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December, 2022

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2024

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DELHI

21 FEB, 9 AM | 24 JAN, 1 PM | 20 DEC, 5 PM | 15 NOV, 5 PM

AHMEDABAD: 16th Feb, 8:30 AM | **CHANDIGARH:** 19th Jan, 5 PM | **PUNE:** 21st Jan, 8 AM
JAIPUR: 15th Feb, 7:30 AM & 5 PM | **LUCKNOW:** 18th Jan, 5 PM | **HYDERABAD:** 6 Feb, 8 AM

PERSONALITY
DEVELOPMENT PROGRAMME
CIVIL SERVICES EXAMINATION - 2022

Programme Features

- DAF Analysis Session with senior faculty members of Vision IAS
- Mock Interview Session with Ex-Bureau crats/ Educationists
- Interaction with Previous toppers and Serving bureaucrats
- Performance Evaluation and Feedback

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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.

1. POLITY AND GOVERNANCE

1.1. AUDIT OF LOCAL SELF GOVERNMENT

Why in News?

Comptroller and Auditor-General of India (CAG) is planning to expand its presence up to the district level **to exercise audit control over three tier Panchayati Raj Institution (PRI).**

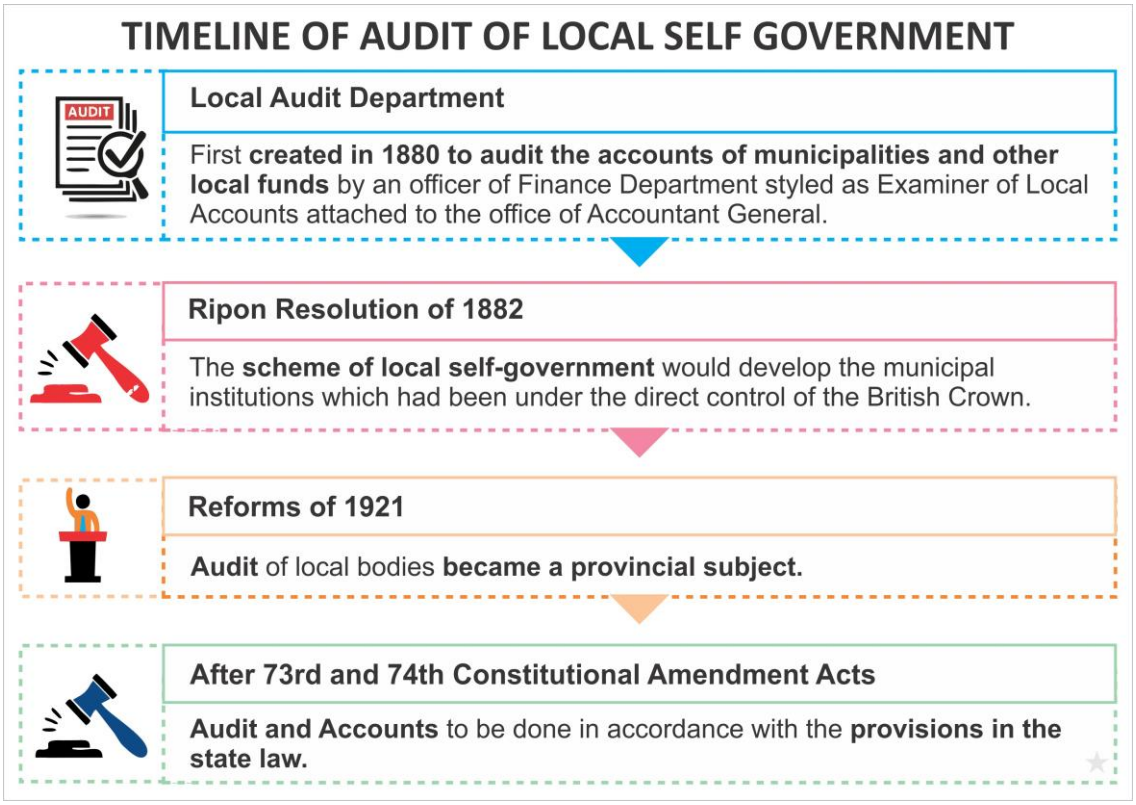
More about news

- Looking at the huge allocation of funds, the CAG has prepared a proposal to open its offices in each district and "**exercise control and supervision**" over the proper maintenance of accounts and audit of the PRIs.
- At present CAG **has presence in state capitals and its accountant general's office** is responsible for auditing accounts of state governments.

About Comptroller and Auditor-General of India (CAG)

- **Articles 148 – 151** of the Constitution of India deal with the institution of the CAG of India.
- CAG is **appointed by the President** by warrant under his hand and sea.
- Removal from office in like manner and on like grounds **as a Judge of the Supreme Court.**
- **In order of precedence, the CAG is ranked 9th** and enjoys the same status as a sitting judge of Supreme Court of India**.**
- CAG exercise such **powers and perform such duties in relation to the accounts of the Union and of the States and of any other authority or body** as may be prescribed by or under any law made by Parliament.

- While the government departments draw funds from the consolidated fund, the PRIs draw money from separate fund accounts kept in **bank or treasury.**
- As reported, the **CAG has now decided to assert its constitutional mandate to supervise all government expenditure** whether drawn from the consolidated fund or the state treasury.
    - The PRIs come under the purview of audit **under Comptroller and Auditor-General's (Duties, Powers, and Conditions of Service) Act, 1971.**



About Local Self Governance and its Audit

- Parliament passed the **73rd and 74th Constitutional Amendments in 1992**, which mandated that State governments constitute panchayats (at the village, block and district levels) and municipalities (in the form of municipal corporations, municipal councils and nagar panchayats) in every region.
- This **instituted a third-tier of governance in the federal framework** through the devolution of functions, funds, and functionaries to local governments.
- **Constitutional Provisions**
    - **Article 243 J**: The Legislature of a State may, by law, make provisions with respect to the maintenance of accounts by the Panchayats and the auditing of such accounts.

- **Article 243 Z:** The Legislature of a State may, by law, make provisions with respect to the maintenance of accounts by the Municipalities and the auditing of such accounts.

Importance of Auditing of Local Self Government

- **Ensuring the Accountability:** A large part of government expenditure directly goes to local bodies for implementation of several central and state level schemes.
  - The existing practice allows PRIs "to prepare monthly and annual accounts of receipts and payments" where **vouchers are retained by them and not submitted to the Accountant General for their audits**.
- **Irregular auditing**: The Local Self Government is audited by a local fund audit body or an agency appointed by the state and many of them are not even audited regularly.
  - The PRIs, which also mobilise revenue through rents, rates, taxes, fines, fees, etc, are **beyond the scrutiny of any central or state audit system.**
- **Transparency through different sources**: Different types of funding is involved for Local Self Government such as Public-private partnerships model in the execution of urban infrastructure, Municipal bonds, etc.
- **Democratic decentralization**: Auditing of the Local Self Government ensures the quality of democratic decentralization.
- **Public Awareness**: Public awareness and risk analysis are part of the audit plan involving PRIs.

Case study: Malur in Kolar District, Karnataka

- Audit scrutiny of records (2001–03) of Executive Officer (EO), Taluk Panchayat (TP), Malur in Kolar District disclosed that the EO **misappropriated funds aggregating Rs. 1.74 crore** by preferring fraudulent claims of works/supply bills in violation of Codal provisions.
- Sub-Treasury Officer (STO), Malur facilitated **misappropriation by passing such fraudulent bills without exercising proper checks** as prescribed in Codes and Manuals.

Challenges in Auditing of Local Self Government

- **Shortage of Staff & Lack of Skill:** The staff do not have requisite skills for maintaining accounts.
- **Lack of regular auditing** by local audit authority.
- **Bank or treasury account**: As Panchayati Raj Institution (PRIs) draw money from separate fund accounts kept in bank or treasury which get audited by local auditor is difficult to audit.
- **Local Bureaucracy** strength is low and have lack of skill in maintaining data in the Audit format.

Ways to ensure Accountability

- **Accounting standards:** CAG can prescribe accounting standards and accounts formats for local government accounts to ensure a degree of uniformity.
- **Dedicated agency**: As suggested by 11th Finance Commission the Director, Local Fund Audit or any other agency made responsible for the audit of the accounts of local bodies, should work under the technical guidance and supervision (TGS) of the C&AG Laying down auditing standards
- **Submission of Audit Report:** Report of the CAG relating to audit of accounts of Panchayats and Municipalities should be placed before a **Committee of State Legislature** constituted on the same lines as a Public Accounts Committee.
- **Skill upgrading**: There is an urgent necessity for substantial technical skill upgrading among local fund auditors.
- **Social Audit**: Developing social audit 'is very essential' to improve the PRI mechanism, increase accountability and transparency as involve the people in Audit.

1.2. DELEGATED LEGISLATION

Why in News?

Recently, Supreme Court Supreme Court observed that a **delegated legislation which is ultra vires the parent Act cannot be given any effect.**

More about News

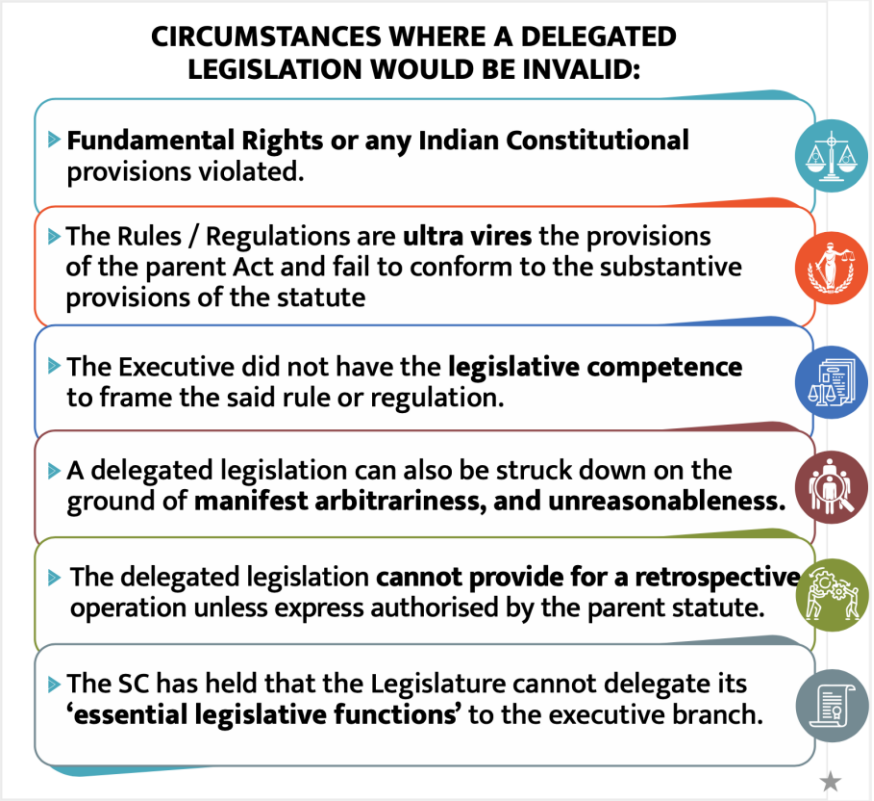
- Case is an appeal filed by **the Kerala State Electricity Board against a State High Court** decision which upheld Kerala Electricity Supply Code, 2014.
- As per ruling, Delegated legislation should not travel beyond the purview of the parent Act.

- If it does, it is **ultra vires** and cannot be given any effect.

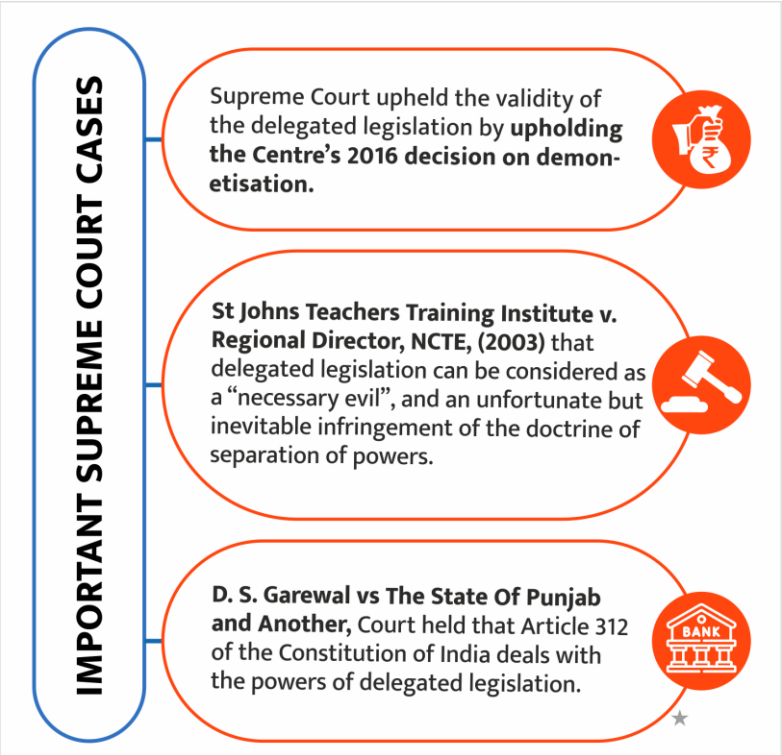
- SC held that **Delegated legislation**, including rules and regulations formed by State and Central authorities, **should not supplant but supplement the parliamentary statute from which it draws power from.**

About Delegated Legislation

- It is a process by **which the executive authority is given powers by primary legislation** to make laws in order to implement and administer the requirements of that primary legislation.
- Parliament thereby, through primary legislation, enables others to make law and rules through a process of delegated legislation.
- Under the **Constitution of India**, legislative power is given to the legislature while the Executive has the power to execute the laws.
  - Due to **paucity of time**, the legislature **limits itself to policy matters**; **delegating** the task of **rule and regulations** to **executive** or any subordinate to supplement **parliamentary statute**.



- **Purpose of Delegated Legislation**
  - **Provide Flexibility in making necessary changes**: It enables the Government to make a law without having to wait for a new Act of Parliament to be passed.
  - **Reduces pressure on Parliament**: The number of activities in states is expanding which requires law and it is not possible for the Parliament to devote sufficient time to every matter.
  - **Decentralized and Sector specific rule/regulation making:** Such as in the sphere of corporate law, the tendency of the law makers is to enact 'bare-bone' statutes such as the SEBI Act, 1992 and the Foreign Exchange Management Act, 1999, etc.
  - **Modern Administration getting more complex**: Functions of the state being expanded and rendered to economic and social spheres too, there is a need to shift to new reforms and providing more powers to different authorities on some specific and suitable occasions.



Issues in Delegated Legislation

- **Low Scrutiny of Delegated Legislation**: Standing Committee on Subordinate Legislation in both houses of parliament is required to study the rules, seek expert and public opinion and submit reports to the house.

- Unfortunately, a study has shown that from 2008 to 2012, **only 101 pieces of delegated legislation, out of a total of 6,985 had been scrutinised by the committees.**

- **Frequency** with which the rules and regulations are notified is very high.
  - For Example since the enforcement of the Companies Act, 2013 ("2013 Act"), the MCA has notified 56 Rules under the Act, and issued 181 Circulars.
- **Against the spirit of Democracy** as unelected person is involved in rules framing and **Political motive** can also come in delegated legislation.
- **Abuse of ruling making powers by the executive**: Failure to oversee delegation legislation can lead to abrogation and abuse of ruling making powers by the executive.
  - Bad rules will inevitable lead to litigation and increase the existing backlog of cases.
- **Overlapping of the Function**: As the delegated authorities get work to amend the legislation that is the function of the legislators.

