of the mission** was launched alongside the **Paris Agreement in 2015**. **Mission Innovation 2.0**, second phase of MI, was also launched in 2021.

5.6.19. CLEAN ENERGY MINISTERIAL (CEM)

- **India is hosting** the Clean Energy Ministerial (CEM) senior officials meetings.

- Discussions on topics such as **energy transition, Clean Power, Green Steel, and Hydrogen** held as part of meeting.
- CEM is a high-level **global forum of 29 member countries** to promote policies and programs that advance clean energy technology through **sharing of knowledge and best practices**.
- It brings together the **world's leading economies, international organisations and companies** to accelerate clean energy transitions.

5.6.20. GREEN HYDROGEN

- Oil India Limited (OIL) has commissioned **India's first 99.999% pure green hydrogen plant in Assam**.
- **About Green Hydrogen:**
 - Defined as hydrogen produced by **splitting water into hydrogen and oxygen using renewable energy** such as wind or solar power that does not entail greenhouse gas emissions.
 - Hydrogen gas can be used as a **fuel in transportation, power generation, and industrial activities**.

5.6.21. GLOBAL ASSESSMENT REPORT ON DISASTER RISK REDUCTION 2022

- UN has released the '**Global Assessment Report on Disaster Risk Reduction 2022 (GAR- DRR 2022)- Our World at Risk: Transforming Governance for a Resilient Future**'.
 - It builds on the analysis of **United Nations-mandated SDG data on increased gender-based violence in disasters**.
 - The GAR is published biennially by the **UN Office for Disaster Risk Reduction (UNDRR)**.
- **Social impact of disaster as shown by the report:**
 - Increasing instances of **displacement and migration due to floods and cyclones in West Bengal and Odisha** makes people more **vulnerable to trafficking**.
 - Monitoring during the COVID-19 pandemic **highlighted the "shadow pandemic"** issue of systematic gender based violence.
 - **Violence against women and girls increases** in the aftermath of disasters and at the extreme end of the scale
- **Disaster Risk Reduction** aims to reduce the damage caused by natural hazards like earthquakes, floods, droughts and cyclones, through an ethic of prevention.
- **Stages of the Disaster-Management Cycle** include Prevention, Mitigation, Preparedness, Response, and Recovery.

- **Initiatives taken to reduce disaster impact**
 - National Disaster Management Authority of India (NDMA).
 - World bank aided Tamil Nadu and Puducherry **Coastal Disaster Risk Reduction Project (CDRRP)**.
 - India is a **signatory to the Sendai Framework for DRR**.

5.6.22. CHAMOLI DISASTER

- Scientists have been able to **decode the reason behind the 2021 disaster in Chamoli district** (Uttarakhand).
 - Scientists have found that the **region was seismically active before the disaster hit**.
 - They also found **signals of rock-ice detachment preceded by a formation of a new structure** via self-assembly or self-organization.
- Earlier it was believed that **Glacial Lake Outburst Flood (GLOF) caused the event**.
 - GLOF is **sudden release of water from a lake fed by glacier melt** that has formed at the side, in front, within, beneath, or on the surface of a glacier.

5.6.23. STUDY POINTS THAT SEA FLOOR SPREADING HAS SLOWED BY 35% GLOBALLY

- For the study on seafloor spreading, researchers **studied magnetic records in the rocks on the oceanic crust** of 18 large spreading ridges to **calculate how much oceanic crust had formed over the last 19 million years**.
- **Key findings from study**
 - **Seafloor is spreading at rates of around 140 millimetres per year**, down from 200 millimetres per year, observed 15 million years ago.
 - **Not all ridges moved alike: Some sped up while others slowed down.**
 - ✓ **Ridges along the eastern Pacific were 100 millimetres per year slower**, lowering the world's average.
- **Reasons identified by the report** include **growing mountains and changes in mantle convection** which transports heat from the earth's interior to the surface.
- **About Sea floor spreading**
 - It is a **geological process that creates crusts**, the outermost shell of Earth.
 - **Tectonic plates separate, allowing magma from the earth's interior to fill the gap** in this phenomenon. The magma cools to form a new oceanic crust.
 - These **activities occur along mid-ocean ridges** - large mountain ranges rising from the ocean floor.

5.6.24. GEOMAGNETIC STORM

- Space Weather Prediction Centre (SPWC) under National Oceanic and Atmospheric Administration (NOAA) has issued **two geomagnetic storm (GMS) watches**.
 - When Coronal Mass Ejections (CME) collide with the Earth, it causes GMS.
- GMS is a **disturbance in the earth's magnetosphere**, which is the area around the planet controlled by its magnetic field.
 - Earth's magnetosphere protects its inhabitants from most of the particles emitted by the sun.
 - It is **caused by massive exchange of energy from the solar wind into the space environment** surrounding the Earth.
 - GMS are **categorised between G1 and G5**, the latter being the strongest.
- **Impact of geomagnetic storms**
 - **Disrupt high-frequency radio broadcasts and global positioning system (GPS) devices.**
 - **Damage satellite electronics** and expose astronauts and high-altitude pilots to increased levels of radiation.
 - Voltage surges due to altered magnetic activity can **affect power supply on earth** and cause outages.
- CME is a **large expulsion of plasma and magnetic field from the sun's corona**, or upper atmosphere.
 - Plasma is the highly ionised gas present on the sun, while corona is the outermost part of the sun's atmosphere.

5.6.25. BERNARDINELLI-BERSTEIN COMET

- NASA has confirmed that Bernardinelli-Bernstein comet is indeed the **largest icy comet nucleus** ever seen by astronomers.
 - Comets are large objects made of **dust and ice** that **orbit the Sun**.
- **About Bernardinelli-Bernstein comet:**
 - Officially called **C/2014 UN271**, it has an estimated **diameter of almost 129 kilometres**.
 - Mass is estimated to be **around 500 trillion tonnes**.
 - It is believed to have originated in **the Oort cloud** (only a theoretical concept), a distant region of the solar system that is **predicted to be the source of most comets**.

5.6.26. INTERNATIONAL PLANT BASED FOODS WORKING GROUP (IPBFWG)

- It is the **new global body** formed to support **plant-based food sector**.
- It has been formed by **associations from seven regions/countries including India**.

- **About plant based foods -**
 - These are ‘foods made from plants that **contain no animal derived ingredients**’.
 - This includes **fruit, vegetables, grains, pulses, legumes, nuts and meat substitutes** such as so



SMART QUIZ

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6. SOCIAL ISSUES

6.1. UNIVERSAL SOCIAL SECURITY

Why in News?

Recently, the government panel has recommended a **Universal Pension Scheme** for gig workers and the self-employed citing concerns on sustainability of the Employees Pension Scheme (1995).

About Social Security and its Significance

- **Social security** is defined as 'the measures of protection afforded to employees and other workers to ensure access to health care and to provide income security particularly in old age, unemployment, sickness, work injury etc. (Code on Social Security, 2020).
 - According to the ILO, social security is a human right which responds to the universal need for protection against certain life risks and social needs.
- It guarantees income security and health protection to people, helping in:
 - Prevention and reduction of poverty and inequality, and
 - Promotion of social inclusion and human dignity.
- Seen as an integral part of the development process, social security serves a number of other significant functions (see image).



Social Security in India

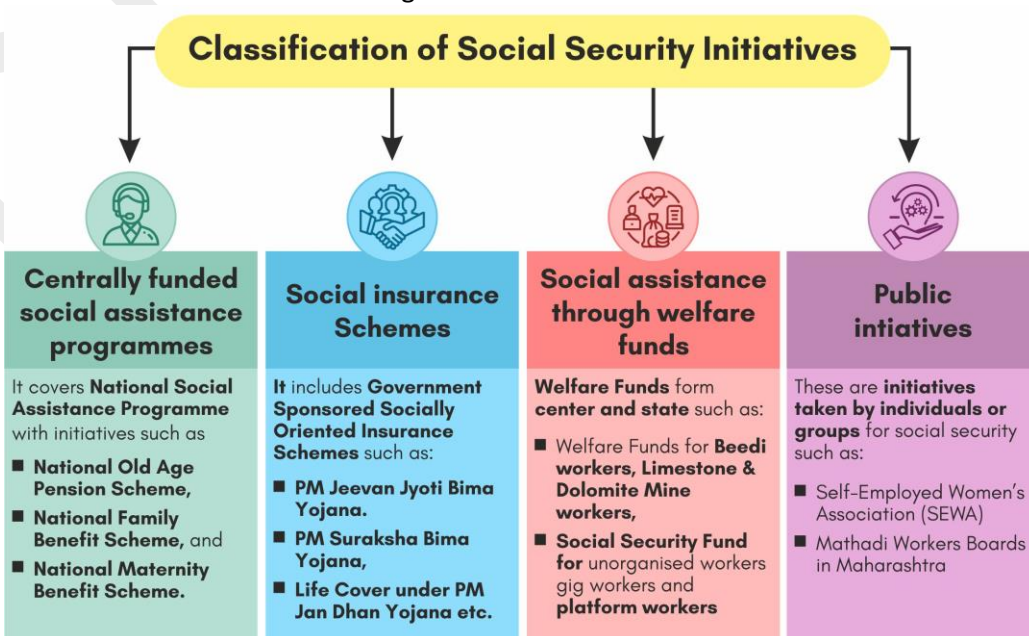
- **Legal standing:** Though it is **not a fundamental right** in India, being a **welfare State**, the state is under obligation via the **Directive Principles of the State Policy** such as **Article 41, 42 and 47**.
 - Since the subject of **Labour** falls under the **concurrent list**, the extension of **Social Security and Social Assistance** benefits to citizens is from the centre as well as from state governments.

Extent of social security:

According to the **Economic Survey 2021-22**, around 90% of the additional workers who joined in 2019-20 were in the informal nature of employment and over 98% were in the unorganized sector. Majority of these people lie outside the net of social security.

- This informality of the workforce may further exacerbate inequalities and lack of social security due to high self-employment,

impact of pandemic and rise of new forms of workers such as gig workers, platform workers, etc.



Recent Government Initiatives

- **Code on Social Security, 2020** to consolidate **nine central labour legislations** on social security to extend social security to all employees and workers either in the organized or unorganized or any other sectors (including the new forms of jobs that are emerging).
 - The subsumed laws include Employees' Compensation Act, 1923, The Employees' State Insurance Act, 1948, The Maternity Benefit Act, 1961, The Payment of Gratuity Act, 1972 etc.
- **New Social Protection Schemes** such as
 - **Pradhan Mantri Shram Yogi Maan-dhan (PM-SYM)**, a voluntary and contributory pension scheme to ensure old age protection for Unorganised Workers.
 - **National Pension Scheme for Traders, Shopkeepers and Self-Employed Persons**, a voluntary and contributory pension scheme for traders, shopkeepers.
- **e-SHRAM Portal** to create a **national database** of Unorganized Workers, including migrant workers, to facilitate delivery of social security schemes to the workers.

New Form of Jobs

- **Gig workers:** Persons with a work arrangement/activity which are outside of traditional employer-employee relationship.
- **Platform workers:** Persons who access organisations or individuals through an online platform and provide services or solve specific problems.
- **Home-based workers:** Persons engaged in, the production of goods or services for an employer in his home or other premises of his choice other than the employer workplace.

Challenges in Universal Social Security

Traditionally, social security was an important responsibility of the family/community. The weakening of joint families and family bondage has increased the importance of institutionalized social security arrangement. To ensure Universal Social Security, it needs to overcome challenges of:

- **High Magnitude of Unorganized Workers (UWs)**, including a large section of distressed categories of workers with low earning and irregular (seasonal) employment patterns.
- **Ignorance, illiteracy, and lack of unionization of workers** leading to poor awareness.
- **Resource constraints** of the State with competitive demand of defence, infrastructure etc. and crippled state finances due to Covid-19.
- **Gaps in laws with relatively weak administrative structure**, particularly in rural areas. E.g. the Code on Social Security, 2020 suffers from issues such as:
 - **Lack of a minimum national benefit** policy,
 - **Lack of accountability** of district administration with responsibility to register UWs,
 - **Overlapping definitions.** E.g. a driver working for an app-based taxi aggregator is a gig worker, platform worker and unorganized worker at the same time.
- **Almost Stagnation of formal employment** in the organized sector with increasing workforce in the informal economy.
- **Fragmented administration systems** due to involvement of multiple ministries and departments at Union and State level with different initiatives.
- **Other issues** such as exclusion errors, lack of transferability/portability of benefits, gender inequality, technological disabilities etc. E.g., the Kattupaniya tribe (nomadic) of Kerala got an Aadhar card and free ration only post Covid-19.

Way Forward

According to ILO, recognition of **universal social protection as human right** is the cornerstone of a **human-centric approach** to achieve **social justice**. Our efforts for universal social security should also start with it to strengthen our social protection systems at-

- **Legal-level: Recognition of Social Security as fundamental right** to frame rights-based and inclusive laws on universality of protection, coverage, and effective access.
- **Policy-level: Decisive Policy Actions** to reinforce and extend social protection mechanisms with adequate benefits.
- **Governance-level: Enhance transparency and accountability** for efficient supervision and effectiveness of the enforcement machinery and of the schemes.
- **Economic-level: Ensure higher and sustainable investments** in social security measures to offer a comprehensive range of benefits for all sections.

- **Address the issue of poverty** through full and productive employment with unemployment protection. E.g. Recognition of unpaid work and launch of unemployment benefit schemes.
- **Information, Education and Awareness (IEC) campaigns** to improve awareness on entitlements, create unions and support people in life and work transitions.
 - Voluntary organizations and committed individuals can be engaged for it.
- **Transferability/portability of benefits** to support labour market mobility (within and across borders).
- **Addressing issues of exclusion, gender inequality** etc. through effective use of Aadhaar, e-SHRAM portal, digital connectivity etc. and at the same time developing tribes and women specific social protection systems.

6.2. CIVIL REGISTRATION SYSTEM (CRS)

Why in news?

Government is planning to **revamp the Civil Registration System (CRS)** through an IT enabled system to ensure the registration of birth and death **in real-time** with **minimum human interface**.

More about news

- The changes would be in terms of **automating the process delivery points** so that the service delivery is **time bound, uniform and free from discretion**.
- The **Registrar General of India (RGI)** has also proposed to “maintain the database of registered birth and deaths **at the national level**.”
- According to the proposed amendments, the database may be used to update the **Population Register, Electoral Register, Aadhar, Ration Card, Passport and Driving License databases**.