Suggestion

- **Amending parliament procedures:** Parliament procedures must be amended to require the affirmation of every rule laid through a vote.
- **Additional working committees** under Standing Committee on Subordinate Legislation, with legal and policy experts to help undertake a comprehensive study of all the rules placed in the parliament.
- **Reasons for the delay** to draft the rules within six months from the date of commencement of an Act must be mentioned before the committee.
- **Coordination between MPs and Committees**: If a piece of subordinate legislation is referred to the committee by an MP for an analysis on specific grounds, then it must be mandatorily undertaken and reported to the house in a time bound manner.

1.3. APPOINTMENTS OF ELECTION COMMISSIONERS

Why in News?

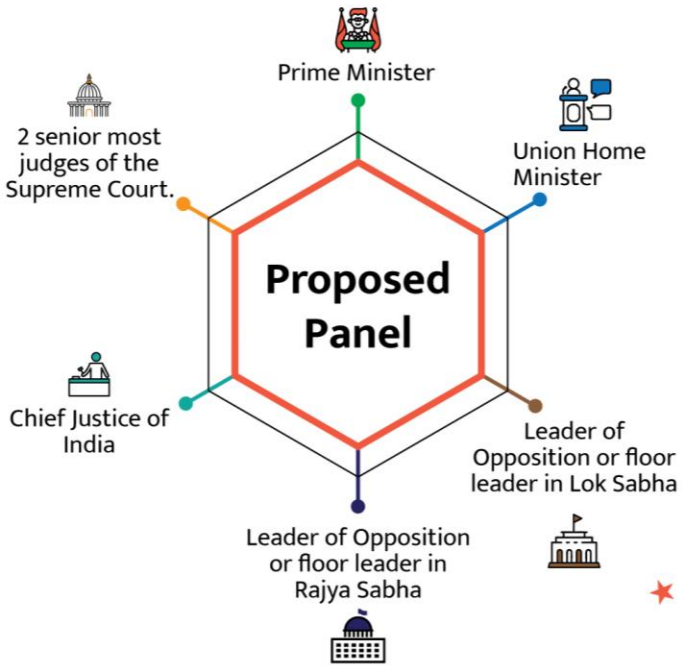
Recently, a private member's Bill was introduced in Lok Sabha regarding **formation of selection committee for Election commissioners.**

About Private member Bill

- Any bill **introduced by a member other than a minister.**
- Can only be **introduced and discussed on Fridays.**
- **Admissibility is decided by Chairman** in case of Rajya Sabha **and Speaker** in case of Lok Sabha.
- No private member's bill has become an Act since 1970.

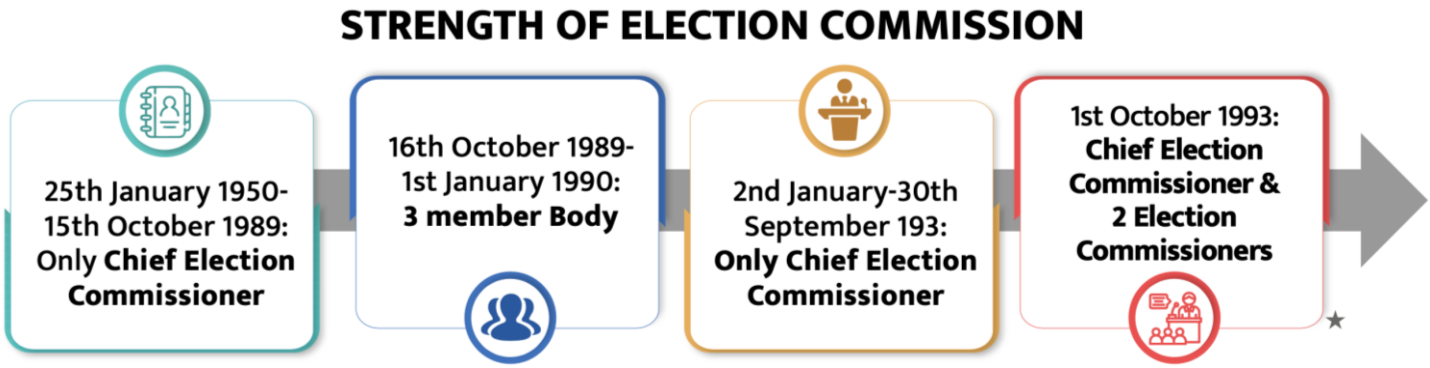
More about News

- Bill seeks to **insulate the appointment process of election commissioners** and mandates that they **should not be eligible for any post-retirement jobs.**
- It seeks the **members of the EC, including the Chief Election Commissioners (CEC)**, to be **appointed by PM Led panel**. (refer infographics)
- Bill seeks to give **Chief Election Commissioner and Election Commissioners a fixed term of 6 years** and the **Regional Commissioners a fixed term of 3 years** from the dates of their respective appointments.
- This bill also comes in the backdrop of **Supreme Court (SC) is hearing petitions on need for reforms in appointment** of CEC and Election Commissioners (EC).
  - SC has questioned government on **method to pick CEC** and also asked centre for **reasons of not come up with any law to regulate appointment of CEC and ECs yet.**



About Election Commission of India

- **Under Article 324,** Election Commission of India (ECI) is an autonomous constitutional authority **responsible for administering Union and State election processes in India.**
  - It administers **elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies in India, and the offices of the President and Vice President** in the country.
- Under the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991, **Chief Election Commissioner (CEC) and Election Commissioners have tenure of 6 years**, **or up to the age of 65** years, whichever is earlier.
- They enjoy the same status and **receive salary and perks as available to Judges of the Supreme Court of India.**
- **CEC is provided with the security of tenure** as he cannot be removed from his office in like manner and on the like grounds as a Judge of the Supreme Court.
  - The **conditions of service of the Chief Election Commissioner shall not be varied** to his disadvantage after his appointment:
  - While any **other election commissioner or a regional commissioner** cannot be removed from office **except on the recommendation of the chief election commissioner.**
- **Constitutional provisions for appointments**
  - Under **Article 324(2)**, the President of India is empowered to appoint the CEC and the ECs.
  - Article 324(2) **empowers the President** of India to fix from time to time the **number of Election Commissioners other than the CEC.**



Issues related to appointment/removal of CEC and EC

- **Role of ruling party:** Appointment is done solely by executive thus giving unfettered discretion to ruling party to choose someone whose loyalty to it is ensured.
- **No prescribed qualifications:** Constitution has not prescribed qualifications (legal, educational, administrative or judicial) of CEC/EC.
- **Difference in removals:** Safeguards to CEC from arbitrary removal (can be removed from office only by order of President, just like a judge of Supreme Court). However similar protection is not provided to ECs.
- **Truncated tenures:** No CEC has completed a 6-year tenure since 2004, therefore CEC is unable to do anything substantial.
- **Silence over post-retirement jobs:** Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 is silent regard to the further appointment of the CEC and ECs to any post or office under the government after their retirement.
  - There is also nothing in the Conditions of Service Act to prohibit a CEC or EC from **joining any political party after retirement.**

Way Forward

- **Collegium System:** There is a need for a collegium that decides on the appointment of the Election Commissioner.
- **Post retirement:** Dinesh Goswami Committee on Electoral Reforms in 1990, had recommended that the CEC and ECs should not be eligible for any further office under the government, including the office of Governor and Lt. Governor, and that an EC should be eligible only for appointment as CEC.

- **Adopting 255th Law Commission of India report recommendations strengthening the office of the Election Commission of India:**
  - **Giving equal constitutional protection** to all members of the Commission in matters of removability.
  - Making the appointment process of the Election Commissioners and the CEC **consultative with selection committee.**
  - Creating a **permanent, independent Secretariat** for the ECI to improve the independence of the ECI.

To know more about Electoral Reforms, please refer to our following Weekly Focus Document.

Electoral Reform: An Approach to Effective Democracy

Elections have become India's great festivals-festivals which have been marked since the seventies by rigging, booth capturing, threat to voters and violence in a large number of constituencies in several states. The need for electoral reforms has been recognised by all political parties and many suggestions have been made in this regard. This document explains the basics of free and fair elections, shortcomings of the entire election process and takes one on the journey of electoral reforms in India.

1.4. NEWS IN SHORTS

1.4.1. CBI'S CONVICTION OF CASE COMES DOWN

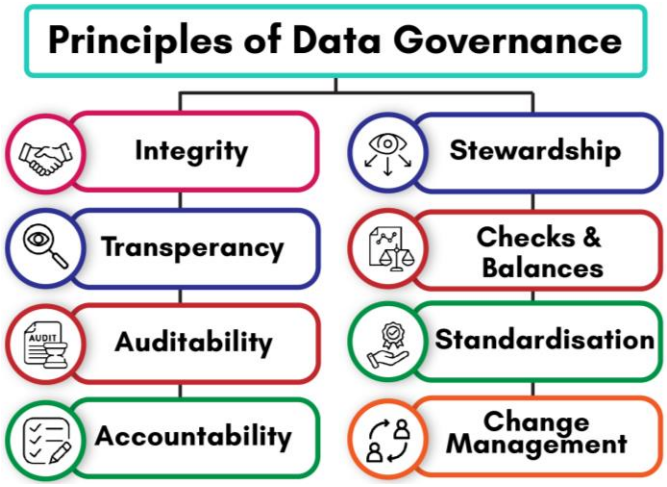
- Recently, action taken report on **Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice** on **112th report** was presented to Rajya Sabha.
- **Major observations and recommendations of committee are as follows:**

Specifications	Observations	Recommendations
Personnel Management	**Huge manpower shortage** (over 1500 IAS officers) with 21 services awaiting **cadre review**.	Designate **Department of Personnel and Training** as **nodal agency** to monitor backlog on reserved vacancies.
Integrity, Vigilance, Transparency and Service Matters	• **High pendency** at Central Administrative Tribunal (CAT), Central Vigilance Officers (CVOs), Central Bureau of Investigation (CBI) etc. • **Cases ending in conviction from CBI have declined** from 743 (in 2012) to 202 in 2021).	• **Filling vacant posts at CAT,** specifying time limits for action on complaints by CVOs and rationalization of strength at CBI. • Put in place a **Case Management System** to **track progress of pending cases**.
General Consent	• **9 states have withdrawn their general consent to CBI** which hampered seamless investigation of cases.	• Before withdrawal of general consent, states should consider **complex nature** involving **multiple agencies spread across many states** and those **involving foreign elements**.
Recruitment	• **No provision for Direct recruitment** of candidates **above rank of sub-Inspector** in CBI.	• Should be provision for **direct recruitment of candidates** in rank of **Inspector/DSP.**

1.4.2. DIGITAL INDIA AWARDS (DIA) 2022

- Smart Cities Mission (SCM), Ministry of Housing and Urban Affairs won Platinum Icon in Digital India Awards (DIA) 2022.
- DIA **honours innovative digital solutions** by government entities **in realising Digital India vision.**
  - These are **conducted by National Informatics Centre** under Ministry of Electronics & Information Technology (MeitY).
  - Award was given for **DataSmart Cities: Empowering Cities through Data initiative of SCM.**

- **DataSmart Cities (DSC) initiative**, launched under National Urban Digital Mission, **aims to harnesses power of data for better governance** in India's 100 Smart Cities.
    - It uses a **three-pronged approach – People, Process, Platforms** – to imbibe a **culture of data awareness** and **data usage in city functioning.**
- **Benefits of DSC**
    - Will **help City administrators in making better policies** leading to **greater efficiency in service delivery and resource allocation.**
    - **Solving complex problems** such as congestion, sanitation etc. **through Citizen Empowerment.**
    - **Promotion of Multidisciplinary Research** on Civic issues.
    - Enhanced **transparency and accountability** by making reliable data available through data platforms.
- **Initiatives taken to promote DSC**
    - **Smart Cities on Open Data Portal** for sharing cities' data on common platform.
    - **India Urban Data Exchange platform** for exchange of data.
    - **Assessment & Monitoring Platform for Liveable, Inclusive & Future-ready urban India (AMPLIFI)**



1.4.3. NORTH-EASTERN COUNCIL (NEC)

- To mark 50 years of NEC, Prime Minister stated that government should work on **8 pillars for North east development,** viz. Peace, Power, Tourism, 5G connectivity, Culture, Natural farming, Sports, Potential.
- PM inaugurated **'Grih Pravesh' programme in Tripura** for more than two lakh beneficiaries under Pradhan Mantri Awas Yojana (Urban and Rural) schemes.
- **Other initiatives for development of North East**
    - **'Act Fast for Northeast' and 'Act First for Northeast'** Policy.
    - **PM's Development Initiative for Northeast (PM-DevINE)** will lead to creation of infrastructure, employment generation etc.
    - **Dhola Sadiya bridge**, country's longest bridge over Lohit River in Assam.
    - **Indian-Myanmar-Thailand trilateral highway** and Agartala-Akhaura rail project.
- NEC was established in 1972 as **nodal agency for economic and social development of North Eastern Region (NER).**
    - It works under administrative control of **Ministry of Development of NER.**
    - **Union Home Minister** is **ex-officio Chairman** of NEC.
    - **NEC achievements in last eight years**: 74% reduction in insurgency incidents, 60% reduction in incidents of attacks on security forces etc.