About Civil Registration System (CRS)

- It is the unified process of **continuous, permanent, compulsory and universal recording of the vital events** (births, deaths, still births) and characteristics thereof.
- History of CRS in India dates back to the **middle of the 19th century**. In 1886 a **Central Births, Deaths and Marriages Registration Act** was promulgated to provide for **voluntary registration** throughout British India.
- Post-independence, the **Registration of Births and Death Act (RBD Act)** was enacted in 1969 to promote **uniformity and comparability in the registration** of Births and Deaths across the country and compilation of **vital statistics** based thereon.
- With the enactment of the Act, **registration** of births, deaths and still births **became mandatory in India**.
- The **RGI** at the Central Government level **coordinates and unifies** the activities of registration throughout the country. However, implementation of the statute is **vested with the State Governments**.
- The Act mandates the use of **uniform birth and death reporting forms and certificates** throughout the country. The scheme of **Medical Certification of Cause of Death (MCCD)** under RBD Act, provides for **causes of death**, a **prerequisite to monitoring health trends** of the population.

Importance of CRS

- **Right to recognition:** Civil registration generates documentation that **supports an individual's right to recognition** as a person **before the law** and acknowledges their **formal relationship** with the state. The absence of civil registration has been described as a ‘**scandal of invisibility**’.
- **Legal status:** It acts as the basis for **identity documents** such as a passport or ID. Individuals are able to have their existence, identity, and vital events **legally recognised** and obtain proof of **legal and civil status** through valid certificates.
- **Planning and monitoring of welfare schemes:** The vital statistics are invaluable for **planning, monitoring and evaluating** various programmes related to primary health care, family planning, maternal and child health, education and so forth.
- **Demography:** CRS is also used for **demographic purposes** such as preparation of population estimates and projections, studies of mortality, fertility and construction of life tables.

- **Human rights:** The achievement of some of the most important human rights that appear in the **Universal Declaration of Human Rights and the Declaration of the Rights of the Child** depend on CRS. Absence of CRS makes **many of these rights practically illusory**, e.g., the right of the child to have a name and a nationality.
- **Others:**
 - Facilitates access to **essential services** such as healthcare, education and social protection.
 - Enables political participation, property ownership, **recourse to justice, formal employment**, inheritance and the use of banking and **financial services**.
 - Reduces the risk of statelessness, child marriage and human trafficking.

Role of the United Nations (UN)

- There is **no single agency within the United Nations** responsible for helping countries set up and manage civil registration.
- However, the **United Nations Statistics Division (UNSD)**, the **United Nations Children's Fund (UNICEF)**, the **United Nations Population Fund (UNFPA)** and the **United Nations Development Programme (UNDP)** all work with developing countries to improve **different aspects of their population statistics**.
- World Health Organisation (WHO), and its partner the Health Metrics Network, focus on **improving health information systems** and the ability of countries to track major causes of death.

Issues with CRS

- **Security concerns:** A few State governments have reported issuance of **fake birth and death certificates**, including **misuse of the User/Login ID and password** created in the existing portal/software developed for online registration of birth and death by **unauthorised persons**.
- **Delayed and under coverage of registration:** The CRS system is facing **challenges in terms of timelines, efficiency and uniformity** leading to delayed and under coverage of Birth and Death in the country.

Central Government Initiatives to overcome these issues and optimize CRS

- **Uniform Software Application for Registration:** A software application for **online and offline registration** of birth and death has been developed which covers the entire gamut of CRS. The application that is presently available in English is being **customized in 13 Indian languages**.
- **Database of Institutions:** A **nationwide database of medical Institutions** has been prepared that has the **address, telephone numbers and other contact details** of the institutions where events occur. The plan is to **electronically monitor** the registration of events in these institutions.
- **Application to Monitor Institutional Events:** An **SMS based application** called "Event Monitoring System for Registration" has been developed and is currently **under pilot testing**. This application attempts to track the events at the **level of institutions and ensure their registration**.
- **Capacity Building of Registrars:** A **standard training manual** has been developed for training the registration functionaries in 13 languages. Regular training of registration functionaries has been introduced by **providing financial assistance to the State Governments**.
- **Data digitization:** Project to **keep old records** in easy to retrieve digital form has been started. This will help in **storage of registers in electronic format and allow easy access** to the records.
- **Advocacy and Publicity:** An intensive **multi-modal publicity and awareness campaigns** on birth and death registration is already underway.
- **Demand Generation:** Creating a **policy environment for demand generation** for birth and death registration is one of the basic needs identified by a national task force set up for the strengthening the CRS.

Way Forward

Government's decision to automate the process is a step in right direction to **enhance effectiveness and efficiency** of CRS. When viewed in conjunction with legislations like **Personal Data Protection Bill (PDPB), 2019** that intends to protect the **privacy rights** of individuals, it could enable the vision of a secure, updated and highly functional repository of citizen's data.

6.3. LEARNING POVERTY

Why in News?

A World Bank official recently stated that India's learning poverty has shot up due to COVID-19 pandemic.

More on News

- According to a simulation data by World Bank, **if before the pandemic about 53% of children were not able to read** a simple text by the age of 10, unfortunately **with the pandemic this has shot up to 70%**.
 - The dual shocks to education systems – school closures and the ensuing economic crisis – caused by the COVID-19 pandemic is aggravating the global learning crisis and impacting education in unprecedented ways.
- This generation will be **harmed compared to the previous and the next generation** just because they were born in specific years and were between five and 18 years.
- If something is not done now, this generation **will have lower productivity, lower earnings, lower well-being** in the future and that is what we need to avoid.

About learning Poverty

- Learning Poverty means **being unable to read and understand a short, age-appropriate text by age 10**.
- All foundational skills (basic literacy, numeracy, and transferable skills) are important, but **reading is focused because:**

- Reading proficiency is an **easily understood measure** of learning;
- Reading is a student's **gateway to learning in every other area**;
- Reading proficiency can serve as a **proxy for foundational learning in other subjects**, in the same way that the absence of child stunting is a marker of healthy early childhood development.

- Just as monetary poverty excludes people from economic, social, and political opportunity, so too does a lack of basic reading skills.

Importance of learning skills

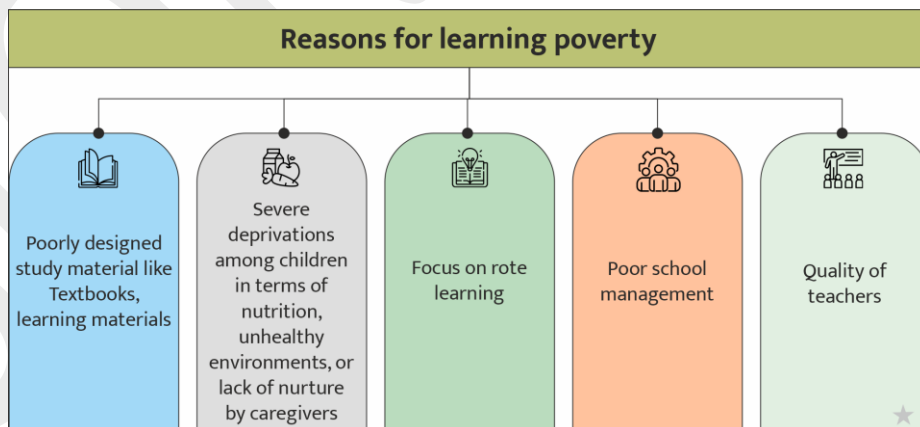
- **For sustainable growth and poverty reduction:** Poor education outcomes have major costs for future prosperity, given that human capital is the most important component of wealth globally.
- **Improving overall schooling systems:** when children cannot read, it's usually a clear indication that school systems aren't well organized to help children learn in other areas such as math, science, and the humanities either.
- **Better quality workforce:** Countries which have prioritised and invested in foundational learning have produced a better quality of workforce, enabling their economies to take off. Both South Korea and China did this in the 1970s, and the impact on their economies was tremendous.
- **Improves individual freedom:** For individuals and families, it can lead to higher productivity and earnings, poverty reduction, higher rates of employment, better health outcomes, and greater civic engagement.

Highlights of World Bank's Country Learning Poverty Briefs for India (2019)

- **Learning Poverty:** 55% of children in India at late primary age today are not proficient in reading, adjusted for the Out-of-School children.
- **Out-of-School:** In India, 2% of primary school-aged children are not enrolled in school. These children are excluded from learning in school.
- As in most countries, **Learning Poverty is higher for boys than for girls** in India.

Why is learning to read proficiently by age 10 so important as a benchmark?

- Once children have learned to decode and become fluent readers, **they read faster, and this frees up cognitive space for them** to focus on text meaning.
- By contrast, **if they do not obtain good skills as readers by approximately age 10, they tend to fall further and further behind**, and few could catch up.
- High rates of reading by age 10 **go hand-in-hand with better skills later in life**.



- **Benefits society:** For societies, it can contribute to faster innovation and growth, better-functioning institutions, greater intergenerational social mobility, higher levels of social trust, and a lower likelihood of conflict.

Way forward

World Bank's Policy Package for helping children learn to read consists of four components that bring focus and facilitate what countries need to do.

- **Ensure political and technical commitment to clear goals, means, and measures for literacy**
 - National goals should be set with an understanding of how students are currently doing, and systems should use the data as a baseline on which to develop achievable goals, interventions, and indicators of progress.
- **Ensure effective teaching for literacy**
 - Teachers need to be supported with learning materials and teacher guides that have a stepwise plan, as well as a teacher professional development plan that strongly emphasizes practicing specific classroom skills.
- **Ensure timely access to more and better age- and skill-appropriate texts**
 - In Mongolia, better access to books led to a 0.21 standard deviation improvement in student outcomes.
- **First teach children in the language they speak and understand**
 - Research shows that students who are taught in their home language in the early years have higher comprehension. It also provides the foundation to more easily learn a second language and study more complex topics later on.

How can schools work to bridge learning gap?

- **Open Schools:** There is need to reach every child (through aggressive enrollment campaigns, communication campaigns at the macro-level such as the national and State-level as well as community-level) to ensure that all of them re-enroll.
- **Assessment:** It is essential that assessment systems have well-defined ways to inform future instruction based on assessment results.
- **Prioritise teaching fundamentals:** Many countries have very rich and dense curriculum with many subjects, but we need to make sure that at least in the beginning children are focusing on the fundamentals.
- **Increase catch-up learning:** teachers will require a lot of support to be able to group students within the classroom not according to the grade or according to the age, but according to where they are.
- **Judicious use of technology:** The pandemic has taught us that the magic of learning happens in the interactions between students and teachers which will never be replaced by technology. But technology will complement the human factor to make the work of teachers more impactful and effective.

Steps taken to address learning poverty

- **World Bank launched a new operational global learning target** to cut the Learning Poverty rate by at least half before 2030.
- **In India**
 - **Draft National Education Policy (NEP)** calls for achieving foundational skills --- reading, writing and arithmetic --- for all children in primary school, and beyond by 2025.
 - Ministry of Education has already launched the **National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) mission.**
 - **School Education Quality Index (SEQI)** by NITI Aayog aims to shift the focus to learning outcomes.
 - To empower the teachers, a capacity development programme for teachers and school heads, NISHTHA was launched by the NCERT.

6.4. ONLINE GAMING

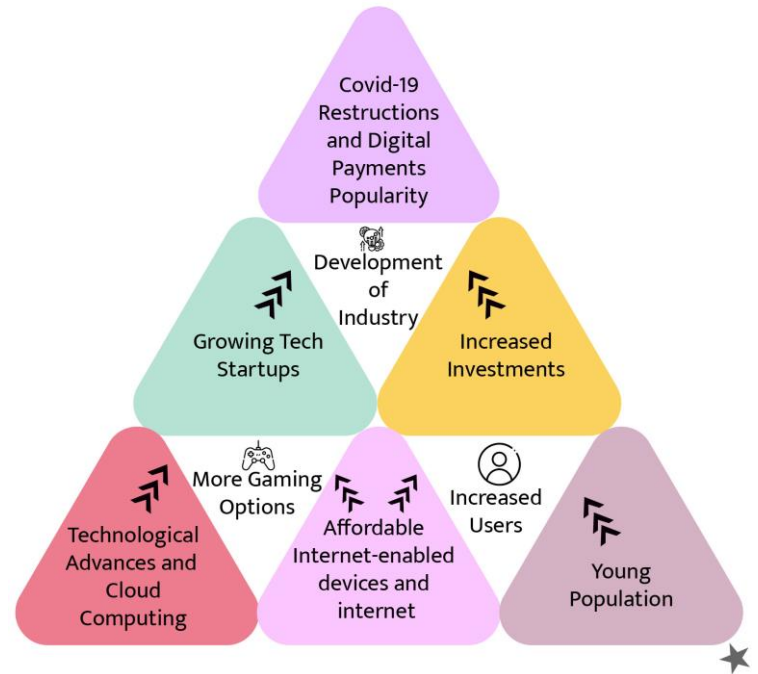
Why In News?

After its announcement in the **Union Budget 2022-23**, the Ministry of Information and Broadcasting (I&B) constituted an **AVGC (Animation, Visual, Gaming and Comics) Promotion Task Force.**

More on News

- The task force will be headed by **Secretary, I&B** with representation from Industry, Academia and State Governments.
- Based on its Terms of Reference (ToR), it will work to **attract FDI** and enhance exports to lead 'Create in India' and 'Brand India'; to **capture 5% (~\$40 billion)** of the **AVGC global market** by **2025** with a growth of **25-30%** and over **1.6 lakh** new jobs creation annually.

Drivers of Online Gaming Sector



- Its **objectives** include-
 - Framing of a **national AVGC policy**.
 - Recommend **national curriculum framework** for AVGC related courses.
 - Boost **employment opportunities**.

Online Gaming Sector and its Potential

- Broadly, online Gaming implies playing games which **need an internet connection** to play them. Part of the **sunrise gaming industry**, online gaming has seen a significant **spike in demand** across various types of online games such as- Multiplayer online games, Role-playing games, real-time strategy or skill games. E.g.
 - Fantasy games, poker, rummy etc. involving **betting and wagering**,
 - **Interactive games** based on transformative technologies such as **artificial intelligence (AI), augmented reality (AR)**.
- The Indian online gaming industry was estimated at **₹13,600 crore** and expected to reach **₹29,000 crore** by **2025** with a **CAGR of 21%** (by KPMG).

Benefits of Online Gaming

The growth of online gaming will have number of socio-economic benefits such as:

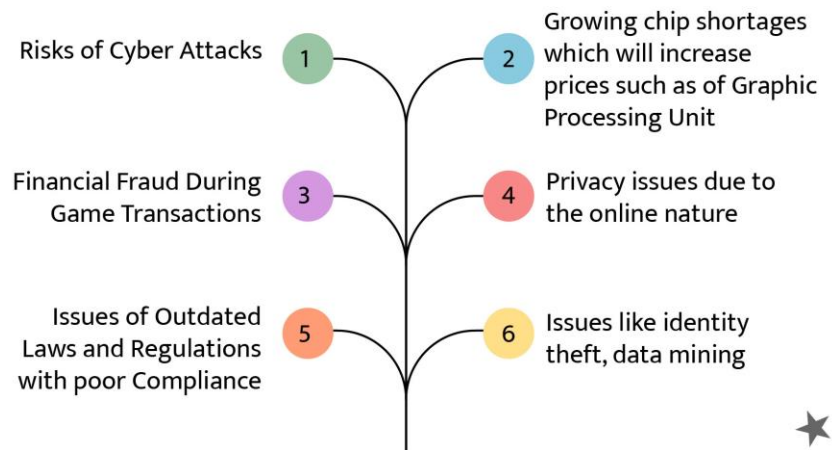
- **Economic Growth:** It will improve government revenues through taxes on online gaming, reducing government deficit and it can be used to augment infrastructure.
 - Recently, the **Group of Ministers** set up by the Ministry of Finance to look into GST rates on casinos, online gaming and racecourses reached consensus on **28% tax slab**.
- **Employment Creation:** It will create significant employment, especially in tech startups, animation and other related industries such as Live Streaming and Video-On-Demand.
- **Reduce Illegal Activities:** Online **fantasy games** with betting and wagering (E.g. Dream 11) can help to curb illegal betting and gambling industry, money laundering etc.
- **Reduce Substance Abuse:** The **convenience and accessibility** of online gaming allows people to play from home, reducing chances of substance abuse, which is more common at betting places, casinos etc.
- **A new dimension to sports:** The **global legitimacy** of E-sports creates opportunities for users to win laurels for the nation. E.g.
 - Unlike Tokyo Olympics and last Asian Games as demonstration events, in Asian Games, 2022 E-sports such as **FIFA, PUBG, Dota 2** etc. will debut as **medal events**.
- **Promote Innovation:** It will promote innovations/technological advancements in immersive and interactive technology such as AR, VR, etc.
- **Better Education:** Educational online games can help children to learn different things, culture etc. through greater engagement (concentration) and motivation.

Issues associated with Online Gaming

Using latest technologies, the online gaming carries not just the risks usually associated with online technologies (see **image**) but it can cause a number of socio-economic issues such as:

- **Physical and Psychological Harms:** Some online games can lead to aggressive behavior and extreme obedience to technology, increasing **violence** and **self-harm** in society. E.g.
 - The Blue Whale Challenge Game- It was an online suicide game.

Online Gaming: Technological Risks



- **Health Issues:** The immersive games and increased game hours can lead to multiple health issues such as stress, anxiety, depression with disruption of sleep and discordant eating patterns.
- **Gaming Addiction:** Constant availability of these games leads to addiction, creating issues of **social dysfunction** (poor social skills) and **larger financial losses** due to greater number of platforms and options.
- **Poor Educational Performance:** Easy access to online games, particularly among children, can interfere with school and educational performance of children due to time constraints.
 - Continued exposure to such games can lead to loss of socio-cultural conditioning and moral values as well.
- **Negative impact on vulnerable sections:** The rise in violence, financial losses etc. can increase violence/crimes against women and children at home and outside.
- **Disordered Gambling:** The lack of national gaming regulation increases chaos, leading to rise of illegal gaming apps from hidden players with ulterior motives.
- **Limited legal awareness:** Under seventh schedule, Betting and Gambling are in List II (State List). It leads to different laws in different states. E.g.
 - Recently, states like Tamil Nadu and Karnataka banned online rummy, fantasy, poker, etc. involving betting and wagering. The state High Court's lifted the ban as Games of Skill are legitimate under Article 19 (1) (g).

Way Forward

The decision to set up **AVGC Promotion Task Force** is a **positive step** and it should be further backed by specific steps for clarity on online gaming such as:

- **Legal Clarity:** Proper regulations on games involving betting and wagering from **states** or allow the centre to make regulations under **Article 252**. The centre can also do it on its own by using its residuary powers under **Article 248**.
- **Regulatory Clarity:** Establish a single regulatory body for the entire online gaming industry to standardize regulations. The regulator can also help in keeping a watch on it and take immediate steps to prevent import of games which are harmful to society.
- **Information, Education and Communication (IEC):** Use IEC to spread awareness on gaming ills and benefits for responsible play, good health and being social.
- **Supervise Children at Home:** Parents should supervise children's online gaming to check the type of games, time spent and learning outcomes.
- **Curbing loss chasing:** A cap can be introduced on the number of transactions from an individual across platforms or one platform to avoid greater economic losses.

6.5. NEWS IN SHORTS

6.5.1. UNITED NATIONS POPULATION FUND'S (UNFPA) RELEASED STATE OF WORLD POPULATION 2022

- The report is titled as "**Seeing the Unseen: The case for action in the neglected crisis of unintended pregnancy**".
- **Key findings of report**
 - Over **60% of unintended pregnancies end in abortion** and 45% of abortions are unsafe, causing 5% to 13% of maternal deaths.
 - **13 % of women in developing countries begin childbearing** before they turn 18.
 - Between 2015 and 2019, **121 million unintended pregnancies** across world every year, and **one in every seven of these occur in India**.
- **Key factors contributing to unintended pregnancies**

- **Lack of sexual and reproductive health** care and information
- **Harmful norms and stigma** surrounding women controlling their own fertility and bodies
- **Judgmental attitudes** or shaming in health services
- **Poverty and stalled economic development**
- **Gender inequality**
- UNFPA is an **international development agency**, created in 1968 to support the execution of projects and programmes in the **area of population and sexual and reproductive health**.
 - Its mandate is established by the **United Nations Economic and Social Council (ECOSOC)**.
 - It is working with **governments, partners and other UN agencies to directly tackle many of SDGs**:
 - ✓ Goal 3 on health.
 - ✓ Goal 4 on education.
 - ✓ Goal 5 on gender equality.

Unintended pregnancy

- **An unintended pregnancy** is a pregnancy that is either unwanted, such as the pregnancy occurred when no children or no more children were desired.

Recommendations by the Report

- Make health services comprehensive and **gender responsive**
- Extend **social protections**
- End **gender-based violence**
- Invest in the **empowerment of women and girls**

6.5.2. SWACHH BHARAT MISSION-URBAN 2.0 LAUNCHES 'NATIONAL BEHAVIOUR CHANGE COMMUNICATION FRAMEWORK FOR GARBAGE FREE CITIES'

- Framework shall serve as a **guiding document and blueprint** for States and Cities to **undertake large scale multimedia campaigns** along with intensive and focused inter-personal communication campaigns.
 - It focuses on **intensifying messaging around the key focus areas of source segregation, collection, transportation, and processing of waste, plastic waste management, and remediation of legacy dumpsites** to truly transform the urban landscape of India.
- **About Swachh Bharat Mission- Urban**
 - It was **launched** on 2nd October 2014 by **Ministry of Housing and Urban Affairs** in all **statutory towns** and effecting behaviour change through **Jan Andolan**.
 - It focuses on
 - ✓ **Sustainability of Open Defecation Free (ODF) outcomes,**

- ✓ **Achieving scientific processing of Solid Waste in all cities,** and
- ✓ **Managing Wastewater** in cities with less than **1 lakh population** in Census 2011.
- **Achievements of Swachh Bharat Mission-Urban (as of Oct 2021)**
 - Over **70 lakh household, community and public toilets** have been built.
 - Urban India was declared **open defecation free in 2019**.
 - Scientific waste management has gone up over four times from **18% in 2014 to 70%**.
 - **Continuous capacity building** of state and city level officials.

6.5.3. ACCESSIBLE INDIA CAMPAIGN (AIC)

- Accessible India Campaign's targets will **finally be achieved in June 2022**.
 - The original deadlines for different projects under the three heads were between July 2016 and July 2019. These have **now been revised to June 14, 2022**.
- Accessible India Campaign (Sugamya Bharat Abhiyan) objective is to **achieve universal accessibility for Persons with Disabilities (PWDs)**
 - For creating universal accessibility for Persons with Disabilities (PwD), the campaign has been divided **into three verticals**;
 - ✓ built-up environment,
 - ✓ transportation sector (airports, railways, public transport) and
 - ✓ ICT ecosystem (websites and public documents, sign language interpreters and TV viewing).
- **Ministry:** Ministry of Social Justice and Empowerment



6.5.4. TWO FULL-TIME ACADEMIC PROGRAMS SIMULTANEOUSLY

- The University Grants Commission (UGC) **released the guideline that allows students to pursue two full-time academic programs in physical mode**.
 - Students can **either choose a combination of a diploma program and an undergraduate degree, two master's programs, or two bachelor's programs**.
- The **adoption of these guidelines is optional for universities** and can be implemented only after the approval of the universities' statutory bodies.
- The **move is in pursuance of National Education Policy 2020** that emphasizes the need to facilitate multiple pathways for learning.

6.5.5. E-DETAILED ACTION REPORT (E-DAR) PORTAL

- It is a **web portal** from the Ministry of Roads, Transport and Highways (MoRTH) in consultation with insurance companies for **integrated data** and instant **information on road accidents**.
- The portal will bring relief to victims' families, check fake claims etc. through **Digitalised Detailed Accident Reports (DAR)**.

- It will be linked with **Vahaan** and the **Integrated Road Accident Database (iRAD)**- to act as an e-version of IRAD.
- Also, it will **alert PWD/Local Body** to examine and record details, helping in identifying the **accident hotspots** for necessary solutions to avoid future accidents.

 <p>SMART QUIZ</p>	<p>You can scan this QR code to practice the Smart Quiz of Environment at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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7. SCIENCE AND TECHNOLOGY

7.1. TRADITIONAL MEDICINE

Why in news?

Recently, WHO Director-General laid the foundation stone for world's first and only **Global Centre for Traditional Medicine (GCTM) at Jamnagar in Gujarat.**

More on news?

- The GCTM will emerge as an **international hub of global wellness**. One of its kind globally, the GCTM will **spread across the world, the rich heritage of ancient medicine, and social-cultural diversity** of different regions.
- The centre will collect data relating to the **analysis of the alternative medicines** as well as will be helpful in conducting **assessment on quality, safety, effectiveness and convenience for administration** of the traditional medicines.
- The centre will also provide **guidance on technical aspects of the medicines.**

About traditional medicine

- **Definition:** According to the WHO, Traditional medicine (TM) is the **sum total of the knowledge, skill, and practices** based on the theories, beliefs, and experiences **indigenous** to different cultures, whether explicable or not, used in the maintenance of health as well as in the **prevention, diagnosis, improvement or treatment of physical and mental illness.**
 - The terms “complementary medicine (CM)” or “alternative medicine” refer to a broad set of health care practices that are **not part of that country’s own tradition or conventional medicine** and are not fully integrated into the dominant health-care system. They are used interchangeably with traditional medicine in some countries.
 - India’s traditional and complementary medicines (T&CM) is also called as **AYUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy)**. It is **regulated by the Ministry of AYUSH** which was formed in 2014.
- According to WHO, **170 WHO member countries** have acknowledged their **use of T&CM** since 2018.

Advantages of mainstreaming T&CM

- **Less capital intensive:** The relatively low level of technological inputs are required for T&CM. As a result, they are affordable to poor people also and have the potential to contribute to a better health care system in many developing countries including India.
- **Enhancing the accessibility to public health facilities:** Despite 71% of the country being predominantly rural, the proportion of Allopathic doctors in rural areas is only 34%. Proportion of Ayush doctors in some of the poorest part of the country is high. This in turn could enhance the accessibility of health facilities in remote areas.
- **Better disease management:** Prevention is the most vital step of disease management. It reduces burden of secondary and tertiary public health care facilities. AYUSH medicines play vital role in preventive care. Also AYUSH doctors could be roped in for providing services that does not need specialization in Allopathy.

Initiatives by India to Promote its T&CM i.e AYUSH system

- **National AYUSH Mission (NAM):** To promote AYUSH medical systems through cost effective AYUSH services, strengthening of educational systems, facilitate the enforcement of quality control of Ayurveda, Siddha and Unani & Homoeopathy (ASU &H) drugs and sustainable availability of ASU & H raw-materials.
- **Champion Services Sector Scheme for Medical value Travel:** To amplify medical tourism in the field of Ayush and to offer support establishing world-class state of the art Ayush hospitals.
- **Ayush Export Promotion Council (AEP):** To promote export of Ayush products/Medicines/Services, support to Industry & Hospitals for participation in International Exhibitions, deputation of experts to different countries establishing quality standards by collaborating with International Agencies like WHO, ISO etc.
- **The AYURSWASTHYA YOJANA:** This umbrella scheme has been coined to roll out authentic and classical Ayush Interventions for promoting community health care and to provide support for establishment of Ayush medical health units in reputed Ayush and Allopathy institutions.
- **AYUSH Information Cell** have been set up in 31 countries to disseminate authentic information about AYUSH systems.

- **Improving doctor to patient ratio:** In India, the **ratio of the doctor-patient is 1:1456** if we consider only allopathic doctors; the ratio will come to 1:800 if the AYUSH practitioners are added. This is **much better than the WHO recommendation of 1:1000**. Thus, leveraging AYUSH doctors is vital for achieving universal health care services.

- **Effective in managing chronic diseases:** Scientific studies of several TM/CAM therapies show that their use is effective, e.g. for HIV/AIDS and cancer patients.

Challenges in mainstreaming T&CM

- **Marginalisation of T&CM:** The National health Policy (NHP), 1983 had observed that planned efforts should be made to dovetail the functioning of the practitioners and integrate services across different systems of medicine in the overall health care delivery system. However, until recently, AYUSH and Allopathy health care system have existed as separate watertight compartments with disproportionately more weightage to allopathy.
- **Skewed financing: In Budget 2020-21,** the Ministry of Health and Family Welfare (MoHFW) was allocated ₹ 86,200.65 crore whereas the Ministry of AYUSH was allocated only ₹ Rs 3,050 crore. Such skewed financing would naturally create a gap between AYUSH and Allopathy in terms of research, education, training, etc.
- **Low acceptance of AYUSH: National Sample Survey in 2014 indicates that only 6.9% of patients seeking outpatient care opted for AYUSH.** In the case of hospitalised care, **the proportion is less than 1%.**
- **State subject:** Health being a state subject adds an extra layer of complexity to any national level initiative. There are states like Maharashtra that have adopted a realistic approach where AYUSH doctors are allowed to practice Allopathy and prescribe drugs, after completing a one-year course. However, such vital steps are missing in other states.

Way ahead

- **Bridging the financing gap:** Equal emphasis should be given to both AYUSH as well as Allopathy system. Public Private Partnership (PPP) could also be utilised to ensuring adequate funding of both the system. This would ensure adequate resources for stimulating strategic research into T&CM.
- **Standardisation & Improving quality:** Produce guidelines for T&CM by developing and providing international standards, technical guidelines and methodologies for research into products, practices and practitioners. These would help promote the safety, efficacy and quality of T&CM by expanding the knowledge base, and providing guidance on regulatory and quality assurance standards.
- **Generating trust between Allopathy and T&CM:** The need for mutual respect between the allopathic and AYUSH practitioners is paramount. Unless they respect each other's system of practice and work as a team, there would always remain a schism in the health system. Mutual respect will also encourage cross learning as well as cross referrals which in turn will benefit the patient.
- **Integration into national health system:** Its proper integration into national health systems will enable consumers to have a wider choice when they wish to use such services. They can blend together in a beneficial harmony, using the best features of each system, and compensating for certain weaknesses in each.
 - In this direction, **in 2020,** the Central Council of Indian Medicine amended Indian Medicine Central Council (Post Graduate Ayurveda Education) Regulations, 2016, to include the regulation to **allow the PG students of Ayurveda to practise 58 types of general surgery.**

7.2. ONE HEALTH

Why in news?