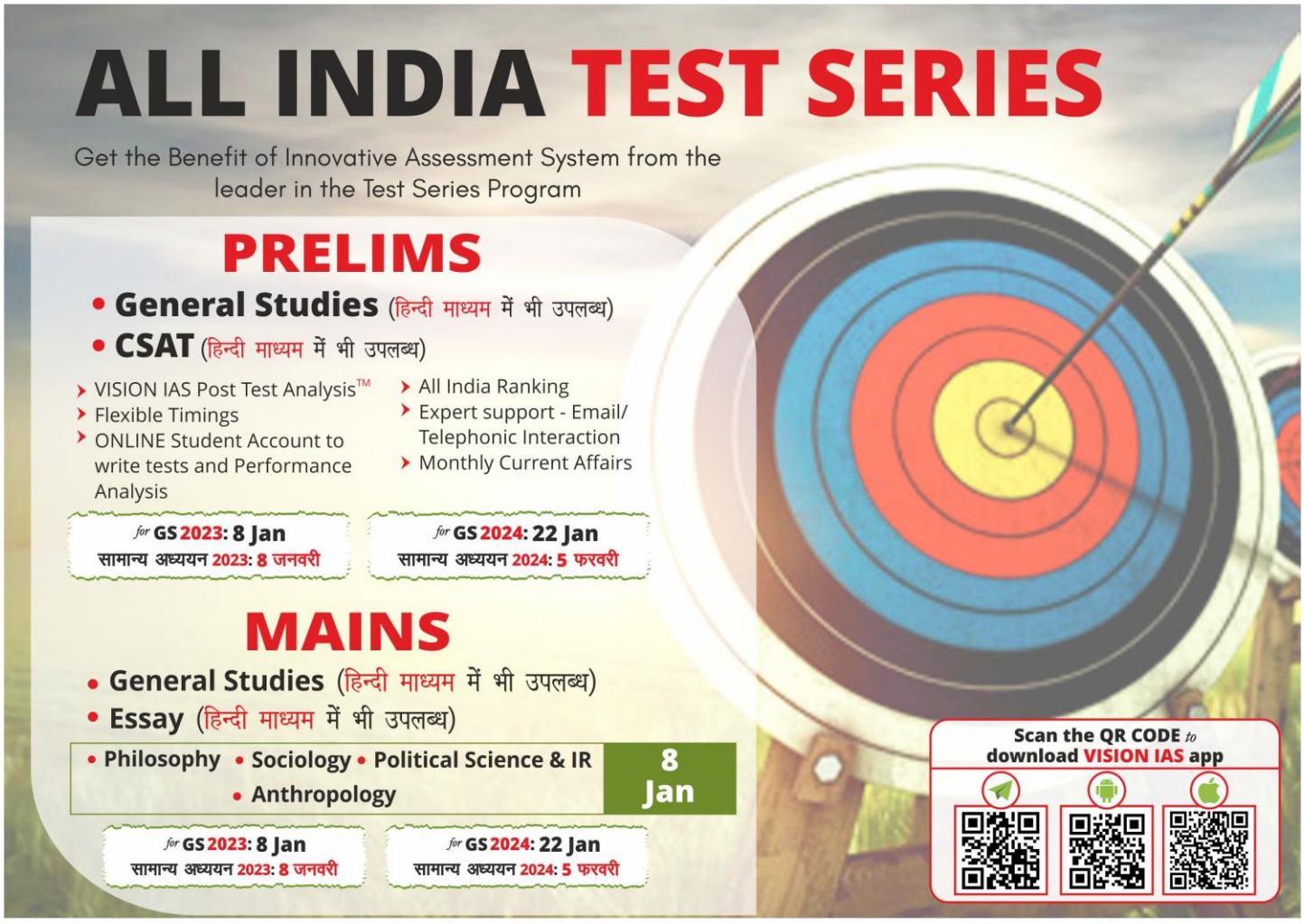
1.4.4. MAHARASHTRA-KARNATAKA INTER-STATE BORDER DISPUTE

- Boundary dispute between two states traces its origin to **reorganisation of states along linguistic lines via State Reorganisation Act, 1956.**
- Since its creation in 1960, **Maharashtra** has been **demanding 865 villages from five districts of Karnataka** (Belagavi, Karwar, Vijayapura, Kalaburagi and Bidar) where **Marathi-speaking people are in majority.**
- In 1967, **Mahajan Commission**, constituted by Centre, **rejected Maharashtra's claim over Belagavi** (then Belgaum) and recommended transferring some of villages to Maharashtra and others to Karnataka.
    - Report was **rejected by Maharashtra** and **Maharashtra challenged State Reorganisation Act, 1956** under Article 131 of Constitution (original Jurisdiction of SC) in 2004.
    - Karnataka has **resorted to Article 3** of Constitution i.e., **only Parliament has power to decide borders of states.**
    - **Belagavi is currently part of Karnataka**.
- Demarcation of boundaries have resulted in **interstate border disputes in around 11 states and 1 Union Territories.**
    - For example, Andhra Pradesh-Odisha, Haryana-Himachal Pradesh, UT of Ladakh-Himachal Pradesh, etc.
- **Centre's stand**: Such **disputes can be resolved only with cooperation** of States concerned wherein Centre acts only as a facilitator for amicable settlement of the dispute.

1.4.5. PROBITY PORTAL

- **Revamped probity portal has been launched** by Department of Personnel and Training (DoPT).
  - Probity is the quality of **having strong moral principles** (such as honesty, uprightness, transparency and incorruptibility) **and strictly following them.**
- Probity Portal was **launched in 2017 to capture data from all Ministries/Departments/Autonomous Organizations/Public Sector Banks** in respect of issues like:
  - **Number of cases pending** for sanction for prosecution.
  - Implementation of **Rotational Transfer Policy.**
  - Number of **penalty disciplinary proceedings**.
  - **DoPT has now completely revamped** the Portal **to add more functionalities to improve user experience**.

QUIZ **SMART QUIZ**	You can scan this QR code to practice the Smart Quiz of Polity at our open test online platform for testing your understanding and recalling of the concepts.	



2. INTERNATIONAL RELATIONS

2.1. UNITED NATIONS AND INDIA'S NORMS

Why in news?

India has proposed reforms in United Nations via **NORMS (New Orientation for Reformed Multilateral system)** to determine a global order that best **reflects contemporary realities**.

More about news

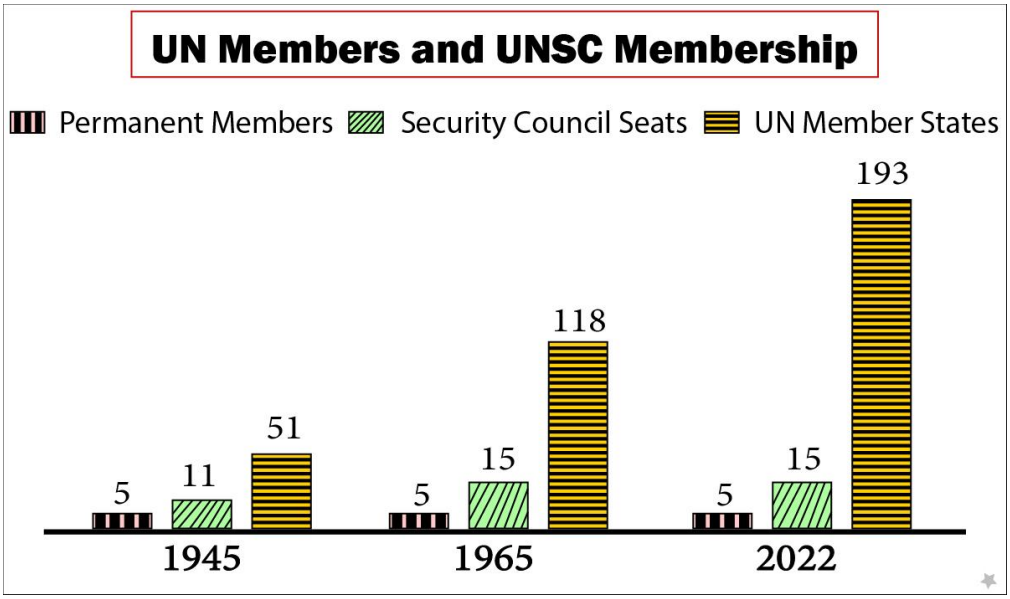
- Multilateralism is an **institutionalized collective action by an inclusively determined set of independent states**.
  - Truly multilateral **organizations are open to all states meeting specified criteria**.
  - The rules of multilateral organizations are publicly known and persist over a substantial period of time.
- NORMS envisages reform in **all three pillars of the current multilateral architecture** (peace and security, development, and human rights), with the **UN at its centre.**
- It calls for a **representative multilateral structure** which is needed to **address emerging challenges** such as terrorism, radicalism, pandemics, threats from new and emerging technologies and so on.
- India **proposed the idea while presiding on the UN Security Council open debate** on 'Maintenance of International Peace and Security'.
  - It had taken over **presidency of UNSC** for December 2022 (final month of its **two-year term as a non-permanent member** in council).

About UNSC

- It is United Nations' **principal crisis-management** body, empowered to **impose binding obligations** on 193 UN member states to **maintain international peace and security.**
- **Membership (15 Members):**
  - **Five permanent members (Collectively P5)** with veto power: China, France, Russia, UK and USA.
  - **Ten non-permanent members** elected by United Nations **General Assembly** by a two-thirds majority They serve **two-year, non-consecutive terms,** are **not afforded veto power.**
- **Council's presidency:** Held by **each of members** in turn **for one month,** following **English alphabetical order of Member States names.**
- **Tools for conflict management:** UN Charter authorizes council to call on parties to seek solutions **via negotiation, arbitration, or other peaceful means**. Failing that, it also empowers Council to take **more assertive actions**, such as **imposing sanctions or authorizing use of force.**
  - Peacekeeping missions are **most visible face** of United Nations' **conflict-management work.**

Need for UN reforms

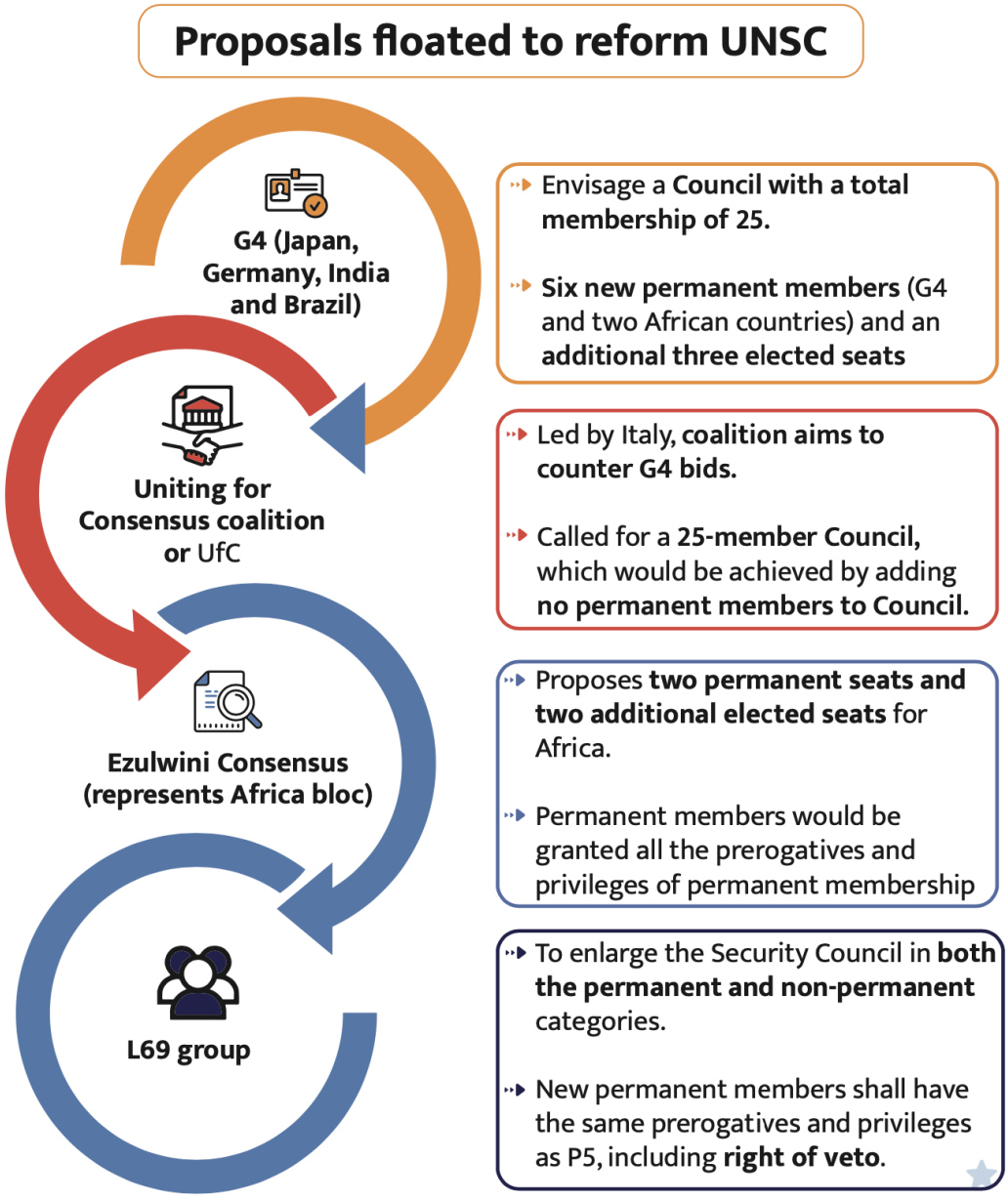
- **Lack of inclusivity and representation:** Basic structure of UNSC has **remained almost unchanged** since its foundation more than 75 years ago (Refer graph).
  - With **profound changes in realities of global community**, Security Council is being questioned in terms of its **legitimacy, effectiveness, and representativeness**.
  - **No African or Latin American** country has been given representation, while Europe **enjoys 'over-representation'** among P5.
  - **More than 50** UN member states have **not yet served on council**.



- **Lacunae in enforcement mechanisms:** A recurring criticism of the UN is its inability to **effectively enforce mandates**.
  - UN is only **as effective as member states allow** and members go to great lengths **to ensure national sovereignty**. Thus, it has become hostage to **geopolitical competition and ideological struggles.**

- U.N.'s response to Russia's invasion of Ukraine **has been anaemic**. General Assembly passed **nonbinding recommendations.** Other organizations also **condemned** Russia's actions, but **punitive measures** have been largely absent.

- **Changes in role**: Issues that UN and UNSC deals with have **diversified over past 75 years** including: peacebuilding, conflict prevention, non-proliferation, counterterrorism and protection of civilians.
  - **Does not represent contemporary realities**: UN is considered a reflection of **power hierarchy** of world **after Second World War.** World has seen **many changes** since then. There is a rise of number of **major economic and military powers** like India, Brazil, Japan etc.
  - UN needs a Council which can come up with **effective resolutions and implement its decisions in a timely and efficient manner.**
- **Misuse of veto powers:** Misuse of veto power is criticized for **stalling governing capacity** of UNSC.
  - P5 have been accused of **misusing their veto** to suit their national agendas **at detriment of global security**.
  - For e.g., **Russia vetoed** resolutions **on Ukraine**, China has deployed it against India to **'safeguard' Pakistan based terrorists** etc.



Hurdles in reforms

- **Require huge support**: For amendments to enter into force, they need to have a **two-thirds vote of support** in UN General Assembly and **two-thirds of assembly's member states**, including P-5 ratified them.
- **Lack of consensus:** Though there is consensus that **council should be expanded**, substantial disagreements remain **regarding the particulars**.
  - UN Charter has **failed to provide criteria** to become a permanent member of UN Security Council.
- **Lack of support from P5**: In past, the U.S. voiced concern that enlargement could **further weaken effectiveness** of Council.
  - This problem will grow if new permanent members also are **granted veto power**.
  - Proposals to **eliminate or limit veto** through charter amendment will be received sceptically by current P5.

Way Forward

- **Expansion of UN**: The secretary-general's recommendation **to focus reforms on three pillars—the UN development system, peace and security, and management—should be seen as a serious contribution** to a process of change.
  - The **Security Council, including its permanent membership, should be enlarged** to grant broader regional representation.
- **Conduct of Business: Procedural changes** could enhance such a limited reform, like the **recent General Assembly resolution requiring a formal meeting** after a permanent member **casts a veto** to debate the matter.
- **Focus on Core Issues**- Three primary threats endanger the existence of humanity: climate change, infectious disease, and nuclear weapons.
  - A **permanent coordinating platform should be set up to integrate the UN response** across agencies, funds, and related organizations, and to act quickly, comprehensively, and efficiently in various fields.
- **Digital Co-operation**- Data is **now a major economic asset, but its use and consequences go well beyond commercial issues** to matters such as the quality of society and political systems.
  - A **UN-led process in this regard would establish a much needed framework for data collaboration platforms to power a post-COVID-19 recovery** and achievement of the Sustainable Development Goals.

2.2. G20 BALI DECLARATION

Why in News?

The 17th G20 summit concluded recently with the adoption of Bali declaration.

More on News

- The motto for this G-20 summit was **Recover Together, Recover Stronger**.
- Also, India took over the presidency of G20 from Indonesia.