Department of **Animal Husbandry and Dairying (AHD)** launched '**One Health'** pilot project in Uttarakhand.

More on news

- The pilot project was launched to implement the **One Health Framework by One Health Support Unit.**
- The key objective of the Unit is to develop a **national One Health roadmap** based on the learnings of the pilot project implementation.
- **An Inter-ministerial One Health committee** under the chairmanship of Principal Scientific Adviser to the Government of India **has been established** to lead the implementation of the **One Health Support Unit.**
- A **Project Steering Committee (PSC)** is constituted under the chairmanship of Secretary (AHD), involving representatives from Ministry of Health and Family Welfare, Ministry of Environment, Forest and Climate Change, ICAR, civil societies, international development organizations and field practitioners.

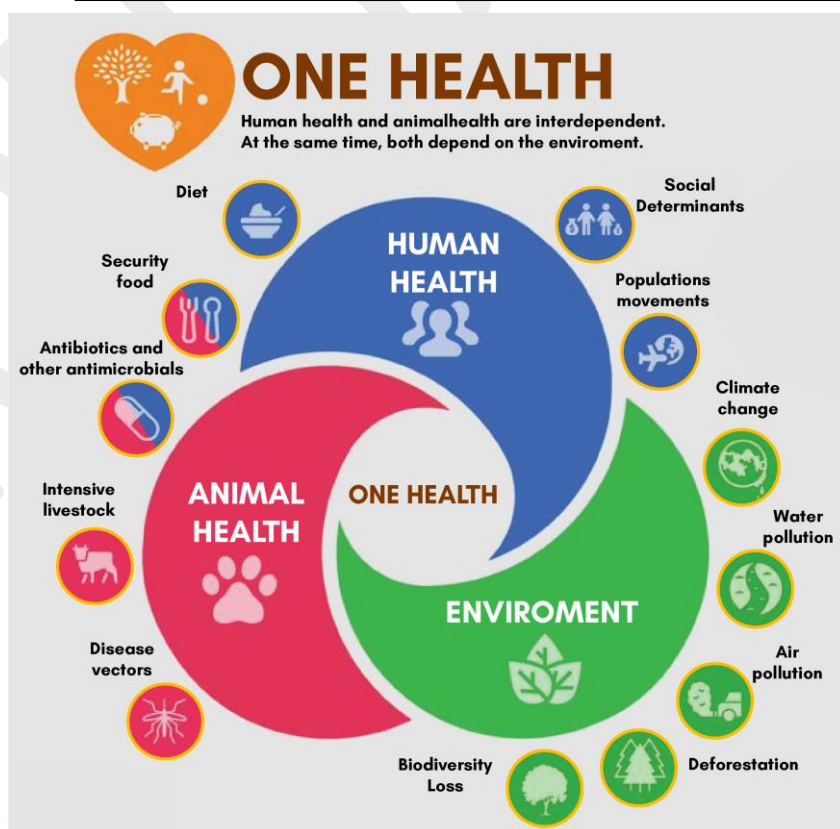
- **Some of the key activities to be undertaken as part of the pilot project** include institutionalizing the mechanism for data collection on disease outbreaks, prevalence, management, and integration of the data with the digital architecture of the National Digital Livestock Mission.

About One Health

- There is no single, internationally agreed upon definition of One Health.
- One Health is understood as a **collaborative, multisectoral, and trans-disciplinary approach** - working at local, national, and global levels – to achieve optimal health and well-being outcomes **recognizing the interconnections between people, animals, plants, and their shared environment.**
 - One Health issues include **zoonotic diseases, antimicrobial resistance, food safety and food security, vector-borne diseases, environmental contamination,** and other health threats shared by people, animals, and the environment.
- The overarching purpose is to encourage **collaborations in research and sharing of knowledge at multiple levels across various disciplines** like human health, animal health, plants, soil, environmental and ecosystem health in ways that improve, protect and defend the health of all species.
- **Global initiatives**
 - **The Pilanesberg Resolution, 2001:** It was targeted at multilateral and bilateral donors and governmental authorities to consider potential wildlife health impacts in development projects.
 - **One World-One Health:** The Wildlife Conservation Society (WCS) introduced the term “One World-One Health” in 2007 along with 12 recommendations (**the Manhattan Principles**) that focused on establishing a more holistic approach to preventing epidemic disease and maintaining ecosystem integrity.

One Health facts

- **People’s Health**
 - 60% of pathogens that cause human diseases like Covid-19 originate from domestic animals or wildlife.
 - 75% of emerging human pathogens are of animal origin.
 - 80% of pathogens that are of bioterrorism concern originate in animals.
- **Food Security**
 - Each night, about 800 million people go to bed hungry.
 - More than 70% additional animal protein will be needed to feed the world by 2050.
 - More than 20% of global animal production losses are linked to animal diseases.
- **Environment**
 - Humans and their livestock are more likely to encounter wildlife (this may increase the transmission of diseases) when more than 25% of an original forest cover is lost.
 - Human actions have severely altered 75% of terrestrial environments and 66% of marine environments.
- **Economy**
 - Animal diseases pose a direct threat to the **incomes of rural communities that depend on livestock production.**



Challenges in adoption of One Health Strategy

- **Difficulty in coordination:** There are relatively limited practical guidance and understanding on how to foster and sustain cross-sector collaborations. Coordination and consensus at national and international level for mobilisation of financial resources, etc. is also one of the hurdles that need to be resolved.
- **Lack of inclusiveness:** Mostly One Health strategy is seen as a governmental endeavour. Awareness about this concept among common people is very less. Therefore, cooperation and active engagement of individuals, communities and society are yet to take place.

- Systemic issues:** Most nations do not have institutions whose primary missions are animal disease surveillance, control, and prevention. Few qualified veterinarians are pursuing careers in livestock and wildlife health, probably because limited jobs are available. Funding of the projects, and transfer of technology are also acting as a hurdle.



Why ONE HEALTH is Important

As Earth's population grows, our connection with animals and the environment changes:

Way ahead

- Consensus building:** Cultivate champions in different sectors who can agree on common objectives that promotes innovation, adaptation, and flexibility in terms of political, financial and administrative accountability.



People live closer together



Changes in climate and land use



More global travel and trade



Animals are more than just food

These factors make it easier for diseases to spread between animals and people.

A One Health approach tackles shared health threats by looking at all angles—human, animal, plant, and environmental

- Establishing international institution:** An international body that would work for creating a global network of qualified individuals working locally, regionally, nationally, and internationally to share information with respect to various dimensions of One Health is needed.
- Mainstreaming One Health:** Success is likely if One Health initiatives are institutionalised in existing structures and not championed by novel structures outside of mainstream systems.
- Adequate funding for animal health programme:** Currently, human health is vastly better funded compared with animal health (some countries have minimal or no veterinary capacity). This needs to be addressed by creating more schools of veterinary medicine, both domestically and globally.
- Education:** Engaging the medical community more in the future may require the incorporation of the One Health concept into the medical school curricula. This would ensure medical students see One Health as an essential component in the context of public health and infectious diseases.

7.3. SOLID FUEL DUCTED RAMJET (SFDR) TECHNOLOGY

Why in news?

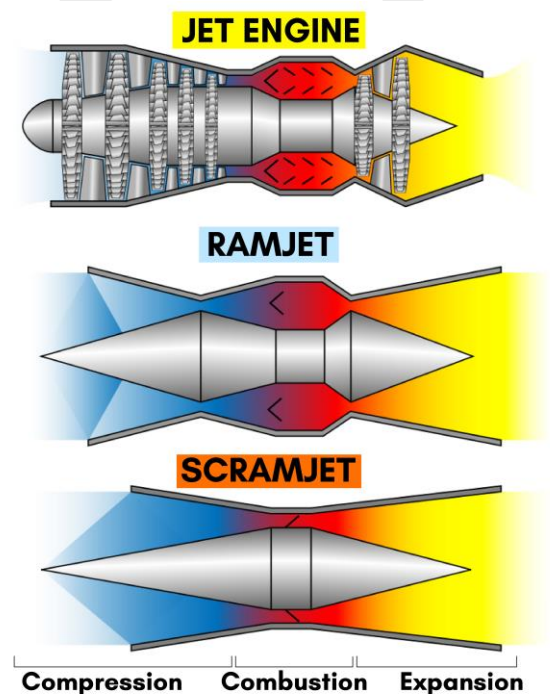
Recently, Defence Research and Development Organisation (DRDO) successfully **flight tested SFDR booster at the Integrated Test Range (ITR)**, Chandipur off the coast of Odisha.

About SFDR

- The first flight of SFDR, developed under a **joint Indo-Russian R&D project**, was tested in 2018. It had achieved the **speed of Mach 3**.
- It is a **missile propulsion system** that includes a **thrust modulated ducted rocket** with a reduced smoke nozzle-less missile booster.
 - The system **utilises a solid fuelled air-breathing Ramjet Engine**. Unlike solid-propellant rockets, the Ramjet takes up oxygen from the atmosphere during flight. Thus, it is **light in weight** and can **carry more fuel**.
 - The missile can hit the air targets in the **ranges from 70 - 340 km**.
- SFDR has been developed by Defence Research and Development Laboratory, Hyderabad in collaboration with other DRDO laboratories such as Research Centre Imarat, Hyderabad and High Energy Materials Research Laboratory, Pune.
- **Significance:**
 - It **enables the missile to intercept aerial threats** at very long range at supersonic speeds and high accuracy.
 - It will help to develop **long-range air-to-air missiles**. However, the technology can also be applied to surface-to-air missiles.
 - Air-to-air missiles which use SFDR technology can **achieve longer ranges as they do not require oxidisers**.

DRDO

- **Headquartered in New Delhi.**
- It is **largest R&D wing of Ministry of Defence** to empower India with cutting-edge defence technologies and to **achieve self-reliance in critical defence technologies** and systems.
- **Formed in 1958 from amalgamation** of the then functioning Technical Development Establishment (TDEs) of Indian Army and Directorate of Technical Development and Production (DTDP) with Defence Science Organisation (DSO).
- DRDO's **first project for Indian military was in surface-to-air missiles (SAM)** known as **Project Indigo**.
- **Fire-and-forget missile** is developed by DRDO under integrated guided missile development programme (IGMDP).



Difference between Ramjet, Scramjet and Dual Mode Ramjet (DMRJ)

- Ramjet, Scramjet and DMRJ are the **three concepts of air-breathing engines** which are being developed by various space agencies.

Ramjet	Scramjet (Supersonic combustion ramjet)	Dual Mode Ramjet (DMRJ)
<ul style="list-style-type: none"> • Air-breathing jet engine that uses the vehicle's forward motion to compress incoming air for combustion without a rotating compressor. • Work most efficiently at supersonic speeds around Mach 3 (three times the speed of sound) and can operate up to speeds of Mach 6. • Efficiency starts to drop when the vehicle reaches hypersonic speeds. • Does not have any turbines unlike the turbojet engines (jet engines). 	<ul style="list-style-type: none"> • Improvement over the ramjet engine as it efficiently operates at hypersonic speeds and allows supersonic combustion. • Uses Hydrogen as fuel and the Oxygen from the atmospheric air as the oxidiser. • Both ramjets and scramjets have no moving parts, only an inlet, a combustor that consists of a fuel injector and a flame holder, and a nozzle. 	<ul style="list-style-type: none"> • Type of jet engine where a ramjet transforms into scramjet over Mach 4-8 range. • It can efficiently operate both in subsonic and supersonic combustor modes.

7.4. EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN)

Why in news?

Large Hadron Collider (LHC) was restarted after a 3-year shutdown.

More on news

- The LHC is part of the **European Organisation for Nuclear Research**, known as **CERN**.
- Over the past three years, the LHC has been closed for maintenance and repairs.
- The LHC itself has undergone an extensive consolidation program and will **now operate at an even higher energy** due to major improvements in the injector complex.
- It will deliver significantly more data to the upgraded LHC experiments.

About European Organization for Nuclear Research (CERN)

- **Founded in 1954**, the CERN laboratory sits astride the Franco-Swiss border near Geneva. It was one of Europe's first joint ventures.
 - In 1951, at an intergovernmental meeting of UNESCO in Paris, **the first resolution** concerning the establishment of a **European Council for Nuclear Research** (in French Conseil Européen pour la Recherche Nucléaire) was adopted. This leads to establishment of CERN.
- CERN's **main area of research is particle physics**. Because of this, the laboratory operated by CERN is often referred to as the European Laboratory for Particle Physics.
- **Members of CERN**
 - Today **CERN has 23 Member States**: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Spain, Sweden, Switzerland and United Kingdom. They **contribute to the budget of the Organization in proportion to their Net National Income (NNI)**.
- **Observer status**: Japan, the Russian Federation and the United States of America.
 - This status is **usually awarded to States that have made significant contributions to the CERN infrastructure**, and to international organisations which maintain close links with CERN. Observers may attend Open Sessions of the Council, and do not have voting rights.
- **Associate membership**: Associate Members have to compulsorily pay a reduced contribution to the CERN budget and enjoy benefits which are reduced accordingly.
 - **Associate Member States**: Croatia, **India**, Latvia, Lithuania, Pakistan, Turkey and Ukraine.

Benefits to India

- **Accessibility to scientific data**: As an Associate member India can access to all data generated at CERN. As there are many experiments in CERN, there will be plenty of information available.

About the Large Hadron Collider (LHC)

- It is the **world's largest and most powerful particle accelerator**. It first started up in **2008**, and remains the latest addition to CERN's accelerator complex.
- It consists of a **27-kilometre ring of superconducting magnets** with a number of accelerating structures to boost the energy of the particles along the way.
- Inside the accelerator, **two high-energy particle beams travel at close to the speed of light before they are made to collide**.
 - The beams travel in opposite directions in separate beam pipes – two tubes kept at **ultrahigh vacuum**.
 - They are **guided** around the accelerator ring by a **strong magnetic field maintained** by superconducting electromagnets.
- **There are four particle detectors** to record the tracks left by debris from the collisions. The detectors (also called experiments) are: **ATLAS** (A Toroidal LHC Apparatus); **CMS** (the Compact Muon Solenoid); **ALICE** (A Large Ion Collider Experiment); **LHCb** (study of physics in B-meson decays at LHC).