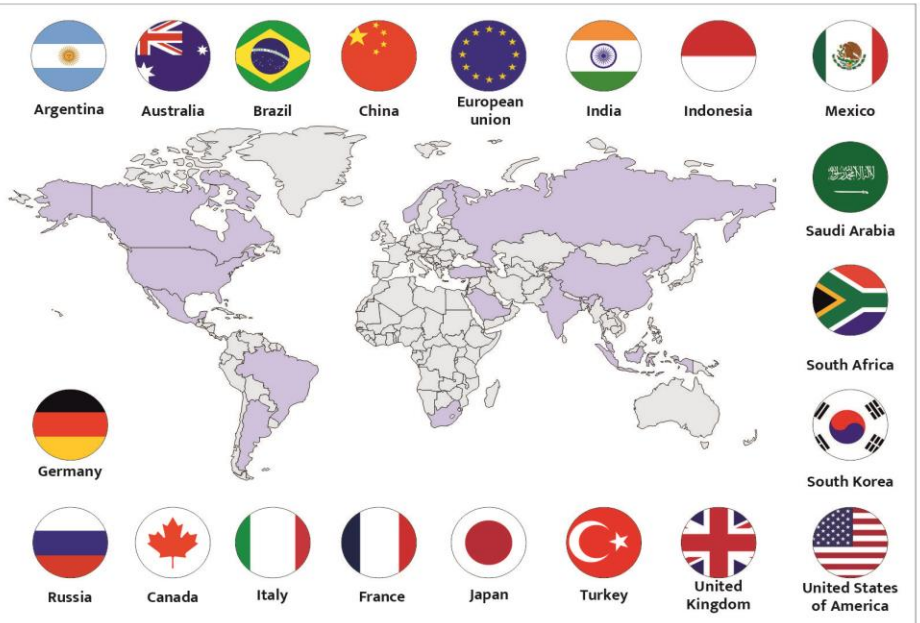
Key Highlights of the Bali Declaration-2022

- The Group **highlighted its differences in the on-going war in Ukraine** and asked for Russia's complete withdrawal from the territories of Ukraine.
- **Group also reassured its Commitment to secure Global Food security.**
  - **The Group welcomed the Black Sea Grain initiative brokered by Turkey and UN.**
    - ✓ **It is an** MoU **signed between Russia and UN Secretariat** to allow export from Russia and Ukraine on food products and fertilizers, to ease the tension in the region.
- The Group has welcomed the provision of additional financial resources, to assist in financing critical gaps in **implementing International Health Regulations (2005)**
  - It also applauded the establishment of a new **Financial Intermediary Fund for Pandemic PPR (the 'Pandemic Fund') hosted by the World Bank.**

Need for reforms in other multilateral institutions

- **West Dominated**: Multilateral Institutions are dominated by West where **European and American interests have prevailed**. For eg, Institutions like International Monetary Fund condition loans on features like **trade liberalization, private enterprise, and an overall reduction** in public spending.
- **Procedural issues**: Procedural issues with multilateralism concern the way that d**ecisions are made and implemented.** For instance, established multilateral organizations arguably **do not meet standards of accountability and transparency** that are considered legitimate.
  - A recent example is **ambiguity and lack of transparency** in World Health Organization's investigation on origins of the COVID-19.
- **Backlash against globalization**: Signs of crisis of globalization can be seen in **recent events like BREXIT, trade wars among nations,** recurrence of deadlocks in Doha Round**, paralysis of dispute settlement body** of WTO due to blocked appointments/re-appointments of judges in its **Appellate Body**.
- **Funding gap:** Despite growing share of **official development assistance** channeled through multilateral organizations, their resources fall short.

G20



- A premier forum **for international economic cooperation**.
- Founded in 1999 **after Asian financial crisis** as a forum for Finance Ministers and Central Bank Governors **to discuss global economic and financial issues.**
- **Annual Summit held** under leadership of a rotating Presidency.
- **No permanent secretariat**.
- Past, present, and incoming presidents—**Troika—support Presidency.**

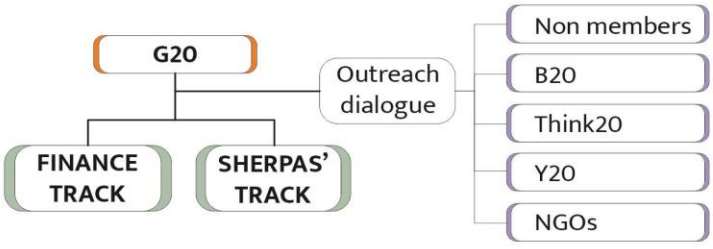
Importance of G20

80% of global GDP

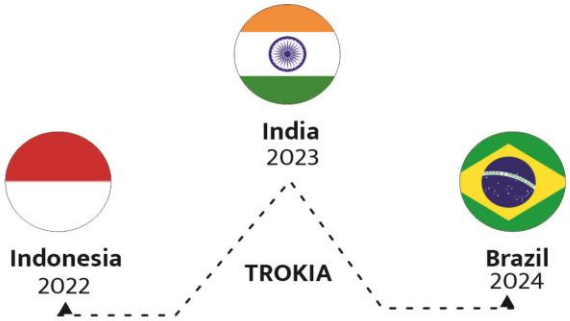
75% of International trade

60% of global population

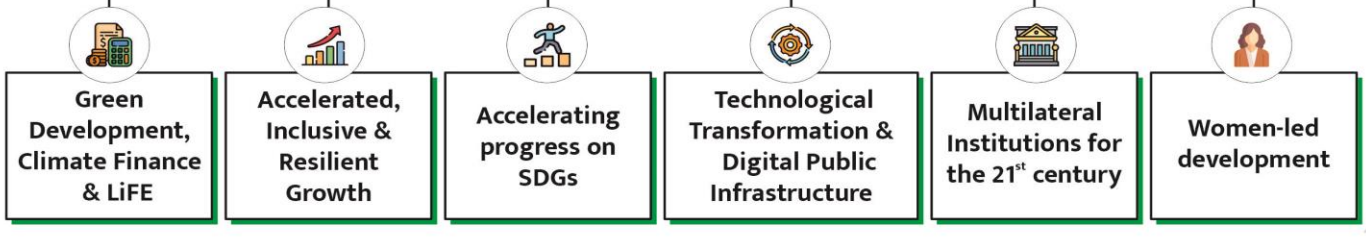
Structure of the G20 preparatory process



G20 Presidencies



India's G20 Priorities:



Significance of G20 in current Geopolitical situation

India's G -20 Presidency

- **The theme of India's Presidency** - **"Vasudhaiva Kutumbakam" or "One Earth · One Family · One Future"**
- The theme affirms the value of all life on the planet Earth and also spotlights **LiFE (Lifestyle for Environment)**, both at the level of individual lifestyles as well as national development.
- India has created a new working group on disaster risk reduction to encourage collective work by the G20.
- India will **host over 200 meetings in over 50 cities across 32 different work streams**.

- **Authority on major international economic issues -** The G20 plays an important role in shaping and strengthening global architecture and governance on international economic issues.
  - It was particularly useful in **steering the global economy after the global financing crisis and banking collapse of 2008.**
  - G20 has spearheaded reforms **for international financial institutions such as reforms to the international tax system, through the G20/OECD Base Erosion and Profit Shifting (BEPS) project**.
- **Egalitarian grouping –** it is an acceptable medium between the **more elitist G-7**, and the **38-member Organisation for Economic Co-operation and Development (OECD).**
  - Over the past two decades, **global economic balance has shifted, and G-20 has been seen as a more representative and egalitarian grouping of global leadership.**
- **Focus on low-income countries**- It is a platform **where leaders' commit to working with developing countries**, **particularly low-income countries** by providing policy coherence, analysis and practical tools to support growth and development.
  - It recognizes that development and global economic issues cannot be tackled separately.
- **Fulfilment of SDGs** - achievements include measures to drive sustainable growth and enhance global stability; co-operation on tax transparency, lowering cost of remittances and increased female participation etc.

Challenges for G20

- **Internal Governance Challenge** – Though the group was intended to be more inclusive than G7, there is no formal membership criteria established still.
  - The membership is **based on a country's systemic importance to global financial markets and its contribution to GDP** and trade only.
  - There is no inclusive membership for the least developed countries.
- **No Code of Conduct established –** There is a lack of a code of conduct for members and clear, enforceable rules that enable action against members if they breach any rules.
  - The Group could have had a better say in the on-going Russia-Ukraine war, if such codes were established.
- **Multilateral commitments on aid and trade are faltering** - This is because the role of the United Nations and the World Trade Organization in securing cooperation between donor and recipient country groups is losing centrality.
  - There are now three socio-economic systems — the G7, China-Russia, and India and the others — and they will jointly set the global agenda.
- **Geopolitical tensions -** Geopolitical tensions, spurred by strategic competition between China and the United States, have increasingly threatened cooperation within the group.
- **Countries are turning to international lenders for bailouts** - The G20 introduced a common framework for debt treatment ahead of its 2020 summit, but only three countries—Chad, Ethiopia, and Zambia—have requested debt relief under the framework.
  - Others have gone towards organisations like IMF.
- **Friction regarding climate change -** China, India, Russia, and Saudi Arabia reportedly blocked an agreement on phasing out coal use and fossil fuel subsidies at a July 2021 meeting of environment ministers.
  - Also, following the invasion of Ukraine, Germany and other G20 countries have reneged on previous promises to stop financing fossil fuel projects overseas.

Way forward

- **Revised theoretical framework of macro and microeconomics** – G20 members need to incorporate lessons from the recent crisis to advocate policy actions based on economic theory that needs revision.
- **Avoiding Internal Fracturing -** Collective action and problem solving should be encouraged that transcends traditionally like-minded groups of countries.

- **Improving Outreach -** The G20 must promote equitable international economic arrangements that provide a larger voice and role for the major economies of the global South.
    - The G20 must also reach out to non-member states and non-state actors and give voice and consideration to their concerns.
- **Establishing a code of Conduct for the members-** by having an established code of conduct the Group can have a better say on controlling the acts of aggressive members like China and Russia.

2.3. BAY OF BENGAL INITIATIVE FOR MULTI-SECTORAL TECHNICAL AND ECONOMIC COOPERATION (BIMSTEC)

Why in News?

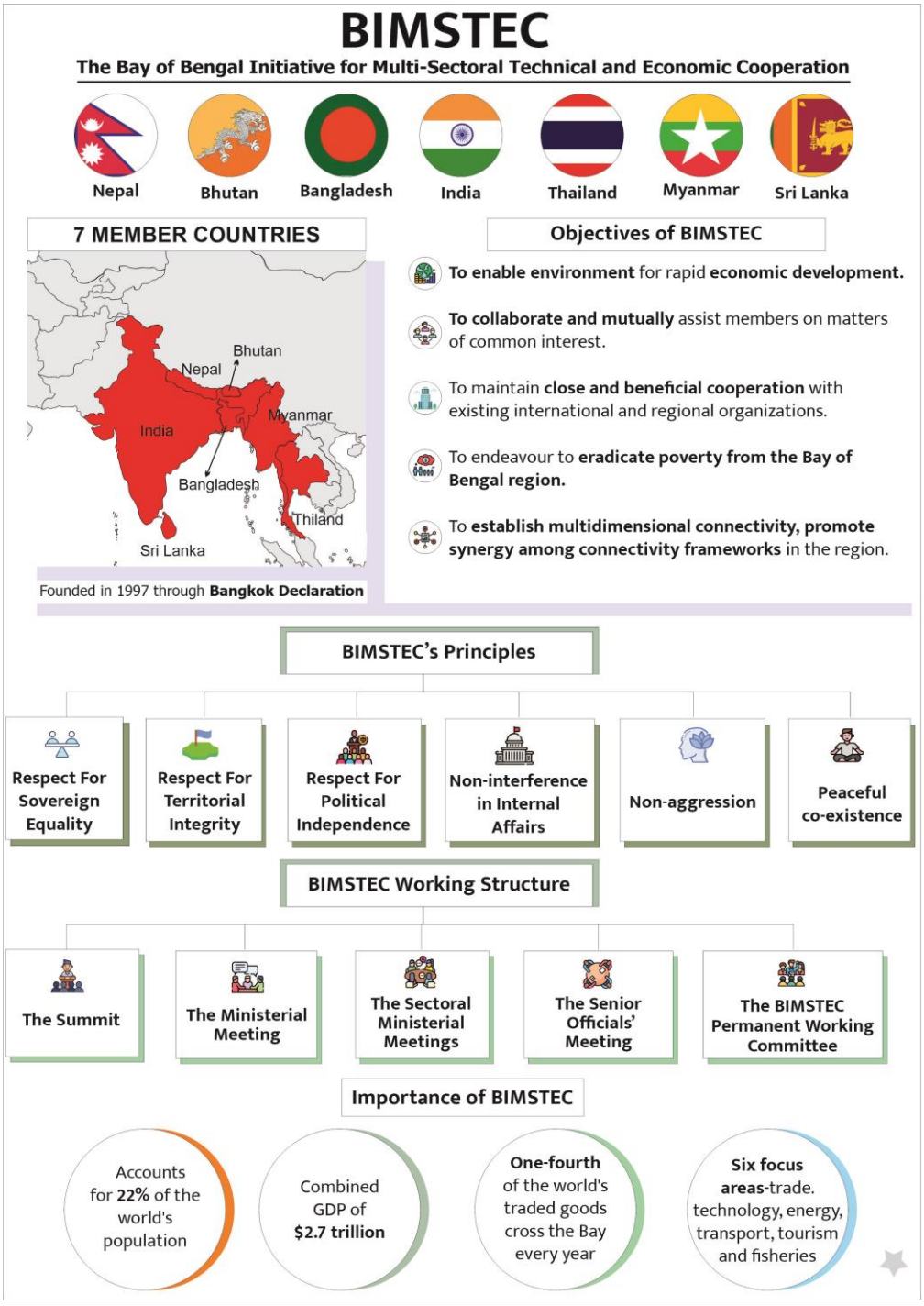
Experts have suggested that there is a need to look for better Regional Forum for the South Asian region.

More about the News:

- The other existing regional forum SAARC is defunct since 2014.
- Experts believe that with the current Geopolitical situation, there is a need to find an alternative to SAARC.
- For this **BIMSTEC** is seen as the right choice for India.

How BIMSTEC is better than SAARC

- **Inclusivity**: **BIMSTEC is more inclusive in nature**; **Article 6** of the recently signed BIMSTEC Charter refers to the 'Admission of new members' to the group, which can be used for including members like Maldives.
    - **SAARC has no such provisions**.
- **Approach**: **BIMSTEC is more homogenous in approach**, the members are focused on the betterment in economic and technical spheres and **there are no obstructionist players like Pakistan** in the grouping as in SAARC.
- **Policy Focus**: **BIMSTEC is in the right direction to aid our Act east goals, with initiatives like transport connectivity, trade agreements** the forum acts as a gateway for India to reach the ASEAN countries.



- Whereas **India's connectivity to the Central Asia is still a distant dream due to the obstructions from Pakistan**, which has always vetoed such connectivity moves through SAARC.

- **Balance of Power**: **BIMSTEC has two regional powers, India and Thailand** act as the two influential powers in the group and the smaller member countries have reduced fear of dominance from one particular country.
  - Whereas the smaller countries of **SAARC are marred by the fear of dominance of India**.
- **Trade and development**: Trade among the **BIMSTEC member countries reached six percent** in just a decade, while in **SAARC, despite an FTA, it has remained around five percent since its inception**.
  - Compared to SAARC, BIMSTEC has greater trade potential for India and its ambitions.
- **Existing Relations**: **BIMSTEC member's relationship is cordial, members maintain reasonably friendly relations** and people to people ties is also improving.
  - Whereas **SAARC Member countries suffer for mistrust and suspicion** over one another, which is not favourable condition for betterment.

Significance of BIMSTEC for India

- **Connecting link:** The grouping acts as a connecting link for achieving two prominent foreign policies of India namely, **Neighbourhood first policy and the Act East policy**.
- **Bridge to the North East:** The landlocked north east region can be developed better with cooperation from member countries of the forum like Bangladesh and Myanmar.
  - Several connectivity projects like **Kaladan Multimodal Transit Transport Project** can fasten the pace of Northeast's development.
  - **It can also reduce its internal strife's in North East** , as the extremist groups of North East use the neighbouring countries as their hideouts.
- **Booster to Blue Economy goals:** The Bay of Bengal region can be made a secure **piracy free zone**, with active participation from the members of the forum.
- **Countering the Chinese influence:** Except for India and Bhutan, all other BIMSTEC nations are part of **China-led Belt and Road initiative (BRI)**.
  - India can positively influence the member countries to help establish a similar initiative for Indian products to reach Far East.

Challenges pertaining to BIMSTEC:

- **Prolonged delay in achieving a Free Trade Agreement (FTA):** It has been years since the framework agreement for FTA was signed and only 2 out of the essential 7 agreements have reached the final stage.
- **Physical infrastructure**: The BIMSTEC region's another drawback is **poor road and rail connectivity**, insufficient last-mile links and **cumbersome customs and clearance procedures** hampers **trade and people-to-people interactions.**
- **Different aspirations of the members**: **The member countries are conducting negotiations with different goals in mind**.
  - For instance, Myanmar is marred with its internal political crisis and **the Rohingya refugee crisis**, Bhutan is **protective about the conservation of its environment and against developmental projects** and Srilanka is in turmoil of both economic and political crisis.
- **No Consensus on BIMSTEC Development Fund:** The technical team formed to finalise the modalities of the BIMSTEC Development Fund is yet to achieve any consensus.
- **Untapped Business-to-Business collaborations:** Currently, the group's initiatives are mostly led by the officials and experts. This needs to be expanded to the business bodies as well.

Way Forward

- **Enhancing connections and connectivity:** This can be done by encouraging people to people contacts and simultaneously accelerating work on the already started multilateral connectivity projects.
- **Strengthening People-to-people ties through cultural ties:** The regional integration can be achieved **by usage of common cultural traits like Buddhism and usage of soft power diplomacy.**
- **Special Visa agreements between the member countries:** Special Visa for the region **on the lines of Schengen Visa of the Europe**, which enables better tourism business-to-business interactions.
- **Concluding on the Free trade Agreement:** FTA will lead to better trade interactions between the countries and will take the groupings interactions to next level.
- **Create a Dispute Resolution Mechanism:** providing an efficient dispute redressal mechanism will enhance the confidence of business houses in cross boundary investments, thereby integrating the region better.

2.4. INDIA-USA-CHINA TRIANGLE

Why in News?

The **18th edition of 'Yudh Abhyas'**, the **annual India-U.S. military exercise** concluded recently in Uttarakhand.

More on news

- Since the **exercise was conducted at just 100kms away from the Line of Actual Control (LAC),** the Chinese government raised its contention.
- **China has claimed that India has violated the 1993 and 1996 agreements** on LAC and also advised the US not to interfere in India-China relations.
- Experts point that the relations between these **three super-states are very important** for the coming world**.**

1993 and 1996 India- China agreements:

In 1993 agreement, both sides agreed to

- **Strictly respect and observe the line of actual control** between the two sides.
- To **keep the military forces in the areas** along the line of actual control to a **minimum level.**
- Not to **undertake military exercises in mutually identified zones.**
- Each side **shall give the other prior notification of military exercises** of specified levels near the line of actual control.

In 1996 agreement, they agreed that

- Neither side **shall use its military capability against the other side**.
- No **armed forces deployed by either side in the border areas along** the line of actual control.

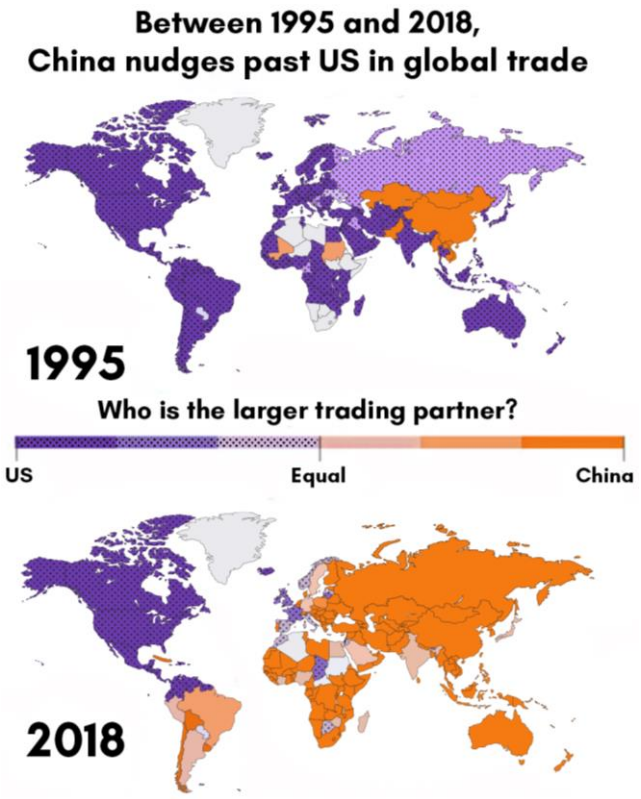
Triangle relationship and India-US-China

- In a triangle set-up, **the way Country "A" deals with Country "B" will affect Country C's behaviour indirectly or directly** due to the established model of interaction among the three parties.
- The preconditions for a triangular relationship are that **each player recognize the strategic salience of the three principals,** and the relationship between any two will be affected by each player's relationship to the third.
  - With the **current dynamics of India-US-China triangle, it is still in its evolving stage** as both divergences and convergences exit amidst their relations.
- A triangle **relationship will not exist among three parties when two parties are friends or allies with the third being their common enemy**.

Areas of divergence in India-USA-China triangle

- **The conflicting foreign policies:** China sees India's Tibet policy and USA's Taiwan policy as hindrance to its sovereign territorial claims.
  - Similarly, India is irked by China's close alliance with Pakistan through its military and economic ties, USA see's China as an immediate threat to its Superpower status.
- **India's apparent closeness to USA**: China sees India's closeness to USA as an issue. For instance:
  - **United States designated India as a Major Defence Partner and** provided India with **Strategic Trade Authorization tier 1 status.**
  - The two countries have already signed **four defence cooperation agreements between them namely**
    - ✓ **General Security of Military Information Agreement (GSOMIA).**
    - ✓ **Logistics Exchange Memorandum of Agreement (LEMOA).**
    - ✓ **Communications and Information Security Memorandum of Agreement (CISMOA).**
    - ✓ **Basic Exchange and Cooperation Agreement (BECA).**
- **Challenging Hegemony**: China wants to exert its influence over the **Indo Pacific region by displacing the position of India in the region and has plans to encircle India through its "String of Pearls**".
  - It also has **meticulous plans to displace the position of USA** in world order.
  - **India-US engagement in the QUAD group** is also an irritant to China.
  - **China has been aggressive in the region.** For instance, issues with **Southeast Asian nations with respect to South China Sea.**
- **China's Belt and Road Initiative:** Since its inception in 2013 the examples highlight that China has used it as a debt trap and cripple the other country's economy for its own benefits.
- **The Power Struggle:** China considers India as its 'Asian Rival' which possesses the inherent capacity to halt its hegemonistic ambitions in Asia.
  - Similarly, it sees USA as its 'Global Rival', whereas both India and USA see China in the prism of an aggressor who intrudes into their sovereignty.
- **China's stance in multilateral forums:** China's stance with respect to keeping India away from important multilateral forums like the Nuclear Suppliers Group (NSG) and the UN Security Council (UNSC) is evidently visible.
  - Whereas USA is trying to include India as a member in the same forums to balance China.

- **China using Trade as its weapon:** China tries to maintain its upper hand with respect to trade imbalances, with both USA and India.
    - China is the source of around 16% of our overall imports and USA is also dependent on China as it acts as its major manufacturing hub.
    - It has also implied many non-tariff barriers on goods from India which resulted in stringent rules on product certification and labelling standards; delays in customs clearances, thereby maintaining its upper hand in balance of trade.



Areas of Convergence in India-USA-China triangle

- **Trade and Commerce:** China is one of the biggest trading partners for both India and USA.
    - **India-China trade relations are considered the cornerstone of their bilateral relations.**
    - On the other hand, both India and USA are important to China as no other countries can procure such high volumes from its factories.
- **Investment needs**: India needs huge investment to develop its infrastructure and economy for which China has a deep pocket.
- **Stability in peace:** Except for the two episodes of Indo-China war in 1962 and 67, both the countries have tried to maintain the peace in the region by de-escalation of minor clashes in the border lines.
    - Similarly, China and USA have not been at direct military conflict with each other.
- **Tackling Environmental Challenges:** The three countries together contribute to a large proportion of the Greenhouse gas emissions, and they are also strongly committed to reduce their emissions gradually and aid to reach the Paris climate targets.
- **Building ties:** The informal summit between India and China's Premier's in Wuhan (2018) and Mamallapuram (2019) and the continued interactions between the three countries on global forums like G20, UN has helped to converge their differences.
    - India-China also converge in the **Shanghai Co-operation Organisation and BRICS.**

Conclusion

India should continue to exercise its strategic autonomy in the triangle. For India, over reliance on USA's aid is not an advisable option, as USA has proved for itself that it is not an all-weather friend of India. Whereas a cordial relationship with China is also important as it is our geographical neighbor, but curtailing it's aggressions in our borders and other spheres also needs to be given an upper hand.

2.5. SOFT POWER

Why in news?

Parliamentary Standing Committee on External Affairs submitted its report on '**India's Soft Power** and Cultural Diplomacy: Prospects and Limitations".

Smart Power

- According to Ministry of External Affairs, Smart power is the **most representative of India's current interaction** with the world. It is a **judicious blend** of soft power with other dimensions of **hard power**.
- Here, emphasis is on building capacities to be **able to choose right forms of power** to employ in relations to a particular context.

About Soft power

- According to the Ministry of External Affairs, Soft power is **ability to influence others** through **appeal and attraction**, using **non-coercive means.**
    - It rests on **ability to shape the preferences** of others.

- It is **different from hard power** that relies on **tangible power resources** such as armed forces or economic means.

- The report has highlighted that despite India's rich history and unrivalled cultural diversity, country remains hampered by the **lack of a comprehensive soft power strategy.**

How soft power is different from hard power?

- While hard power relies on State's **military and economic resources**, soft power works on persuasion, aiming at **furthering a country's 'attractiveness'**.
- Hard power tends to result in an **immediate but short-duration outcome**, whereas soft power has tendency to **cause long-term change**.
- Hard power **forces one to act in a way different** to one's usual behaviour i.e. **involuntarily.**
  - On the contrary, soft power changes one's attitude to end that **one acts voluntarily** in a way different to one's usual behaviour.

Issues with India's soft power diplomacy

- **Issues highlighted by MEA:** Ministry of External Affairs had highlighted following key issues **inhibiting effective conduct** of soft power and cultural diplomacy.
  - Lack of timely and adequate **budget allocation**.
  - Need for **greater coordination and consultation** among multiple institutions, both in the government and private sector.
    - ✓ Currently, there is **duplication of efforts and resources** due to **overlapping mandates** of several ministries and agencies.
  - Shortage of **skilled, motivated manpower** in the Headquarters as well as in Indian Missions/Posts abroad who have the **requisite enthusiasm and interest** in cultural work.
  - **Lack of clarity** about the mandate of ICCR and the scope of "culture".
  - **Absence of a national policy** on projection of cultural soft strengths overseas which results in **ad hoc, unsustainable measures**.

Importance of Soft Power for India

- **Key determinant in success or otherwise of a country's foreign policies.** For ex, India's **use of soft power** in Afghanistan has played out **in favour of India, outwitting Pakistan** (uses hard power)
- **Only known nuclear weapons state** that is not part of Non-Proliferation Treaty but is still **permitted to engage in nuclear commerce globally**
- Hard power cannot be exercised effectively if **soft power is ignored,** because of **consequences** associated.
- Can earn **respect and elevate its global position. For ex,** relatively **neutral, non-threatening image** compared to powers like U.S, China etc.

Instruments of India's soft power diplomacy

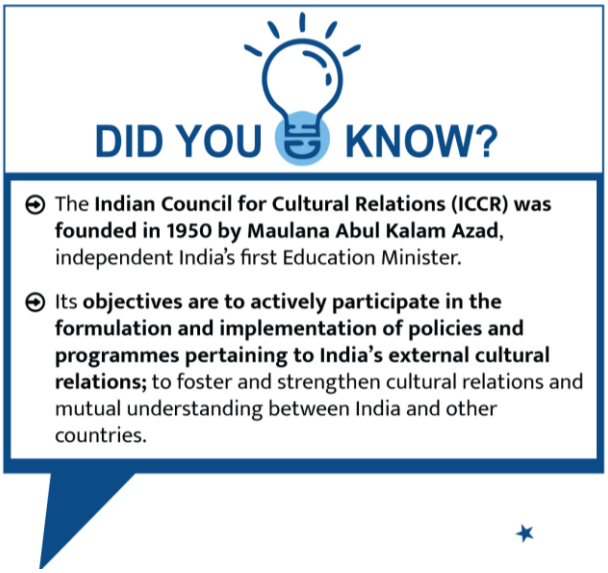
Instrument	Details/Steps taken
Culture	▶ Ministry of Culture has signed **109 bilateral cultural agreements and 74 Cultural Exchange Programmes.** ▶ Ministry of Culture implements **"Scheme for Promotion of International Cultural Relations"** to showcase **India's rich cultural heritage.**
Diaspora	▶ Large Diaspora with **over 31 million** including over 13 million NRIs and 18 million PIOs. ▶ **Major Programmes / Schemes** are: ➢ Pravasi Bharatiya Divas Convention/Conferences, ➢ Know India Programme etc.
Tourism	▶ Launch of **'Incredible India'** campaign. ▶ Spreading awareness **about Buddhist Circuit/Pilgrimage**, and so on.
Parliamentary Democracy	▶ MEA is working closely with Lok Sabha and Rajya Sabha Secretariats and Election Commission in the task of **promoting democracy as India's strength.** ▶ Regular **goodwill exchange visits** by Parliamentarians.
Ayurveda, Yoga and Traditional Medicine	▶ United Nations General Assembly **declared 21st June** as International Day of Yoga (IDY). ▶ Ministry of AYUSH **promotes AYUSH systems via** bilateral MoUs, collaboration with WHO, etc.
Sports and Youth Exchange Programmes	▶ Ministry of External Affairs through Board of Control for Cricket in India (BCCI) has trained athletes from **Afghanistan, Maldives and Bhutan.** ▶ **Youth Exchanges with friendly countries** on reciprocal basis.
Media and Cinema	▶ **Prasar Bharati** has re-oriented 'DD India' channel as **English news channel** and **signed MoUs with foreign broadcasters.** ▶ Bollywood has emerged as one of most notable examples of **global entertainment.**
Education and Knowledge Sharing	▶ India has signed **Educational Exchange Prog/ Memorandum of Cooperation / Joint Declaration of Intent /Letter of Interest** with countries for cooperation in the field of education. ▶ **Study in India** initiative for merit-based admission of students from various African and Asian countries. ▶ Cooperation through **Multilateral Platforms** like BRICS, G-20, ASEAN etc

- **Impact of domestic issues**: Reports in the international media of **pollution in urban areas, child labor and violence against women, trafficking** have detracted visitors.
- **Sub-Par performance in religious tourism:** Though India is currently home to seven of the eight most significant Buddhist sites in world, it receives **less than one percent of global Buddhist tourism**. South East Asian nations such as **Thailand and Indonesia are the prime recipients** of such tourism.