How the large hadron collider works

Unit Now



Small number of collisions
Most particles miss each other

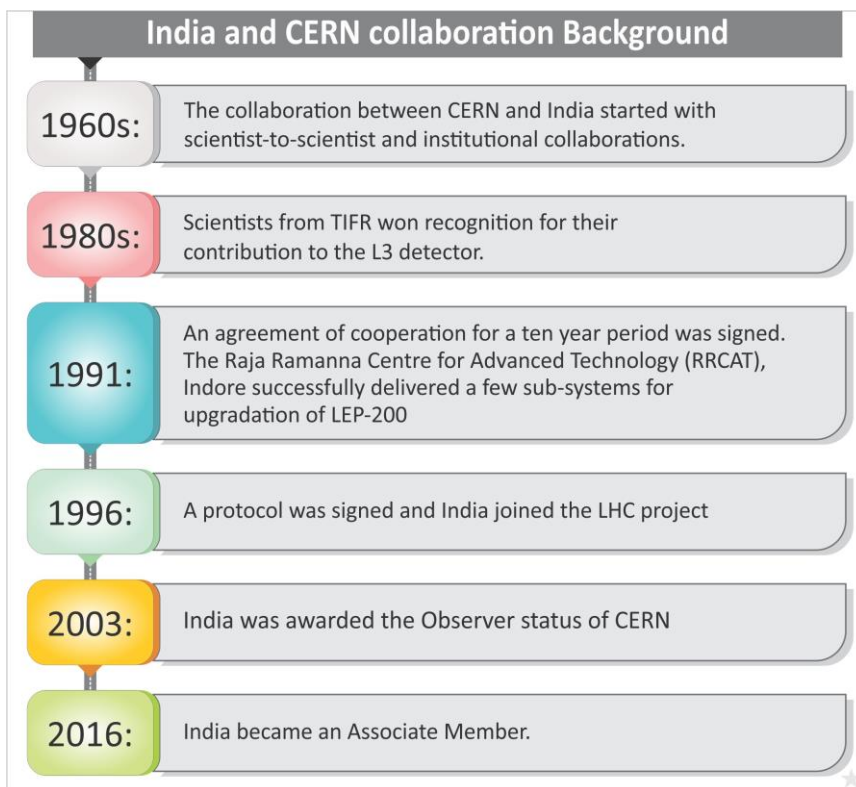
From now on



More collisions
Fewer particle miss each other



- **influencing policy.** India's associate membership status ensure India has a larger say in decisions regarding scientific policy formulation and experiments at the highest levels.
- **Access to research facilities:** Indian scientists are eligible to apply for staff appointments at CERN. Indian graduate and doctoral students can attend different educational programmes and workshops held by CERN. Indian scientists and engineers working in CERN will learn how to operate and maintain the facilities. So when they return it will be useful for India
- **Benefits for Indian Industry:** Indian industry can bid for CERN contracts, allowing for industrial cooperation in scientific research.
- **Full membership:** India's associate membership will be up for review every five years; it also has the option of applying to become a full member after two years. Full membership will grant India the right to vote, a privilege not accorded to Associate Members.



Conclusion

It is expected that the upgraded LHC may find an unknown fifth force of nature and the Dark Matter that makes up most of the Universe called. This would bring a paradigm shift for understanding the origin and evolution of the Universe. As India has been important part of this experiment, any new discovery would also further enhance the image of India in the field scientific milieu.

Significance of CERN

- **Fundamental research**-CERN's flagship accelerator is the LHC which during 2010-2013 brought proof of the existence of the long-sought Higgs boson particle (existence of this particle was predicted by Standard Model).
- **Advancing the frontiers of technology:** CERN also plays a vital role in developing the technologies of tomorrow.
 - **World Wide Web (WWW):** It is the best known CERN technology. It was invented to allow an ever increasing number of scientists to share information.
 - **The Grid:** Grid harnesses the power of computers around the world. It has been developed at CERN to process the vast amounts of data collected by the LHC experiments.
- **Other technological spin off:** CERN is contributing to a **better planet**, with novel and more efficient technologies like
 - **Industry 4.0**, increasing automation and efficiency
 - Cultural heritage through **art restoration**
 - Developing technologies expected to have **significant impact in the future**

7.5. NEWS IN SHORTS

7.5.1. GAGAN

- Airports Authority of India (AAI) successfully conducted flight trials using GAGAN based LPV approach procedure.
- **India is the first country in the Asia Pacific Region to achieve such a landmark** in field of Air Navigation Services (ANS).
 - **LPV (Localizer Performance with Vertical Guidance) permits aircraft guided approaches**

that are operationally nearly equivalent to Category 1- Instrument Landing System (Cat-1 ILS), **without the need for ground-based navigational infrastructure.**

- **It will provide** substantial operational benefit in poor weather and low visibility conditions.
- **About GAGAN (GPS Aided GEO Augmented Navigation)**
 - GAGAN is an **Indian Satellite Based Augmentation System (SBAS)** jointly developed by **AAI and ISRO**

for India and neighbouring countries in the equatorial region.

- It is one among the **only four Space-Based augmentation systems** available in the world which also includes US(WAAS) Europe (EGNOS) and Japan (MSAS).
- **Benefits of GAGAN**
 - Assist **air traffic control to cope with increased traffic** as well as **improving performance while maintaining safety and reducing infrastructure** needed on ground.
 - Manage land transport in India, whether it is by road or railways.
 - Help farmers in **aerial crop spraying or precision farming**, used for **forest and wildlife resource management system**.
- **Glossary**
 - **Instrument Landing System** is a standard **International Civil Aviation Organisation (ICAO) precision landing aid** that is used to provide accurate descent guidance signals for guidance to aircraft **for landing on the runway under normal or adverse weather conditions**.

7.5.2. EOS-02 SATELLITE

- Union Minister of Science & Technology has informed that the **EOS-02 will be launched in the second quarter of 2022**.
- **About EOS 02**
 - It is an **Earth observation satellite being developed by ISRO** as a test payload for the maiden launch of the Small Satellite Launch Vehicle (SSLV).
 - Applications include **agriculture, forestry, geology, hydrology, and miniaturized power electronics among others**.
- Other EOS satellites include **EOS -01 for Agriculture, Forestry & disaster management and EOS-03 as First Agile Earth Observation satellite in Geostationary orbit etc**.

7.5.3. TELANGANA SPACETECH FRAMEWORK

- It's a **first-of-its-kind attempt in the government sector** to launch spacetech framework.
- It aims to:
 - help the state emerge as a commercial hub for all space-related products and services.
 - promote domestic production of launch vehicles, satellite systems and subsystems, ground equipment manufacturing and other facilities.
 - establish Telangana as a **one-stop global destination for space technology**.

- Telangana, which is already a base for defence & aerospace companies, **has over 1,000 MSMEs catering to aerospace, defence and space sectors**.

7.5.4. SPACE BRICKS

- Researchers from ISRO and Indian Institute of Science (IISc) have **developed a way to make bricks of complex shapes from Martian soil** with the help of bacteria and urea.
- First **slurry was made by mixing Martian soil with guar gum, a bacterium called Sporosarcina pasteurii, urea and nickel chloride (NiCl₂)**.
 - **Bacteria convert the urea into crystals** of calcium carbonate.
 - These crystals, along with biopolymers secreted by microbes, **act as cement holding soil particles together**.
- In the past, the team **had made bricks out of lunar soil** using a similar method.

7.5.5. NASA'S PERSEVERANCE ROVER

- It has **captured the solar eclipse on Mars** featuring Phobos, one of Mars' two moons (other is Deimos).
- It was launched in 2020 under **Mars 2020 Mission** and landed at **Jezero crater, Mars** in 2021.
- The rover is on an **astrobiology mission to**
 - **Better understand** the Mars geology and seek **signs of ancient life**,
 - **Collect and store** a set of **rock and soil samples** for possible return to Earth, and
 - **Test new technology** to benefit future robotic and human exploration of Mars.

7.5.6. GENETICALLY ENGINEERED MOSQUITOES

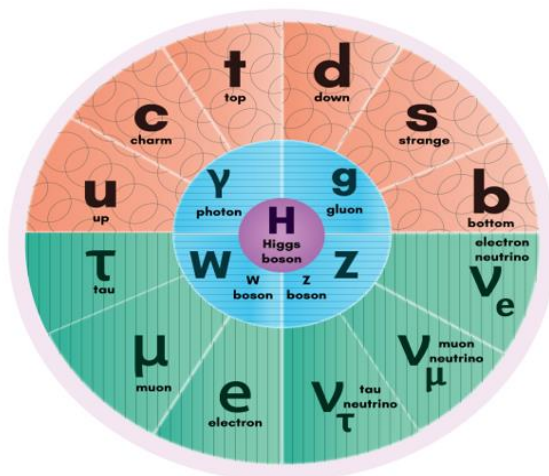
- A recent study of genetically modified mosquitoes in the United States has raised hopes of controlling disease-carrying mosquitoes.
 - For this experiment, the **scientists engineered a gene that will kill the female offspring**.
 - It was done to reduce the population of **wild Aedes aegypti mosquitoes that is a vector for viruses like chikungunya, and dengue, zika, and yellow fever**.
- Genetically engineered mosquitoes are an **alternative to insecticides to control insect populations**

7.5.7. W BOSON

- Recently scientists have found out that a fundamental particle '**W boson**' (refer to the infographics) has a **significantly greater mass** than theorised by the **Standard Model**.


- This recent discovery indicates there may be a **new fundamental ingredient to our universe**.
- **About the Standard Model**
 - It is a set of mathematical formulae and measurements **describing elementary or fundamental particles and their interactions**.
 - It contains **12 fundamental matter particles** categorised as **quarks and leptons** and **three forces that govern the behavior of matter: electromagnetism, the strong and weak nuclear forces**.
 - ✓ The force of gravity is currently not included in the standard model).
 - This model was developed in the early 1970s, and is still considered to be the **most accurate theory covering the foundations of particle physics**.
 - It **predicted the existence** of yet-to-be discovered particles, such as the **Higgs boson**.
 - However, this model is yet incomplete and **falls short of in explaining:**

- ✓ General relativity's description of gravity?
- ✓ Why is the Universe expanding ever faster?
- ✓ Why is there more matter than antimatter?




● QUARKS ● LEPTONS ● BOSONS ● HIGGS BOSON

The Standard Model includes the matter particles (quarks and leptons), the force carrying particles (bosons), and the Higgs boson.



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MAINS

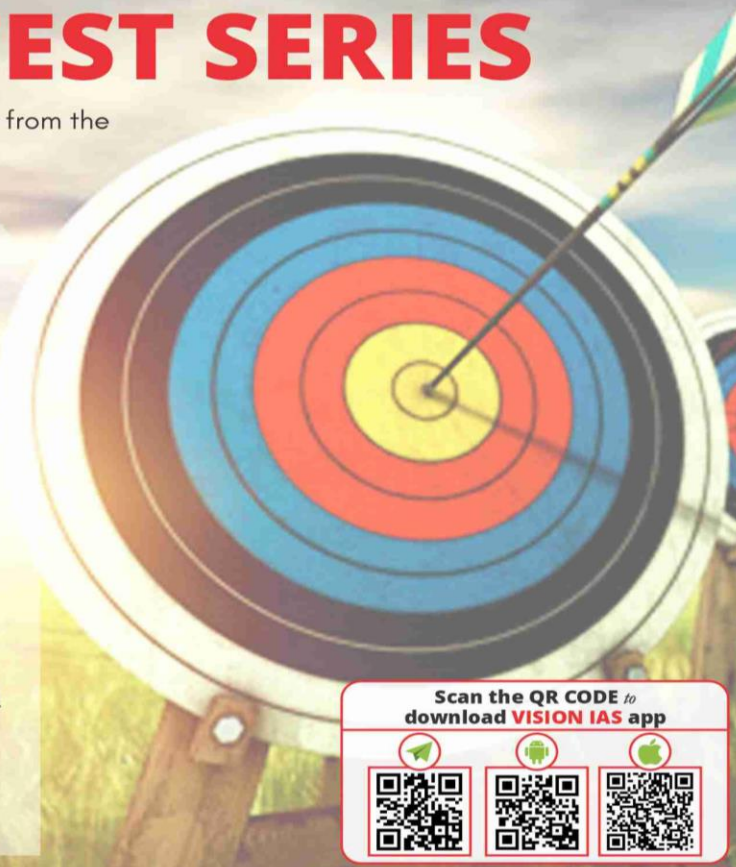
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- **Essay** (हिन्दी माध्यम में भी उपलब्ध)
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8. CULTURE

8.1. ODISHA TEMPLE ARCHITECTURE

Why in news?

Temples of Odisha were in news due to various incidents.

More on news

- The Central government has opposed the **Odisha government's ordinance to bring Lingaraj temple** and its associated temples under a special law on the grounds that it is outside the legislative competence of the state legislature.
- In another incident, objections are being raised against Odisha government's massive beautification project around the Jagannath temple due to its execution mismanagement.

Lingaraj Temple

- The temple is **dedicated to Lord Shiva** located in Bhubaneswar, Odisha.
- It was **built by Somavanshi Dynasty King Jajati Keshari** of in the 10th Century and completed by King Lalatendu Keshari in the 11th Century.
- The main spire is 54 metres high. Besides, there is a pillared hall, a dancing hall (NatyaMandap) and a hall for serving offerings (BhogaMandap).
- The walled campus has about 50 smaller shrines, including one dedicated to Goddess Parvati.
- It is the **biggest temple in Bhubaneswar**.
- This great temple **represents the quintessence of the Kalinga type of architecture**.
- Lingaraj is referred to as **'Swayambhu'** – (self-originated Shivling). Another important aspect of the temple is that it signifies the syncretisation of Shaivism and Vaishnavism sects in Odisha. The Shivling is known as Hari Hara.



Jagannath Temple, Puri

- The Jagannath Temple is a Hindu temple **dedicated to Lord Jagannath**, a form of Krishna, in Puri, Odisha.
- The temple is believed to have been constructed on the site of an earlier temple in the 12th century by **King Ananta Varman Chodaganga Deva**, the first king of the Eastern Ganga dynasty.
- The main temple of Jagannath is **constructed in Kalinga architecture**, with a height of 65 meters placed on an elevated platform.
- Jagannath Puri temple is called **'Yamanika Tirtha'** where, according to the Hindu beliefs, the power of 'Yama', the god of death has been nullified in Puri due to the presence of Lord Jagannath.
- This temple was called the **"White Pagoda"** and is a part of Char Dham pilgrimages (Badrinath, Dwaraka, Puri, Rameswaram).
- In front of the entrance stands the **Aruna stambha or sun pillar**, which was originally at the Sun Temple in Konark.
- **Jagannath Rath Yatra** also called as **Chariot Festival**, is celebrated here on the 2nd day of Shukla Paksha of Ashadh, the third month, according to the traditional Oriya calendar.
 - It is 9 day-long event during which the three holy chariots carrying idols of Lord Jagannath, his brother Balaram (Balabhadra) and sister Subhadra are pulled by thousands of devotees from India and abroad.