Measures to strengthen India's soft power

- **Recommendations made by Parliamentary panel on external affairs**: Key recommendations include
  - A **formal study of international best practices** of soft power projections should be done on a priority basis and **learnings from such a study must be factored in** while formulating India's strategy.

- Asked the government to develop **objective metrics** for evaluating soft power outcomes through a **'Soft Power Matrix'.**
- Need for **greater synergy** among MEA and other ministries, departments and agencies involved in India's soft power projections and cultural diplomacy.
- MEA was also urged to **increase the number of tourism offices** abroad and adopt a **country-specific approach** for promotional activities.
- Government should **come out with a public relations strategy** to project India's soft power and cultural diplomacy.
- To **proactively interact** with Indian diaspora, hold designated events to **solicit their feedback and suggestions** for better **regular engagement** with host country.



- **Promote tourism: A multi-pronged approach** focusing on product enhancement, bettering connectivity, and **creative promotion and marketing** of products could help achieve an **effective strategy for inbound tourism.**

Comparison between India and China in soft power diplomacy

According to **Brand Finance's Global soft power index 2022**, while **China is ranked at 4th** position, India is far behind at **29th position**.

Areas where India lacks behind China

- **Lack of monetary resources**: China is estimated to **spend about US$ 10 billion** a year just on its Confucius Institutes and soft power promotion whereas ICCR and other agencies put together **spend around 300-400 crores**.
  - Most of India's expenditure goes in **establishment and administration.**
- **Culture promotion through state:** Indian cultural centres are **far few in number** and Indian culture has seen **popularity naturally** and through Indian immigrants rather than through a **mixture of immigration and government effort**.
- Though in **recent time**, state has started **playing proactive role** in popularizing culture.

Advantages of India over China

- **Consistently using soft power since long time:** Since independence, India has shown **more inclination towards soft power**, **unlike China**.
  - In China, concept rapidly rose to popularity in the mid-2000s and now acts as an integral part of its foreign policy.
- **Benign development partner:** Further, unlike China, India's development Programme is **free from accusations of trampling sovereignty or integrity** of its partners or strangulating them financially with **unbearable debt trap.**
- **Democratic credentials**: India's **democratic values and openness** makes it a more **trustworthy and dependable** partner.
  - Whereas China has been criticized due to **excessive control** of Chinese authorities, their censorship and clamping **down on freedom of speech and expression.**

2.6. NEWS IN SHORTS

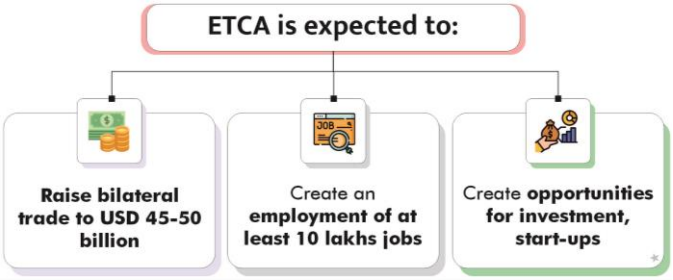
2.6.1. UNITED NATIONS COMMISSION ON STATUS OF WOMEN (CSW)

- UN Economic and Social Council (ECOSOC) **adopted a resolution to remove Iran from CSW.**
- **About UN-CSW**
  - It is the principal **global intergovernmental body** exclusively dedicated to **promotion of gender equality and empowerment of women.**
  - It was **established by ECOSOC** in 1946.
  - Plays a leading role in **implementation of the Beijing Declaration and Platform for Action.**
  - Consists of **one representative from each of 45 Member States** elected by ECOSOC on the basis of equitable geographical distribution
  - **India was elected** to CSW for four years from **2021 to 2025**.

2.6.2. INDIA AUSTRALIA ECONOMIC AND COOPERATION TRADE AGREEMENT (ECTA)

- India Australia Economic and Cooperation Trade Agreement (ECTA) recently came into force.
- ECTA **provides an institutional mechanism to encourage and improve trade** between two countries and **covers almost all tariff lines** dealt by India and Australia.
  - After **India-UAE Comprehensive Economic Partnership Agreement**, ECTA will be the **second**

trade agreement for India that will be operationalized this year.



- **Key features of ECTA**
  - **India will benefit from preferential market access** provided by Australia on 100% of its tariff lines, including all **labor-intensive sectors of export** interest to India, such as Gems and Jewellery, Textiles, leather, footwear etc.
  - Australia has offered **wide ranging commitments in several services sub-sectors** like IT, ITES, Health, Education.
  - **A separate Annex on Pharmaceutical products** which will enable fast-track approval for patented, generic and biosimilar medicines.
  - Covers areas like **Rules of Origin, Sanitary and Phytosanitary (SPS) measures, Dispute Settlement,** Movement of Natural Persons etc.

2.6.3. US' NDAA

- US$ 858 billion **National Defense Authorization Act (NDDA)** was passed by Senate and House of Representatives.
- It focuses on **most vital national security priorities for USA**, including strategic competition with China and Russia; disruptive technologies etc.
  - To **strengthen US engagement** in **Indo-Pacific region**, it stresses on **engaging India to expand cooperation on emerging technology, readiness and logistics**.
  - This includes areas such as unmanned aerial vehicles, defensive cyber capabilities, cold weather capabilities etc.
- **India- US Defence Cooperation**
  - In 2016, US designated India as '**Major Defence Partner,'** (status unique to India).
  - India was accorded '**Strategic Trade Authorization Tier 1 status' in 2018** for **high-technology product sales** particularly in **civil space and defence sectors.**
- **India-US Defence Agreements**
  - **General Security of Military Information Agreement (GSOMIA), 2002** on military information exchange.
  - **Logistics Exchange Memorandum of Agreement (LEMOA), 2016** to use each other's military base.
  - **Communications Compatibility and Security Agreement (COMCASA), 2018** for interoperability between two militaries and sale of high-end technology to India.
  - **Basic Exchange and Cooperation Agreement (BECA), 2020** to share high-end military technology, logistics and geospatial maps.

2.6.4. SAARC CURRENCY SWAP FRAMEWORK

- RBI has signed a **Currency Swap Agreement (CSA) with Maldives Monetary Authority** under SAARC Currency Swap Framework.
  - CSA between the two countries is **an agreement or contract to exchange currencies with predetermined terms** and conditions.
- SAARC Currency Swap Facility **came into operation in 2012 with** to provide a backstop line of **funding for short term foreign exchange liquidity requirements** or balance of payment crises **till longer term arrangements are made.**
  - The drawals can be made **in US Dollar, Euro or Indian Rupee.**

2.6.5. LUSOPHONE COUNTRIES

- India is hosting the **International Lusophone Festival** in Goa.
  - It seeks to further India's connection with the **Lusophone world**.
  - The Portuguese rule over Velha Goa (or Old Goa) started in **1510** and lasted till **1961**.
- Lusophone World (**Portuguese-speaking countries**)
  - **It** is spread in **nine countries** across **four continents**.
  - **Portuguese** is the most spoken language in the **Southern Hemisphere (see image).**
  - In **1996**, **Community of Portuguese Language Countries (CPLP)**, also known as **Lusophone Commonwealth** was formed.
    - ✓ CPLP is a **multilateral forum** with **9 member states** and **32 associate observers (India is associate observer)**.
    - ✓ **Members are** Angola, Brazil, Cabo Verde, Guinea Bissau, Mozambique, Portugal and São Tomé and Príncipe; while Timor Leste and Equatorial Guinea.
- **India Lusophone relations**
  - In **2014**, Goa organized the **3rd Lusofonia Games** involving athletes from **Lusophone World**.
  - **Six-fold** rise in **India's trade** with CPLP countries in the last decade.
  - India offers training to **all CPLP member states**, except Portugal, under the **Indian Technical and**

Economic Cooperation Programme (ITEC) and **India-Africa Forum Summit (IAFS) framework**.

- **Future Scope:** Cooperation in **strategic areas** (Blue Economy, Renewable Energy, Defence etc.); field of **startups** and **cutting-edge technologies** (nanotechnology, biotechnology etc.).

Portuguese Speaking Countries

2.6.6. PARIS CLUB

- It is an **informal group of official creditors** whose **role is to find coordinated and sustainable solutions** to the **payment difficulties** experienced by debtor countries.
- The origin of the Paris Club **dates back to 1956**.
- It is a group of **22 permanent members, including Australia, UK, USA, Japan etc.**
  - India **is not a member. It acts as an ad-hoc participant.**

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3. ECONOMY

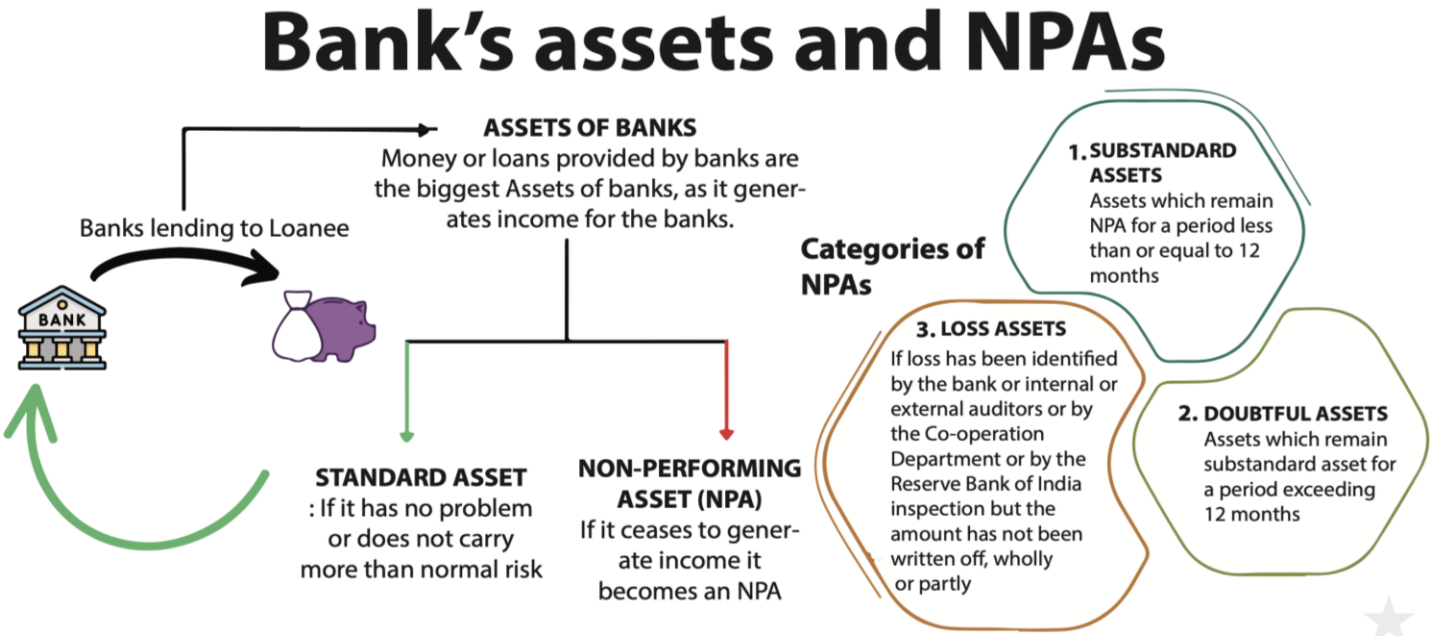
3.1. NON-PERFORMING ASSETS (NPAS)

Why in News?

RBI's recent '**Report on Trend and Progress of Banking in India 2021-2022**' highlights the banking **Gross NPAs (GNPAs)** declining to **5%** from a **peak** of **9%** in **2017-18.**

Banks and their NPAs

- A Bank is a **financial institution** accepting funds (**deposits**) and lending them (**loans**) as its **primary role**; loans are the **primary assets of the banks** (refer **image**).
- Based on overdue norms, a loan or advance for which the principal or interest payment is overdue for a period of **90 days** (one quarter) is classified as NPA.
  - For **Agricultural loans**, the overdue for NPA is **two crop seasons** for short duration crops and **one crop season** for long duration crops.
- Based on the NPA period and its identification, the NPA category changes (see **image**).



Legacy NPAs and Current Status of Banks NPAs

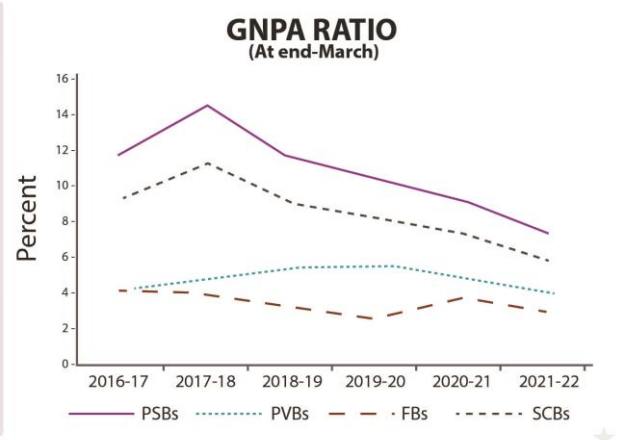
Playing a vital role in the economy of a nation, in 2016, the Indian financial markets were under severe stress. By 2016, the banking NPAs **reached 9%** because of various reasons (refer **diagram**).

But for last few years, the **Indian banking sector** is witnessing a **healthy balance sheet growth** with:

- **Improved Asset Quality** due to easing of legacy NPAs, greater transparency in asset recognition, upgradations, write-offs etc. For instance, in the last 5 financial years-
  - Banks have **written off bad loans worth more than ₹10 lakh crore**.

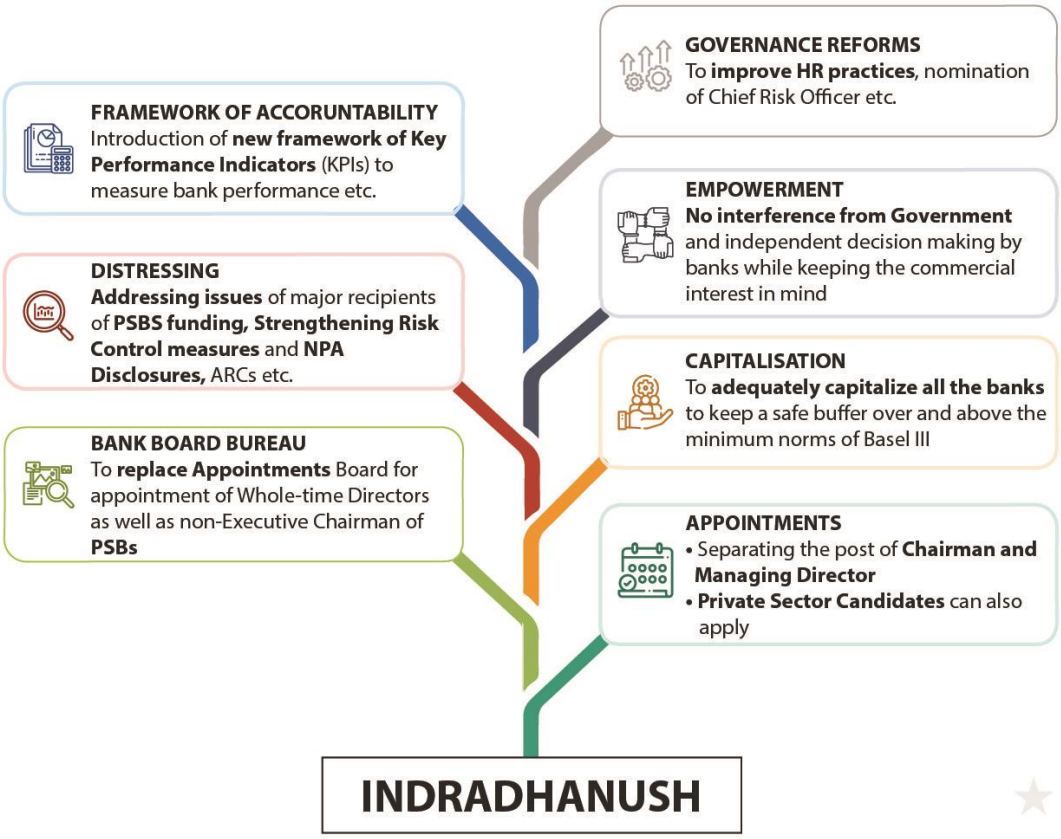
- Banks have **recovered an aggregate amount of more than ₹6.5 lakh crore**.

- **Enhanced Profitability** to levels observed in 2014-15 on account of acceleration in income and contraction in expenditure.
  - **Banks credit growth** accelerated to 10-year high while interest expenditure declined.
- **Lowering Slippages** due to enhanced credit monitoring processes, coupled with diversification of Bank's investment portfolio.
  - Slippage refers to the difference between the expected price of a trade and the price at which the trade is executed.
- **Augmented Capital Buffers** because of higher provisioning, declining Gross NPAs etc.
- **Soundness of Other indicators** such as sufficient liquidity, reduced number of banks under RBI's prompt corrective action (PCA) framework etc.



Major Initiatives taken to address Legacy NPAs

- **Recapitalization or capital infusion in Public Sector Banks (PSBs)** by the government to help them in achieving capital adequacy requirements.
- **Indradhanush Plan** to revamp the functioning of the PSBs with seven elements of ABCDEFG (see **image**).
- **Consolidation of PSBs** through mergers over the last few years.
- **Setting up of National Asset Reconstruction Company Limited (NARCL)** and **India Debt Resolution Company Limited (IDRCL)** to resolve the legacy NPAs and clean up the bank books.
- **Insolvency and Bankruptcy Code (IBC), 2016** for a time-bound, market mechanism for reorganization and insolvency resolution of corporate loans in financial stress.
  - It empowers operational creditors by allowing them to make applications for the **Corporate Insolvency Resolution Process (CIRP)**.
  - IBC is further amended to introduce **Pre-Packaged Insolvency Resolution Process (PPIRP)**, an alternate and speedier resolution mechanism for MSMEs.
- **Enhanced Access and Service Excellence (EASE) Reforms** for PSBs aimed at institutionalizing clean and smart banking.
- **Launch of Regulatory Sandbox** by the RBI for innovative products, services or business models etc.



Remaining and Emerging Concerns

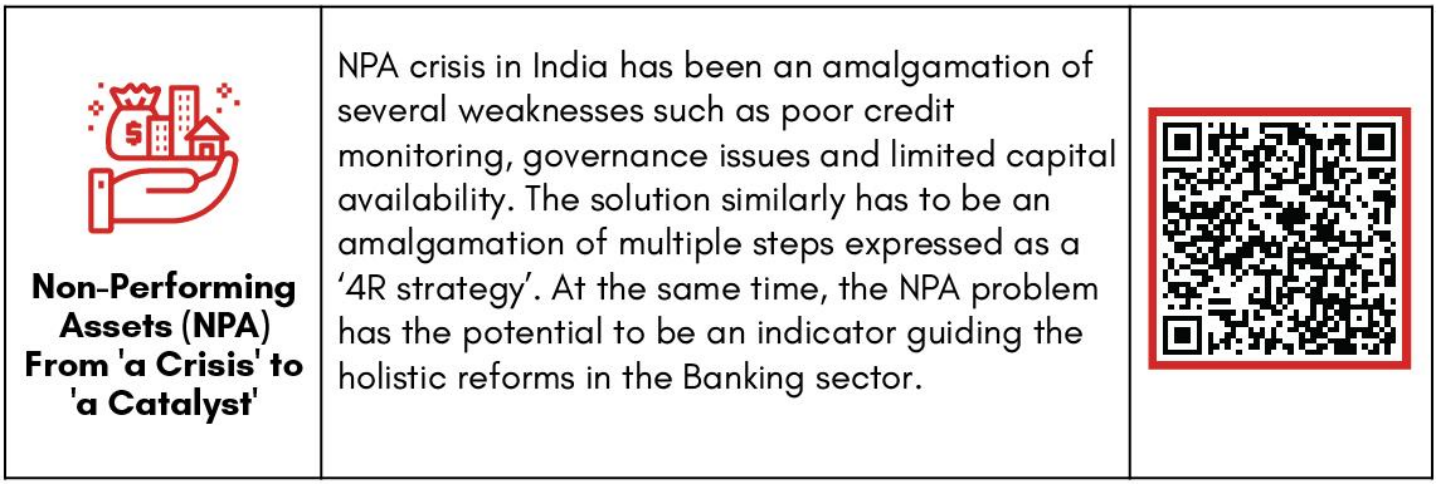
- **Inflation is Globalized** due to continuing geopolitical risks, Covid-19, supply chain risks etc.
  - It **deteriorates** the **global growth** and **trade outlook** with growing concerns over recession.
- **Borrowing Costs are Increasing** because of synchronized monetary policy tightening.
- **IBC Framework Effectiveness is declining**. E.g.
  - The **time taken** for **admission of resolution application** as well as the **final resolution** and **liquidation** has **steadily increased**.
  - **Declining rates of recovery** in comparison to the claims admitted.
  - **Sales to Asset Reconstruction Companies (ARCs)** have gradually **decreased** over the years. In 2021-22, only 3.2% of the previous year's GNPAs were sold to ARCs.
- The **share of unsecured credit** in total credit has been **increasing since 2015**.
- **Risk of Failures and Weaknesses in Corporate Governance** remains.

Way Forward

With banks as the **backbone** of every economy, it is vital that banks remain in good health. But when we look above concerns with the issues of **capital outflows**, **currency depreciations** and **reserve losses** of **Emerging Market Economies (EMEs)** like India, the downside risks to financial systems remain high. Therefore, due diligence and robust credit appraisal becomes important to limit credit risk. Further, to maintain good asset quality, we must work on-

- **Improving IBC Framework Effectiveness** for timely resolution of stressed assets; helping to prevent asset value depletion as well.
- **Convergence of Corporate Governance Practices** between PSBs and Private sector Banks.
  - As per the latest report, the GNPAs of PSBs were 6.5% as compared to 3.3% for private banks.
- **Use Technology and Innovation** to supplement supervisory intelligence with big data for containing the possible systemic risks.
  - E.g. implementation of the **Centralized Information and Management System (CIMS)** for automatic data reporting by regulated entities (REs).
  - The banks can also use **artificial intelligence and machine learning (AI/ML) to develop ideas like a fraud vulnerability index dashboard for loans.**
- **Monitoring Slippages** in restructured assets with overall strong vigilance from RBI and other financial regulators; ensuring timely intervention, whenever necessary.

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



3.2. DIGITAL LENDING

Why in news?

Reserve Bank of India's (RBI's) guideline on digital lending became effective on December 1.

More in News

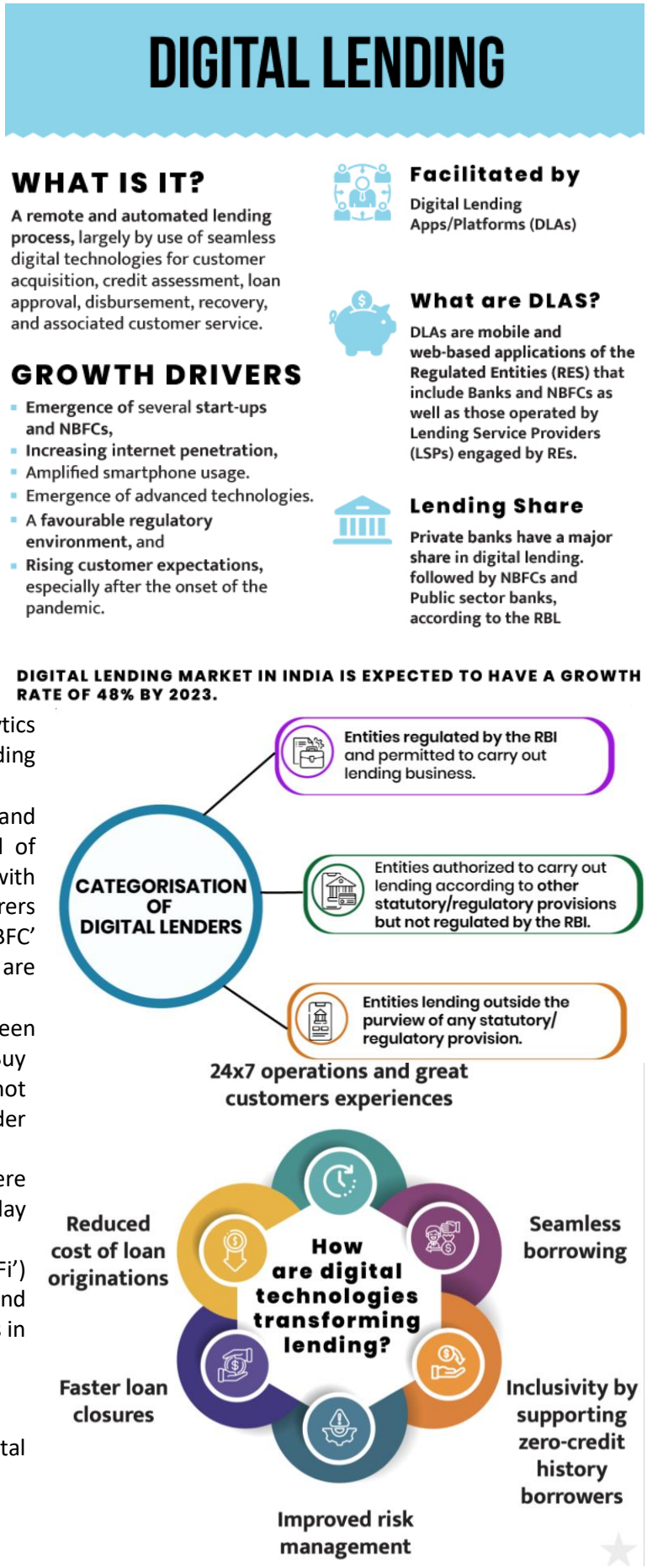
The RBI came out with the guidelines on digital lending in September and gave time until November 30 for players to comply with the 'existing loan' category.

Need for the guidelines

- **Rise in illegal lending apps:** The pandemic necessitated financial emergencies and limited access to banks and financial institutions shifting Indian customers to digital lenders in their hour of need. This resulted in the emergence of many fake and illegal lending apps.
  - RBI identified over 600 illegal lending apps in 2021, more than half of the total lending apps in India.
- **Concerns with data privacy:** Fintech **Non-Banking Financial Company (NBFC)** lenders are adopting Artificial Intelligence, Machine Learning data analytics etc. for insights into customer buying and spending patterns for building alternative credit models.
- **Unregulated entities:** Technology service providers and marketplace aggregators are following the model of platform lending or 'loan service providers' (LSP) with banks and NBFCs at the backend as manufacturers where the loan is booked. However, this 'rent-an-NBFC' model has higher potential of risk as these entities are not under the RBI's regulatory purview.
- **Unreported products:** In recent times, there has been the development of several new products like 'Buy Now Pay Later (BNPL)' Loans. Such transactions are not reported to the credit bureaus, as they do not fall under the definition of 'credit'.
  - BNPL is a form of point-of-sale credit where buyers/ purchasers are typically given a 15–30-day interest-free repayment period.
- **Rise in crypto lending:** Decentralized finance ('DeFi') lending platforms—which enable lending and borrowing using crypto assets—poses serious issues in the absence of any regulatory framework.

Guidelines on Digital Lending

- **Applicability:** These guidelines are applicable to digital lending extended by:
  - All Commercial Banks
  - Primary (Urban) Co-operative Banks,



- State Co-operative Banks,
- District Central Co-operative Banks; and
- Non-Banking Financial Companies (including Housing Finance Companies)

Key Provisions:

Parameters	Guidelines
Customer Protection and Conduct requirements	• **Loan Disbursal, Servicing and Repayment:** All loan servicing, repayment, etc., shall be executed by the borrower directly in the regulated entities (RE's) bank account without any pass-through account/ pool account of any third party. • **Credit Limit:** There can be no automatic increase in credit limit without the explicit consent of borrower. • **Collection of fees, charges, etc.:** Any fees, charges, etc., payable to LSPs will be paid directly by REs and are not by the borrower. • **Disclosures to borrowers:** REs shall provide a **Key Fact Statement (KFS)** to the borrower before the execution of the contract of all digital products. o KFS contain the details of All-inclusive cost of digital loans in the form of **Annual Percentage Rate (APR)**, the recovery mechanism, details of grievance redressal officer designated and the cooling-off/ look-up period. • **Grievance Redressal:** REs shall ensure that they and the LSPs engaged by them shall have a **nodal grievance redressal officer** to deal with FinTech/digital lending related complaints/issues raised by the borrowers. o The borrower is allowed to complain over the **Complaint Management System (CMS)** portal under the **Integrated Ombudsman Scheme** of RBI if their grievance was not resolved by the bank within 30 days.
Technology and Data Requirement	• **Collection, usage and sharing of data with third parties:** Collection of data by the DLAs must be need-based and with prior and explicit consent of the borrower having audit trail. o Explicit consent of the borrower shall be taken before sharing personal information with any third party. • **Storage of data:** REs shall ensure that o LSPs/DLAs engaged by them do **not store personal information of borrowers except some basic minimal data** (viz., name, address, contact details of the customer, etc.). o **No biometric data is stored/ collected** in the systems associated with the DLAs o **All data is stored only in servers located within India.** o The **borrowers must be informed** about the storage of customer data. • **Comprehensive privacy policy:** RE is responsible for data privacy and security of the customer's personal information. • **Technology standards:** REs shall ensure that they and the LSPs engaged by them comply with various technology standards/ requirements on cybersecurity stipulated by RBI and other agencies.
Regulatory Framework	• **Reporting of Loans:** REs are required to ensure that any lending done through DLAs has to be reported to Credit Information Companies (CICs), irrespective of its nature or tenor. o Lending through the **Buy Now Pay Later (BNPL) model** also needs to be reported to CICs. • **Cooling off/look-up period:** A borrower shall be given **an explicit option to exit digital loan** by paying the principal and the proportionate APR without any penalty during the cooling off period (determined by the Board of the RE). • **Due diligence and other requirements with respect to LSPs:** REs must conduct enhanced due diligence before entering into a partnership with a LSP for digital lending and shall carry out periodic review of the conduct of the LSPs engaged by them.