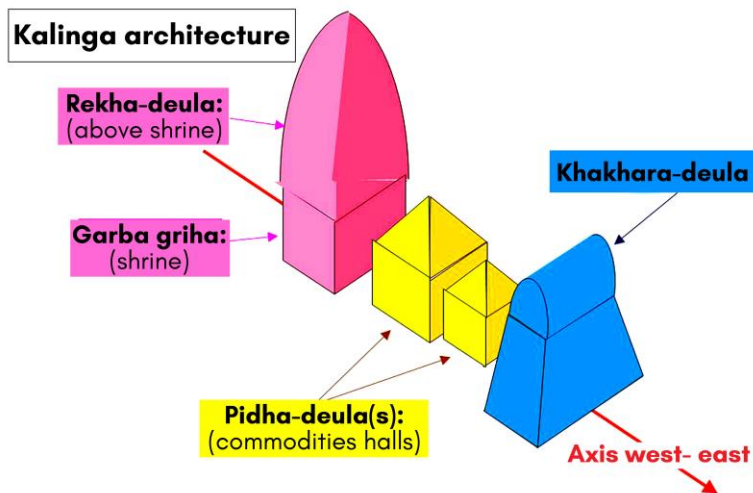


Other Important Temples/Monuments in Odisha

- Konark Sun Temple (UNESCO World Heritage Site)
- RajaRani Temple
- Tara Tarini Temple
- Udaygiri and Khandagiri Caves
- Mukteswara Temple

Kalinga Style of Architecture

- Kalinga style is identified as a **sub-class under the Nagara category** and is mostly confined within the ancient Kalinga region(also known as Utkal), present Odisha.
- In Kalinga Architecture, basically a **temple is made in two parts, a tower and a hall**. The tower is called **deula** and the hall is called **jagmohan**.
- The walls of both the deula and the jagmohan are lavishly sculpted with architectural motifs and a profusion of figures.
- The style consists of three distinct types of temples: **Rekha Deula, Pidha Deula and Khakhara Deula**. The former two are associated with Vishnu, Surya and Shiva temples while the third is mainly with Chamunda and Durga temples.
- The **Rekha Deula and Khakhara Deula houses are the sanctum sanctorum** while the Pidha Deula constitutes outer dancing (called NatyaMandap)and offering halls(called BhogaMandap).



Related News

Asurgarh fortified settlement

- Asurgarh fortified settlement (**ninth century BC**) in Odisha's Kalahandi district, has been ascertained to be the **oldest among the major fortified settlements in the State**.
 - Archaeologists deployed **Accelerator Mass Spectrometry (AMS) radiocarbon technique**, a technology that allows to **distinguish** different types of atoms on the basis of **differences in atomic weights (mass)**.
- **Major Findings:**
 - Cultural sequence of the site could be **divided into three phases:**
 - ✓ **Iron Age** (ninth century BC to fourth century BC),
 - ✓ **Early Historic or Rampart phase** (second century BC to first century AD), and
 - ✓ **Late Period/Decline** of the settlement (second century AD to third-fourth century AD).
 - **Antiquities found** include **Beads of coral, lapis lazuli, carnelian, glass, jasper, garnet, shell, agate, milky quartz, terracotta, kaolin, and soft stone, and circular discs** made out of potsherds and stone.
 - Only site in Odisha which shows **highly skilled engineering of water management** in comparison to contemporary sites.
- Other **early historic sites** in Odisha include Sisupalgarh (near Bhubaneswar); Jaugarh, a fortified settlement on the Rushikulya valley (Ganjam); Khalkattapatna (Puri); the port site of Manikpatna (Puri) etc.

ANTIQUITIES FOUND

417
antiquities
retrieved
from the
Asurgarh
excavation

Most important findings were imperial variety punch-marked coins and tokens made of a mixed material of silver and copper, a tiny figurine of lion made of copper, a gold chain, terracotta sealings

Beads of coral, lapis lazuli, carnelian, glass, jasper, garnet, shell, agate, milky quartz, terracotta, kaolin, soft stone and circular discs made out of potsherds and stone



8.2. CYCLOPEAN WALL

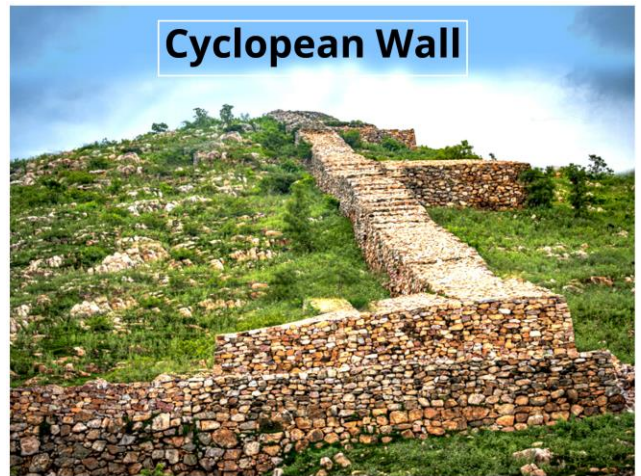
Why in news?

Bihar government has again sent a proposal to the Archaeological Survey of India (ASI) to get Cyclopean wall listed in the UNESCO World Heritage Site.

About Cyclopean Wall

- The Cyclopean Wall is a **40 km long wall of stone** (more than 2,500 years old structure) which encircled the ancient city of Rajgir in Bihar.

- The ancient city of Rajgir was the capital city of King Bimbisara and his son Ajatshatru who were contemporaries of the Buddha.
- It was **built in the pre-Mauryan era** (before 3rd century BC) and was erected by King Jarasandha, the 2nd ruler of **Brihadratha (Rawani) dynasty** using massive undressed stone to protect their capital from external invaders and enemies.
- The wall is **among the oldest examples of cyclopean masonry** in the world.
 - Cyclopean masonry is a term used to describe a **type of megalithic architecture** entailing the working of unusually large blocks of stone without mortar, often for the construction of fortifications.
 - The **term was coined by Greeks** in the Classical Age, reflecting the belief that only the Cyclops, gigantic, one-eyed creatures of myth, could have been strong enough to manipulate stones so immense.
- It is believed that the Cyclopean Wall at Rajgir is **similar to “Frontiers of the Roman Empire”** that runs through Germany, UK and Northern Ireland, which was included on UNESCO’s world heritage list in 1987.



About World Heritage Sites

- A World Heritage Site is a **location with an “outstanding universal value”**. This signifies “cultural and/or natural significance which is exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity”.

- These sites are nominated by UNESCO as embodied in an international treaty called the **‘Convention concerning the Protection of the World Cultural and Natural Heritage’** adopted in 1972.



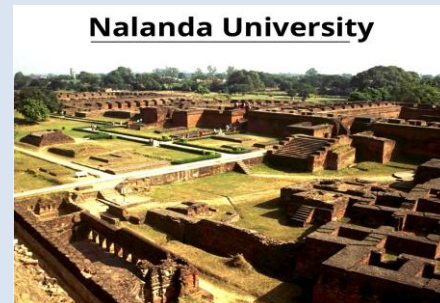
What UNESCO tag means for these sites?



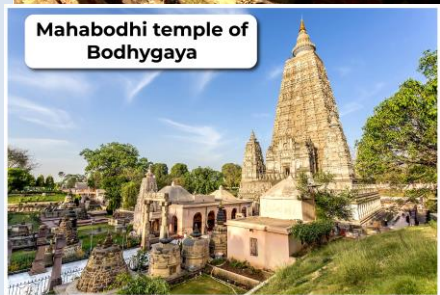
- **Nomination process:**
 - **Tentative List:** It is the first step a country must take by making an ‘inventory’ of its important natural and cultural heritage sites located within its boundaries.
 - **The Nomination File:** After UNESCO includes a property in the Tentative List, that country has to prepare a nomination document with necessary documentation and maps. This is sent for evaluation to the advisory bodies.
 - **Final Inscription:** Once a site has been nominated and evaluated, it is up to the World Heritage Committee to make the final decision on its inscription on the World Heritage Lists.

Other UNESCO World Heritage Sites in Bihar

- **Nalanda University:** It was listed in 2002 as the Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar in the UNESCO World Heritage Sites of India list.
 - It is one of the famous universities of ancient India and historic center of higher learning. It was **founded by Kumaragupta (Shakraditya)** of the Gupta dynasty in the early 5th century, and it flourished for 600 years until the 12th century.
 - It has been listed as an "**Institute of National Importance**" by the government.
- **Mahabodhi temple of Bodhygaya:** It was also listed in UNESCO World Heritage Sites of India list in 2002.
 - It is the site where **Lord Buddha had attained enlightenment** is one of the four holy sites related to the life of the Lord Buddha. The other three are: **Lumbini (Birth) in Nepal, Sarnath (Dharma-Chakra-Pravartana - 1st Sermon) and Kushinagar (Mahaparinirvana- death)** in Uttar Pradesh.
 - The original structure was **built by the Mauryan emperor Ashoka** which was reconstructed entirely in brick in late Gupta period. The present temple dates from the 5th or 6th centuries.



Nalanda University



Mahabodhi temple of Bodhygaya

8.3. NEWS IN SHORTS

8.3.1. DHARA: AN ODE TO INDIAN KNOWLEDGE SYSTEMS

- It is a **flagship initiative of the Ministry of Culture**.
- It is conceptualised as a **series of lecture demonstrations dedicated to specific areas of enquiry**, highlighting India's contribution and achievements across domains.
- It **embodies that idea of "continuous flow" of information and knowledge** from one age to another, being adopted, questioned and evolved over time so that we not only move ahead to the next level of insights across various fields but do so on the back of the findings and deep understanding already available to us.

8.3.2. NATIONAL FILMS DEVELOPMENT CORPORATION

- Recently, **Union Ministry of Information and Broadcasting** announced the **merger of four film bodies** to the National Film Development Corporation (NFDC).
 - The four film bodies include **Films Division (FD), Directorate of Films Festivals (DFF), National Film Archives of India (NFAI), and Children's Film Society (CFS)**.
- The move to merge the film media units **began in 2016-17** and is part of a **larger rationalisation exercise of autonomous bodies** under central government which is underway across ministries.
- The ownership of the assets available with these will **remain with the Central government**.

- Their mandate of production of documentaries and short films, organization of film festivals and preservation of films are transferred to the NFDC.
- **National Film Heritage Mission** aiming at digitization and restoration of films and documentaries will now be **implemented by NFDC**.
- **Significance of the merger**
 - **Reduce the overlap of various activities and ensure better utilization of public resources** by bringing all activities under a single management.
 - **Ensure balanced and focused development** of Indian cinema in all its genres-feature films, including films/ content for the OTT platforms, children's content, animation, short films and documentaries.
 - **Better and efficient utilization** of existing infrastructure and manpower.
 - **Bring more synergy**, better coordination between film bodies and a focused international outreach.
- **About NFDC**
 - It is a **Central Public Sector Undertaking under Ministry of Information and Broadcasting**, incorporated in 1975 with the primary object of planning and promoting an organized, **efficient and integrated development of the Indian Film Industry**.
 - The **mandate of production of feature films** is carried out by NFDC.

Role of film bodies

- **FD**, established in 1948, was created primarily to **produce documentaries and news magazines as publicity for government programmes** and to keep a cinematic record of Indian history.

- CFS, founded in 1955, with the specific objective of **providing children and young people value-based entertainment** through the medium of films.
- NFAI, established in 1964, with the primary objective of **acquiring and preserving Indian cinematic heritage**.
- DFF, set up in 1973, to **promote Indian films and cultural exchange**.

8.3.3. SANGEET NATAK AKADEMI, LALIT KALA AKADEMI AWARDS

- Vice president will confer the Sangeet Natak Akademi Fellowship and Sangeet Natak Awards for 2018 while the Lalit Kala Akademi's Fellowship and National Awards for 2021 on April 19
- **Sangeet Natak Akademi**
 - Sangeet Natak Akademi, the apex body in the field of **performing arts** in the country, **was set**

up in 1953 for the preservation and promotion of the vast intangible heritage of India's diverse culture expressed in forms of music, dance and drama.

- Sangeet Natak Akademi Awards are **national honours** given by the government to performing artists, teachers and scholars in the field of performing arts.
- **Lalit Kala Akademi**
 - It was inaugurated in New Delhi in **1954**.
 - Lalit Kala Akademi manifests a commitment to the service of the **visual arts by establishing, preserving and documenting visual art of the highest order** that in turn reflects the vitality, complexity and unfolding patterns of ancient, modern and contemporary art in India.



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9. ETHICS

9.1. SURROGATE ADVERTISEMENTS

Introduction

Recently, a Bollywood actor pulled out of his endorsement deal with a brand associated with tobacco products after receiving criticism on social media for his endorsement. Health activists also highlighted the lack of principles and urged for changes in advertising laws to regulate tobacco products and surrogate advertising.

About Surrogate Advertisements

- Surrogate means replacement or substitute. So, surrogate advertisements refer to the advertisements which duplicate the brand image of one product to promote another product to get **consumer attention** and increase **brand recall**. E.g.
 - Liquor companies advertising Music CDs or pan masala brands advertising cardamom with celebrities.
- Surrogate advertisements are used by companies for products whose advertisements are **prohibited by laws**:
 - **Cable Television Networks (Regulation) Act, 1995**: It prohibits the direct or indirect promotion and advertisement of **cigarettes, tobacco products, wine, alcohol, liquor, or other intoxicants**.
 - **Cigarettes and Other Tobacco Products Act (COTPA), 2003**: It prohibits advertisement of **tobacco products** by both direct and indirect means.
- Surrogate advertisements **can be done in different ways** (as given in image).
- **Celebrity endorsements** are an important component of it due to their **strong influence on people's choices**.



Implications of Surrogate Advertisements: Ethical and Social Concerns

The **Advertising Standards Council of India (ASCI)** code states that celebrities should not be featured in advertisements for products that by law require health warnings in their packaging or ads. Still, many celebrities endorse such products, giving rise to number of **concerns** such as:

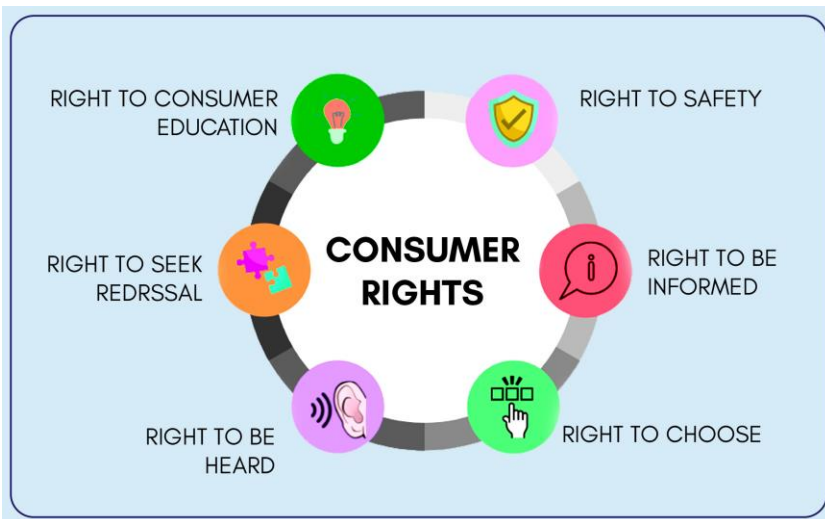
- **Manipulating choices**: Use of celebrity trustworthiness and credibility to market **unsafe or hazardous** products. E.g.
 - Sportspersons promoting junk foods or carbonated soft drinks.
 - It can lead to misleading conduct as it is difficult to authenticate whether the celebrity actually uses these products.
- **Override expert opinion**: Celebrity endorsement can have greater influence on people in comparison to expert opinion even if misleading due to higher reach and appeal value.
- **Tarnished Image**: Such endorsements also tarnish the image of celebrities by showing them as totally money minded or lacking an ethical compass.
- **Violation of Consumer Rights**: Misleading information violates the **basic truth-in-advertising principle**, also violating the consumer rights guaranteed under the **Consumer Protection Act, 2019**.
- **Social Harm**: Surrogate advertisements not just allow the business of tobacco, Liquor etc. to flourish but it also leads to increased burden of diseases such as cancer.

Challenges in Stopping Surrogate Advertisements

In 2008, the Government issued a notification banning surrogate advertising of liquor companies but it was amended in 2009 to allow advertisements of products which share a brand name or logo with any tobacco or liquor product with some caveats.

This can be attributed to number of socio-economic reasons as well as the ethical dilemmas faced by government/s like:

- **Overprotective State**, i.e. a government or its policies interfering with personal choices to narrow down individual **freedom of choice** and individual **responsibility**.
- **Dilemma over genuine ads** as some tobacco and liquor companies do have genuine business interests in other goods and services. Bans can harm their right to do business, create unfair competition and curb creativity of advertising agencies.
- **Concerns over potential use of other unethical practices** or price reduction by companies to gain market share, creating risk of even greater consumption from people.
- **Loss of Jobs and Revenue** as the production and high taxes/cess on sin goods (e.g. liquor and tobacco) contribute significantly to job creation and state revenue.



Potential solution to the issue of Surrogate Advertisements

Solution to end surrogate advertisements lies in **Virtue Ethics**, i.e. practice of high moral standards. A virtue based society seeks **honesty** and **truth**- important building blocks of **trust** through **practical or moral wisdom**, helping:

- **State** to choose the **right course of action** in terms of **transparent laws** and **proper regulatory control** over such advertisements. E.g.
 - Amending laws such as **COTPA** or **Trade Marks Act** to comprehensively address shortcomings of law or creating a **Central Consumer Protection Authority (CCPA)** to regulate misleading advertisements.
- **Companies** understand their **responsibility** towards consumers and have a proper code for endorsements with priority to consumer interests. It will ensure compliance with law and upholding of consumer rights.
- **Celebrities** to have **ethical enquiry** on broader societal implications of their influence or credibility. It will promote due diligence from them, helping to avoid any misleading impression or conflict of interests.
- **Citizens** in development of ethical stance or rational choices, forcing companies, celebrities and government to change their **attitude** and perform their **duties objectively**.

Conclusion

Freedom of speech and expression is an essential feature of any active democratic society. But it should not reduce the ethical requirements of companies, celebrities, and citizens. Virtue Ethics works with all actors to find a solution while promoting personal autonomy and rational decision-making.

“Good people do not need laws to tell them to act responsibly, while bad people will find a way around the laws.”

- Plato

10. SCHEMES IN NEWS

10.1. ATAL INNOVATION MISSION (AIM)

Why in news?

The Union Cabinet, recently, approved continuation of Atal Innovation Mission (AIM), till March 2023.

More on news

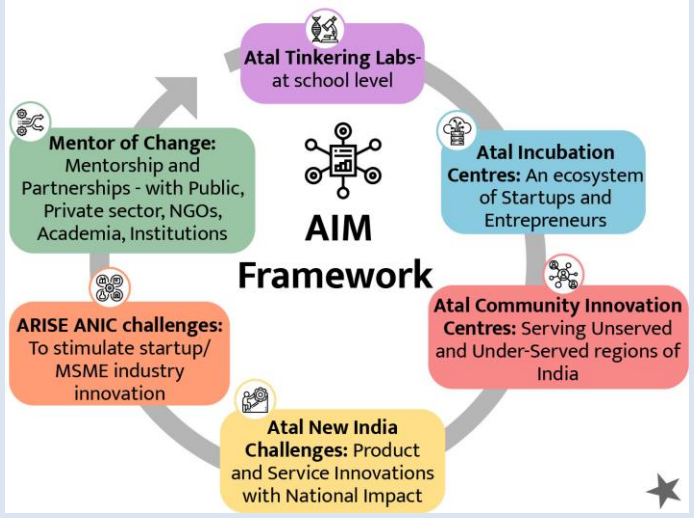
- The **intended targets** that will be achieved by AIM are:
 - Establishing 10000 Atal Tinkering Labs (ATLs).
 - Establishing 101 Atal Incubation Centers (AICs).
 - Establishing 50 Atal Community Innovation Centers (ACICs).
 - Supporting 200 startups via the Atal New India Challenges.

Achievements under AIM

- Supported startups have raised **2000+ Crores from the government and private equity investors** and have created several thousand jobs.
- Executed several **innovation challenges on topics of national interest**.
- Partnered with the Ministry of Defence to set up the **Defence Innovation Organization** which (fostering innovation procurement in the defense sector).
- Pivotal role in **the success of InSprenure**, an Innovation Startup Summit hosted between India and Singapore.
- **Bilateral collaboration:** The AIM has created bilateral relations with various international agencies for building synergistic collaboration on innovation and entrepreneurship such as
 - **AIM – SIRIUS:** Student Innovation exchange program with Russia
 - **AIM – ICDK** (Innovation Centre Denmark) and Water Challenge with Denmark
 - **IACE** (India Australian Circular Economy Hackathon) with Australia

About AIM

Objective	Salient features
<ul style="list-style-type: none"> • To create and promote an ecosystem of innovation and entrepreneurship across the country at school, university, research institutions, MSME and industry levels. • It is envisaged as an umbrella innovation organization that would play an instrumental role in alignment of innovation policies between central, state and sectoral innovation schemes. 	<ul style="list-style-type: none"> • AIM was launched in 2016 by NITI Aayog to create and promote a culture of innovation and entrepreneurship across the length and breadth of our country. • The AIM has focused on both infrastructure creation and institution building. • AIM has adopted a holistic approach encompassing schools, universities, research institutions, industry, MSME, NGOs, Ministries, at district, state and national levels. • It has two core functions: <ul style="list-style-type: none"> ○ Entrepreneurship promotion through Self-Employment and Talent Utilization (SETU), wherein innovators would be supported and mentored to become successful entrepreneurs. ○ Innovation promotion: to provide a platform where innovative ideas are generated • Atal Tinkering Labs (at school level) where students from Class 6th to Class 12th learn innovation skills and develop ideas. <ul style="list-style-type: none"> ○ Atal Tinkering Marathon: The marathon puts nation-wide challenge in 6 thematic areas namely Clean Energy, Water resources, Waste management, Healthcare, Smart mobility, and Agri-tech to find out the best student innovators of India. • Atal Incubation Centres (AICs) & Atal Community Innovation Centers (ACIC): They will be set up at the university, NGO, SME and Corporate industry levels for promoting entrepreneurship in universities and industry. • Atal New India Challenges (ANIC): To promote technology driven innovations and product creation for social and commercial impact. It aims to address the Commercialization Valley of Death - supporting innovators scale over the risks associated with access to resources for testing, piloting and market creation.



	<ul style="list-style-type: none"> ○ ANIC 2.0: Recently, phase 1 of the 2nd edition of the ANIC was launched. It will see 18 challenges in 7 sectors, such as; E-mobility, Road Transportation Space Technology and Applications, Sanitation Technology, Medical Devices and Equipment, Waste Management, Agriculture. ● Mentor India Campaign: It's a strategic nation building initiative to engage leaders who can guide and mentor students. Industry, Academia, Government, Global Collaborations as a key to success. ● ARISE-Atal New India Challenges: To spur applied research and innovation in Indian MSMEs and startups. The programme will be driven by Indian Space Research Organization (ISRO), four ministries—Ministry of Defence; Ministry of Food Processing Industries; Ministry of Health and Family Welfare; and Ministry of Housing and Urban Affairs—and associated industries to facilitate innovative solutions to sectoral problems.
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Related News: Atal New India Challenge 2.0	
<ul style="list-style-type: none"> ● Atal Innovation Mission launched the phase 1 of the 2nd edition of the Atal New India Challenge (ANIC 2.0) <ul style="list-style-type: none"> ○ ANIC is a flagship program of Atal Innovation Mission, NITI Aayog. ● ANIC is aim to address the Commercialization Valley of Death- supporting innovators scale over the risks associated with access to resources for testing, piloting and market creation. <ul style="list-style-type: none"> ○ ANIC 2.0 will see 18 challenges in 7 sectors, such as; E-mobility, Road Transportation Space Technology and Applications, etc. 	

10.2. RASHTRIYA GRAM SWARAJ ABHIYAN (RGSA)

Why in News?

Cabinet approved **continuation of revamped Centrally Sponsored Scheme (CSS) of Rashtriya Gram Swaraj Abhiyan (RGSA)** for implementation during the period from 01.04.2022 to 31.03.2026

Objectives	Salient Features
<ul style="list-style-type: none"> ● Develop governance capabilities of Panchayati Raj Institutions (PRIs) to deliver on the Sustainable Development Goals (SDGs). ● Enhance capabilities of Panchayats for inclusive local governance with focus on optimum utilization of available resources and convergence with other schemes to address issues of national importance. ● Enhance capabilities of Panchayats to raise their own sources of revenue. ● Develop a network of institutions of excellence to support capacity building and handholding for PRIs. ● Promote e-governance and other technology driven solutions to enable good governance in Panchayats for administrative efficiency and improved service delivery. ● Recognize and incentivize PRIs based on performance. 	<ul style="list-style-type: none"> ● RGSA is proposed to be implemented as a core CSS and will be implemented in a demand driven mode. ● It will comprise Central and State component (refer image). <ul style="list-style-type: none"> ○ Central Components of the scheme will be fully funded by the Government of India. ● Sharing ratio for the State components will be in the ratio of 60:40 except NE, Hilly States and Union Territory (UT) of J&K where Central and State Ratio will be 90:10. <ul style="list-style-type: none"> ○ However, for other UTs, Central share will be 100%. ● Coverage: All States and UTs including institutions of rural local government in non-Part IX areas, where Panchayats do not exist. <div style="text-align: center; margin-top: 20px;"> <pre> graph TD Root[Activities supported under the programme] --> National[National Level activities] Root --> State[State component] National --> N1[National plan of Technical assistance] National --> N2[Incentivization of panchayats (Awards)] State --> S1[Capacity Building & training] State --> S2[Technical support to PRIs] State --> S3[e-Enabements of panchayats] N1 --- N1a[Collaboration with academic institutions/ institutions of excellency NIRD & PR] N2 --- N2a[mission mode project on e-Panchayat] S1 --- S1a[Distance learning] S1 --- S1b[Administrative & financial data analysis & planning cell] S1 --- S1c[Panchayat Building & community hall] S2 --- S2a[Strengthening gram sabha including in PESA areas] S2 --- S2b[Training infrastructure & HR] S2 --- S2c[Innovative activities] S3 --- S3a[Projects based support for economics development/ income enhancement] S3 --- S3b[IEC(2%)] S3 --- S3c[Programme management (5%)] </pre> </div>

<ul style="list-style-type: none"> • Promote devolution of powers and responsibilities to Panchayats according to the spirit of the Constitution and PESA Act 1996. • Strengthen Gram Sabhas to function effectively as the basic forum of people's participation, transparency and accountability within the Panchayat system. • Focus areas of RGSA is <ul style="list-style-type: none"> ○ To ensure <ul style="list-style-type: none"> ✓ Basic orientation training for the Elected Representatives (ERs) of Panchayats, within 6 months of their election. ✓ Refresher trainings to be ensured within 2 years. ✓ Capacity Building of ERs ✓ Strengthening of the Panchayat – SHG partnership ○ To bridge gaps in Capacity Building and Training, Gram Panchayat infrastructure, Institutional support for innovations, promote provision of adequate manpower at GP level etc. 	<ul style="list-style-type: none"> • Priority will be given to subjects of national importance principally under following 9 themes, namely: (i) Poverty free and enhanced livelihood in villages, (ii) Healthy Village, (iii) Child Friendly Village, (iv) Water Sufficient Village, (v) Clean and Green Village, (vi) Self-Sufficient Infrastructure in Village, (vii) Socially Secured Village, (viii) Village with Good Governance, and (ix) Engendered Development in Village. • No permanent post will be created under the scheme but need based contractual human resources may be provisioned for overseeing the implementation of the scheme and providing technical support to States/UTs. • Scheme will also converge capacity building initiatives of other Ministries/ Departments for attainment of SDGs. • State Government will formulate their Annual Action Plans for seeking assistance from the Central Government as per their priorities and requirement.
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10.3. PRIME MINISTER STREET VENDOR'S ATMANIRBHAR NIDHI (PM SVANIDHI)

Why in news?

Recently, **Cabinet Committee on Economic Affairs (CCEA)** has approved **extension of PM SVANidhi beyond March 2022 till December 2024.**

Objective	Salient Features
<ul style="list-style-type: none"> • To facilitate street vendors to access affordable working capital loan for resuming their livelihoods activities, after easing of lockdown. 	<ul style="list-style-type: none"> • It was announced as a part of the Economic Stimulus-II package under the Atmanirbhar Bharat Abhiyan. • Launched in 2020 as a Micro-Credit facility under the aegis of the Ministry of Housing and Urban Affairs (MoHUA). • It is a Central Sector Scheme (CSS). • Targets to benefit over 50 lakh Street Vendors. • There will be no penalty on early repayment of loan. • Implementing partner- Small Industries Development Bank of India (SIDBI).

<ul style="list-style-type: none"> • To empower Street Vendors for their holistic development and economic upliftment. • To facilitate working capital loan up to `10,000 at subsidized rate of interest. • To incentivize regular repayment of loan by offering an interest subsidy of 7% per annum. This subsidy will be credited back on a quarterly basis. • To reward digital transactions with monthly cash back offers. 	<ul style="list-style-type: none"> • Ministry has also launched Socio-Economic Profiling of PM SVANidhi beneficiaries and their families. <ul style="list-style-type: none"> ○ Based on the profiled data, benefits of the various eligible Central Schemes would be extended to them for their holistic socio-economic upliftment. • Lending institutions: <ul style="list-style-type: none"> ○ Scheduled Commercial Banks, Regional Rural Banks (RRBs), Small Finance Banks (SFBs), Cooperative Banks, Non-Banking Finance Companies (NBFCs), Micro Finance Institutions (MFIs) & SHG Banks. • Eligibility for State/UTs: <ul style="list-style-type: none"> ○ It is available to beneficiaries from States/UTs which have notified rules and guidelines under Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014. • Eligibility Criteria of Beneficiaries/ Street vendors: <ul style="list-style-type: none"> ○ In possession of Certificate of Vending / Identity Card issued by Urban Local Bodies (ULBs). ○ Vendors who have been identified in the survey but have not been issued Certificate of Vending / Identity Card. ○ Vendors left out of ULB led identification survey or who have started vending after completion of the survey and have been issued Letter of Recommendation (LoR) to that effect by the ULB/Town Vending Committee (TVC). ○ Vendors of surrounding development/peri-urban/rural areas vending in the geographical limits of the ULBs and have been issued LoR to that effect by ULB/TVC. <p>SVANidhi se Samridhi programme:</p> <ul style="list-style-type: none"> • This exercise is being undertaken under the overall ambit of PM SVANidhi Scheme. • Quality Council of India (QCI) is the implementing partner for the programme • The programme would map the socioeconomic profile of the PM SVANidhi beneficiaries and their families, assess their potential eligibility for various Central welfare schemes and facilitate the linkages to these schemes. • The socio-economic profiling will also help States, if they deem fit, to extend their State-specific welfare schemes & benefits, to the eligible PM SVANidhi beneficiaries and their families.
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Places in News: India

Jammu and Kashmir

- Pakistan objected to the construction of Rattle and Kwar hydroelectric projects on the Chenab River.
- Cabinet has approved the 540 MW Kwar Hydroelectric Project in Kishtwar district.

Rajasthan

- Green agriculture project funded by FAO's Global Environment Facility (GEF) for conservation of critical biodiversity in Desert National Park.

Gujarat

- Madhavpur Mela organized.

Maharashtra

- Mumbai and Hyderabad have been jointly recognised as 2021 Tree City of the World' (TCW) Tag.

Karnataka

- Chennakeshava Temple of Belur started its Rathotsava (chariot festival).
- Second edition of Khelo India University Games.
- A rock-cut cave from Megalithic period found in Dakshina Kannada.

Ladakh

- Ladakh has identified proper mapping and boundary identification of Changthang and Karakoram sanctuaries.
- National Wildlife Board has cleared construction of a road from Ladakh's Saser La to Sasebrangsa.

Himachal Pradesh

- Border Roads Organisation will build the world's highest tunnel at Shinku La Pass.

Assam

- AFSPA lifted from parts of Assam.
- Discovery of megalithic stone jars in Assam's Dima Hasao district.

Nagaland

- AFSPA lifted from parts of Nagaland.
- Ceasefire pacts with three Naga groups extended by a year.

Manipur

- AFSPA lifted from parts of Manipur.

Tamil Nadu

- Prehistoric relics are discovered along the banks of three rivers flowing through Attappady hills.
- A seaweed park will be set up.

Kerala

- Prehistoric relics are discovered along the banks of three rivers flowing through Attappady hills.
- Algal bloom poses threat to Kabani River ecosystem.

Places in News: World

Turkey
President of Turkey approved changes in Electoral Laws to bolster his rule.

France
Emmanuel Macron re-elected as France President.

Israel
Clashes have erupted between Israeli police and Palestinians in Jerusalem's Al-Aqsa Mosque compound and Damascus Gate (Bab al-Amud).

Burkina Faso
A military court handed down a life term to former president

Tanzania
Samia Suluhu Hassan became the first female President.

Red Sea
US Navy has created a new task force with allied countries to patrol Red Sea amid Yemen War.

Horn of Africa
Horn of Africa is facing its worst drought in 40 years says the UN.

Maldives
Maldives President issues decree banning 'India Out' campaign.

Lithuania
Cabinet has approved the opening of a new Indian Mission in Lithuania.

Kuwait
Kuwaiti PM resigned as political crisis intensifies.

Turkmenistan
President visited Turkmenistan.

Kuril Islands
As per Japan, the disputed islands are illegally occupied by Russia.




Korean peninsula
Recently, North and South Korea leaders exchanged letters with the hope to make the Korean Peninsula peaceful.

Whakaari/ White Island
New research detects pre-eruption warning signals at Whakaari White Island and other active volcanoes.

Falklands
Argentina acknowledges Indian support for resolving Falklands dispute issue

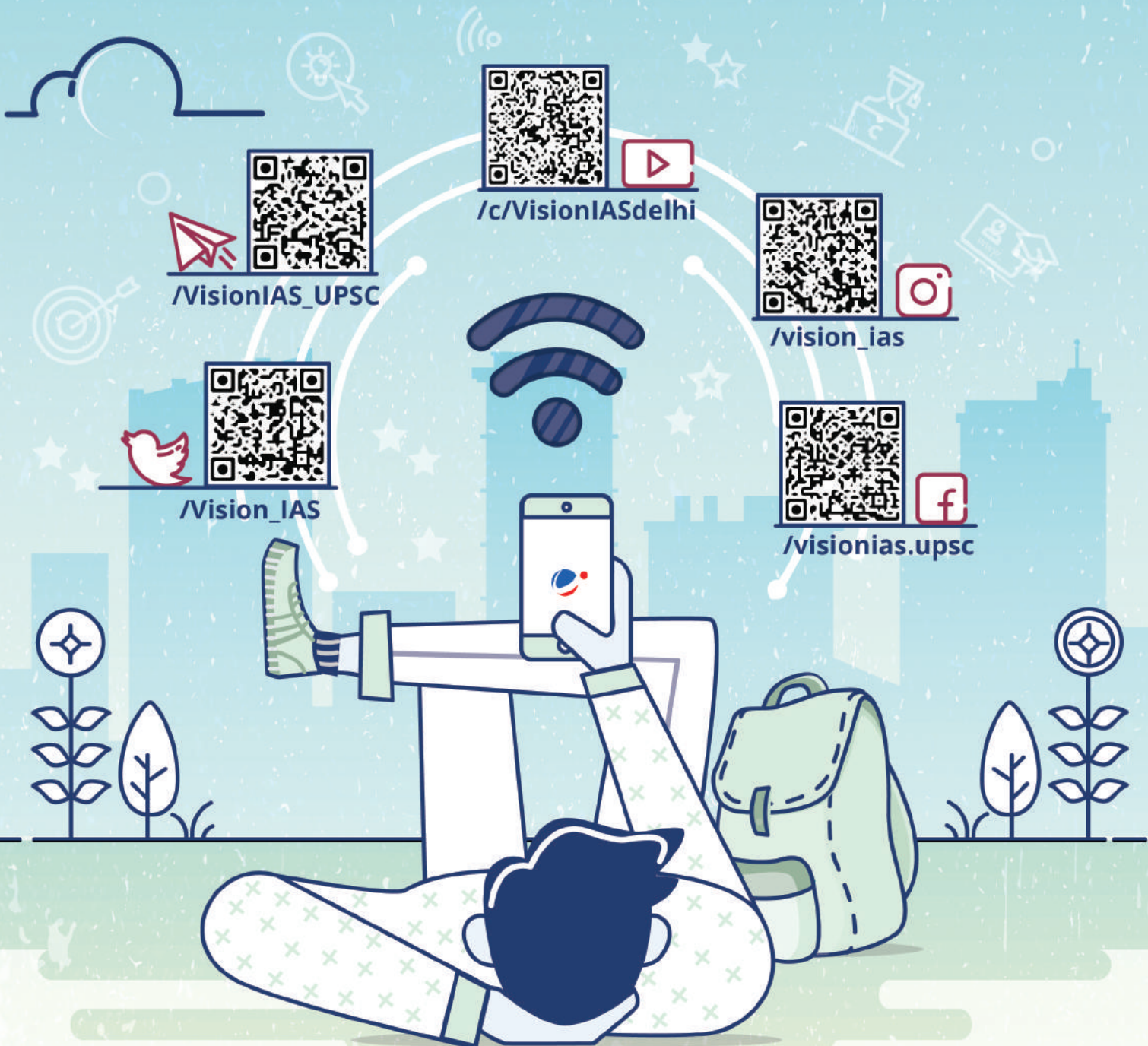
Antarctica
Scientists observed breakup of Conger Ice Shelf in eastern Antarctica.

Personalities in News

Personality	About	Ethical Values Exhibited by the personality
 <p>Guru Tegh Bahadur Ji</p>	<ul style="list-style-type: none"> • He was the youngest son of Guru Hargobind Sahib, the sixth Sikh guru. He was 9th of 10 Sikh Gurus. • Also known as "Hind ki Chaddar" (Protector of Hindu Religion) because he sacrificed his life to save Kashmiri pandits and Hindu religion. For this, he was executed in 1675 in Delhi by the orders of Aurangzeb. • His 115 hymns are included in Sri Guru Granth Sahib. 	<ul style="list-style-type: none"> • Commitment and Universal Brotherhood <ul style="list-style-type: none"> ▶ He committed himself to save a community from the oppressive ruler ▶ He committed himself to save a community from the oppressive ruler
 <p>Babu Veer Kunwar Singh</p>	<ul style="list-style-type: none"> • Popularly known as Veer Kunwar Singh, he was born in the Ujjainiya clan of the Parmar Rajputs of Jagdishpur, part of present-day Bhojpur district, Bihar. • He was a freedom fighter and at the age of 80 he led the Indian Rebellion of 1857 against the British East India Company in Bihar. • An expert of guerrilla warfare, he fought various battles against the British at Arrah, Azamgarh, Kanpur, Baliya etc. 	<ul style="list-style-type: none"> • Fearlessness and leadership <ul style="list-style-type: none"> ▶ He was an expert in the art of guerrilla warfare and his tactics left the British puzzled. ▶ As a military commander, he led the 1857 rebellion in Bihar against the British.
 <p>Charles Darwin</p>	<ul style="list-style-type: none"> • Charles Darwin, a British naturalist and biologist, is famously known as the Father of Evolution. • In 1831, he embarked on a voyage to South America on HMS Beagle and spent time on Brazil, Argentine, Chile and the remote Galapagos Island of Ecuador. • In 1859, he published 'On the Origin of Species' which gave the Theory of Evolution by Natural Selection. <ul style="list-style-type: none"> ▫ A similar-looking theory was also reached by Alfred Russel Wallace at the same time • His work influenced the development of a number of subjects including anthropology, geology, psychology, history etc 	<ul style="list-style-type: none"> • Intellectual Curiosity and Research <ul style="list-style-type: none"> ▶ He consistently contributed through his research to the field of evolutionary biology. ▶ His ideas, later has been widely used to explain social and economic views.
 <p>Sri Narayan Guru</p>	<ul style="list-style-type: none"> • He was a Hindu saint & social reformer from Kerala. • He propagated the ideas of 'One Caste, One Religion, One God' and gave a spiritual dimension to patriotism. • Values - Truth, Ethics, Compassion, Integrity, Courage, Unrighteousness. • Key achievements <ul style="list-style-type: none"> ▫ He, along with Padmanabhan Palpu, founded the 'Sree Narayana Dharma Paripalana Yogam' (SNDP) that worked towards the spiritual upliftment and education of underprivileged Ezhava community. ▫ He lent support to Vaikom Satyagraha for temple entry (1924-25) in Travancore for the lower castes' community. ▫ His works include Daiva Dasakam, Anukampadasakam etc. 	<ul style="list-style-type: none"> • Egalitarianism and Pluralism <ul style="list-style-type: none"> ▶ He was the champion of the rights of lower caste oppressed in the twentieth century Kerala. He overturned the social system of entire Kerala, while following simple means of ethical writings and social mobilization. ▶ He played a significant role in reforming the society by asserting his pluralist view with equality and liberty.
 <p>Dhundiraj Govind Phalke (DadasahebPhalke)</p>	<ul style="list-style-type: none"> • Contribution- Known as the Father of Indian cinema, <ul style="list-style-type: none"> ▫ His film, 'Raja Harishchandra' (1913), is considered to be India's first full-length motion picture which laid the foundation of filmmaking in India. ▫ Dabbled in multiple professions - photography, printing, make-up, and even magic before turning to filmmaking. • Honours: 'DadasahebPhalke Award' was instituted in 1969, which is highest official recognition for film personalities in India. <ul style="list-style-type: none"> ▫ It is presented annually by the president of India for remarkable contribution to Indian cinema. 	<ul style="list-style-type: none"> • Creativity and pioneering spirit <ul style="list-style-type: none"> ▶ He not only used to direct the films but utilized his creative instincts to act as an actor, scriptwriter, dress designer, editor and distributor. ▶ He directed and produced the first feature film in India at the time when rarely people know about cinema in India.
 <p>Alluri Sitarama Raju</p>	<ul style="list-style-type: none"> • Alluri Sitarama Raju, also known as ManyamVeerudu (Hero of the Jungles), was an Indian Revolutionary who fought for Indian Independence. • He was born in Pandurangi Village in Bheemunipatnam, near the Coastal city of Visakhapatnam and led the Rampa Rebellion (1922-24) in Godavari Agency of Madras Presidency, British India. <ul style="list-style-type: none"> ▫ It was based on guerilla warfare and he mobilised tribals and forest dwellers against the British due to their oppressive Madras Forest Act, 1882. 	<ul style="list-style-type: none"> • Fortitude and Compassion <ul style="list-style-type: none"> ▶ He was an Indian revolutionary who showed extraordinary courage by leading the rebellion against the Britishers. ▶ He travelled extensively in his teen years, deeply moved by the socio-economic conditions, especially in tribal areas, under British rule.

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**SHUBHAM
KUMAR**

(GS FOUNDATION BATCH
CLASSROOM STUDENT)



2
AIR

**JAGRATI
AWASTHI**

(ALL INDIA
TEST SERIES)



3
AIR

**ANKITA
JAIN**

(ALL INDIA
TEST SERIES)



4
AIR

**YASH
JALUKA**

(ABHYAAS
TEST SERIES)



5
AIR

**MAMTA
YADAV**

(ALL INDIA
TEST SERIES)



6
AIR

**MEERA
K**

(ALL INDIA
TEST SERIES)



7
AIR

**PRAVEEN
KUMAR**

(ALL INDIA TEST SERIES,
ESSAY TEST, ABHYAAS,
PDP)



8
AIR

**JIVANI KARTIK
NAGJIBHAI**

(GS FOUNDATION BATCH
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9
AIR

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RAIPUR | RAJKOT | RANCHI | ROHTAK | ROORKEE | SAMBALPUR | SHILLONG | SHIMLA | SILIGURI | SONIPAT | SRINAGAR | SURAT | THANE
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