Issues with the guidelines

- **Business impact**: Digital lending norms has led to increased compliance costs, operational intensity and disruptions, for fintechs in certain business segments.
- **Lack of clarity on First Loss Default Guarantee (FLDG):** FLDG is a lending model between a fintech

Related News

The Reserve Bank of India (RBI) has revised its securitization guidelines.

- Under the new norms, RBI **bars lenders from securitizing loans that mature in less than 365 days.**
  - These **include short tenor loans** such as MFIs, gold loans, and short-term personal and consumer durable loans.
- Securitization is the **process of pooling and repackaging of financial assets** into marketable securities that can be sold to investors.
- Securitization market is primarily **intended to redistribute the credit risk away from the originators** to a wide spectrum of investors who can bear the risk, thus **aiding financial stability** and **provide an additional source of funding.**

and a regulated entity in which a third party guarantees to compensate up to a certain percentage of default in a loan portfolio of the regulated entities (RE).
    - Currently, there is no clarity on what is permissible and what is not permissible as far as these partnerships are concerned.
- **Collaboration between banks and fintechs:** Technologically, banks, NBFCs and fintechs operate on different platforms. The systems of banks and fintech have to be aligned for co-lending and the process of integration takes time.

The way forward

- **Specific guidelines are needed on whether FLDG arrangements** between RE and Non-RE are allowed and the limits on risk sharing. This will ensure that fintechs are meeting the credit demand--especially of dependent borrowers, such as micro and small businesses, while at the same time adhering to regulatory guidelines.
- **Fintechs and NBFCs should invest in robust tech, data, and security infrastructures** to avoid violating the RBI guidelines.
- With the introduction of the Personal Data Protection (PDP) Bill, data regulations and security protocols are expected to tighten further. Therefore, **water-tight compliance is required at the lender's end.**

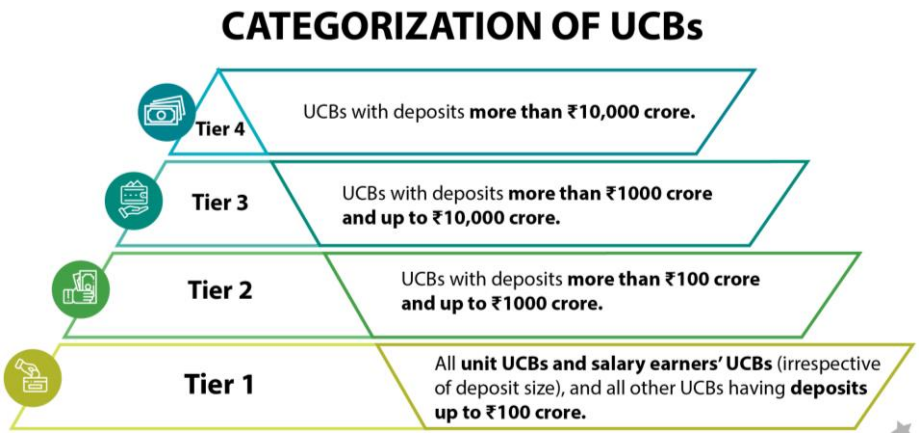
Conclusion

The above recommendations will certainly bring in required regulatory oversight, help build trust in digital lending for customers and provide more transparency, thereby providing a comprehensive framework and progressive regulatory environment for the fast-growing digital lending segment in the medium- to long run.

3.3. RE-CATEGORIZATION OF URBAN COOPERATIVE BANKS

Why in news?

The Reserve Bank of India (RBI) announced a four-tiered regulatory framework for categorisation of Urban Co-operative Banks (UCBs).



More on the new regulatory framework

- The framework was recommended by the **Expert Committee on Urban Co-operative Banks** for strengthening the financial soundness of the UCBs.
    - The existing regulatory framework classifies UCBs into two tiers -- Tier I and Tier II.
    - The RBI had constituted the committee in 2021 under the Chairmanship of **Shri N. S. Vishwanathan**, former Deputy Governor, RBI.
    - The committee **examined the issues in UCBs sector and reviewed regulatory/ supervisory approach** for strengthening the sector.
- Four-tiered regulatory framework is **based on size of deposits of the banks***(refer infographic)*.
- **Other revised regulatory framework**

Net Worth	• Tier 1 UCBs operating in a **single district shall have a minimum net worth of ₹2 crore**. • **All other UCBs** (of all tiers) **shall have a minimum net worth of ₹5 crore.** • UCBs which currently do not meet the minimum net worth requirement, as above, shall achieve the minimum net worth in a phased manner.
Capital to risk weighted assets ratio (CRAR)	• **Tier 1 UCBs** shall maintain, as hitherto**, a minimum CRAR of 9 percent of Risk Weighted Assets (RWAs) on an ongoing basis.** • **Tier 2 to 4 UCBs** shall maintain a minimum **CRAR of 12 percent of RWAs on an ongoing basis**. • UCBs in Tier 2 to 4, which do not currently meet the revised CRAR of 12 per cent of RWAs, shall achieve the same in a phased manner.

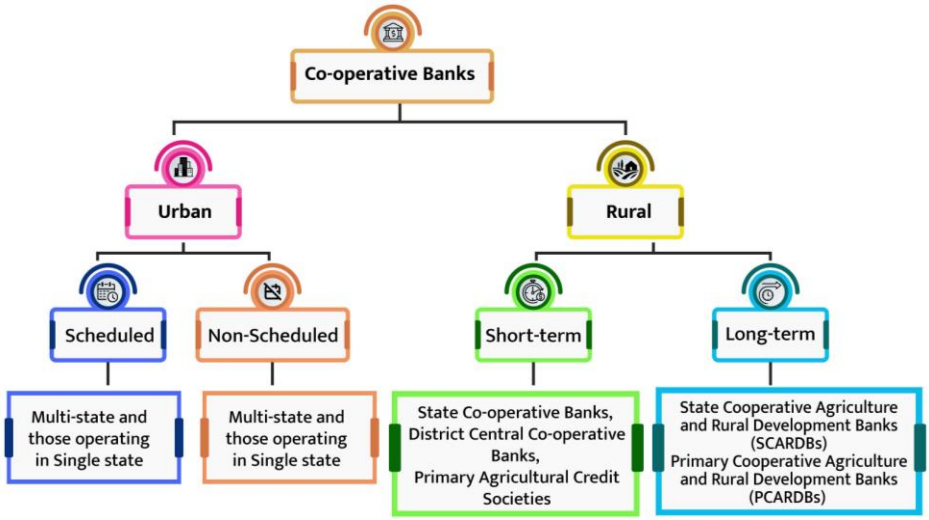
Financially Sound and Well Managed (FSWM)	• The revised criteria, for determining the FSWM status have been given as under: ○ **Net NPA of not more than 3%.** ○ **No default in the maintenance of CRR / SLR** during the preceding financial year. ○ **Sound internal control system** with at least two professional directors on the Board. ○ **Core Banking Solution** (CBS) fully implemented.

- **Applicability:** Framework is applicable to **all Primary (Urban) Co-operative Banks.**
- **Rationale: To address the vast heterogeneity** that exists amongst the UCBs.

Comparison of Regulatory Frameworks for UCBs, Universal Banks(UNBs), Small Finance Banks (SFBs) and Regional Rural Banks (RRBs)

Prudential Norm / Regulatory Approval	UCBs	UNBs	SFBs	RRBs
Capital Adequacy	Under Basel I norms, capital to be maintained only on credit risk.	Under Basel III norms. Capital to be maintained on credit risk, market risk and operational risk.	Under Basel II norms, but capital to be maintained only on credit risk.	Under Basel I
Opening of Branches, Extension Counter	UCBs which meet the Financially Sound and Well Managed (FSWM) criteria are allowed to open new branches under **automatic route.**	Under automatic approval route, subject to conditions.	Under automatic approval route, subject to conditions.	Under automatic approval route, subject to conditions.
Extension of area of operation	Under prior approval route	Not applicable. Area of operation extends to the entire country.	Not applicable. Area of operation extends to the entire country.	Area of operation of RRBs is fixed.
Priority Sector Lending targets	75 per cent of Adjusted Net Bank Credit (ANBC), to be achieved by March 31, 2024.	40 per cent of ANBC	75 per cent of ANBC	75 per cent of ANBC
Inclusion under Second Schedule to RBI Act, 1934	Prior approval route UCBs fulfilling prescribed criteria are eligible to apply.	Prior approval route All new SCBs after commencement of operations are eligible to apply.	Prior approval route All new SFBs after commencement of operations are eligible to apply.	Prior approval route Newly amalgamated RRBs are Scheduled by RBI on the basis of certificate issued by NABARD.

About Cooperative Banks

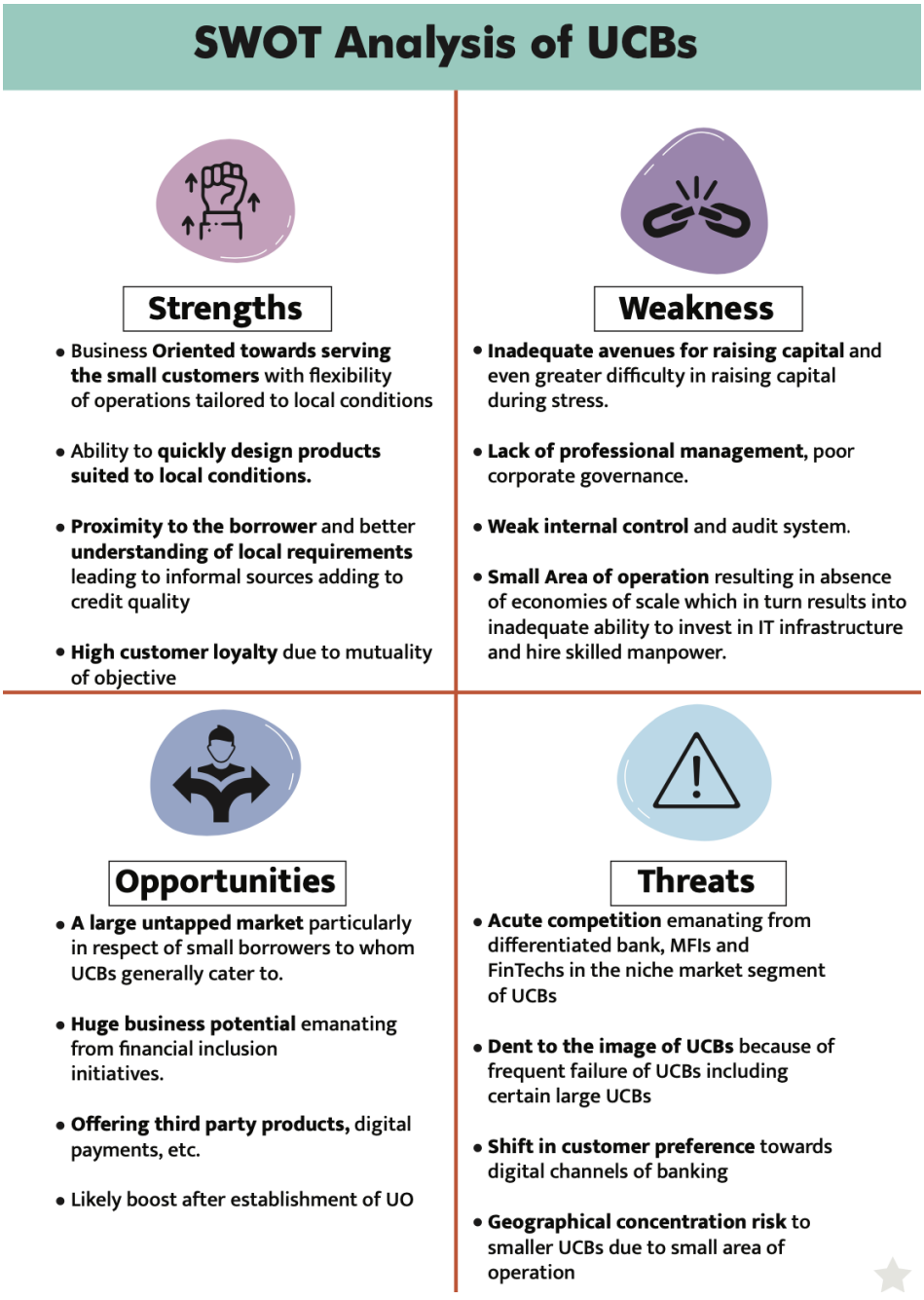


- Co-operative banks are **financial entities established on a co-operative basis and belonging to their members**. This means that the **customers of a co-operative bank are also its owners.**
- **Registration:** UCBs are primarily registered as cooperative societies under the provisions of either the **State Cooperative Societies Act** of the State concerned or the **Multi State Cooperative Societies Act, 2002** if the area of operation of the bank extends beyond the boundaries of one state.
- **Regulation of UCBs**: It is split between RBI and Centre/State Governments, while that of smaller co-operative banks is divided between National Bank for Agriculture and Rural Development (NABARD) and State governments.

- They come under the regulatory ambit of the Reserve Bank of India (RBI) under two laws, namely, **the Banking Regulations Act, 1949, and the Banking Laws (Co-operative Societies) Act, 1955.**
- **Urban and Multi State Cooperative Banks are under the direct supervision of RBI.**

Recent steps taken for UCBs

- **Banking Regulation (Amendment) Act, 2020: The** recent amendment to the BR Act has conferred greater regulatory powers upon the RBI. It brought management / governance, audit, reconstructions / amalgamation, winding up, etc. of co-operative banks under RBI's purview to enable improvement in the quality of their management and the standards of their co-operative governance.
  - Earlier, the banking related functions of a UCB were regulated by RBI under the provisions of Banking Regulation Act and powers with regard to incorporation, management, audit and winding up were governed by the co-operative societies acts concerned.
- **Supervisory action Framework (SAF):** It seeks to ensure expeditious resolution of financial stress faced by some of the UCBs.
  - The move comes in the backdrop of the alleged irregularities in the Punjab and Maharashtra Cooperative (PMC) Bank causing distress to over 9 lakh depositors.
  - The SAF is **similar to the Prompt Corrective Action (PCA) framework** which is imposed on commercial banks.



- **Umbrella Organisation (UO):** The RBI accorded regulatory approval for setting up of an Umbrella Organisation (UO) for UCB sector .
  - **UO can act as a self-regulatory body for small UCBs**, will have **a paidup capital of Rs.300 crore** and should provide cross liquidity and capital support to the UCBs when needed.
- **Other important steps:**
  - Entering into **Memorandum of Understanding (MoU) with state and central governments to facilitate coordination of regulatory policies**, formation of task force for UCBs, a comprehensive set of capacity building initiatives, measures to bring in efficiency through adoption of technology, etc.
  - Prescribing **educational qualifications and 'fit and proper' criteria** for managing directors (MDs) and whole-time directors (WTDs) of primary urban banks and barring MPs and MLAs from these posts.

- **Voluntary Transition into SFBs** –A scheme to enable eligible UCBs to voluntarily transition into SFBs was issued on the basis of recommendation of the High-Powered Committee on UCBs (2015)
- **Interest Subvention Scheme for MSMEs** – For inclusion of UCBs as Eligible Lending Institution under the Interest Subvention Scheme for MSMEs 2018 on par with commercial banks.
- **Constitution of Board of Management (BoM):** RBI provided guidelines on constitution of BoM in UCBs with deposits of ₹100 crore and above to improve quality of governance.
- **Customer Protection** - Limiting liability of customers of Co-operative Banks in unauthorised electronic banking transactions thereby bringing parity with commercial banks.

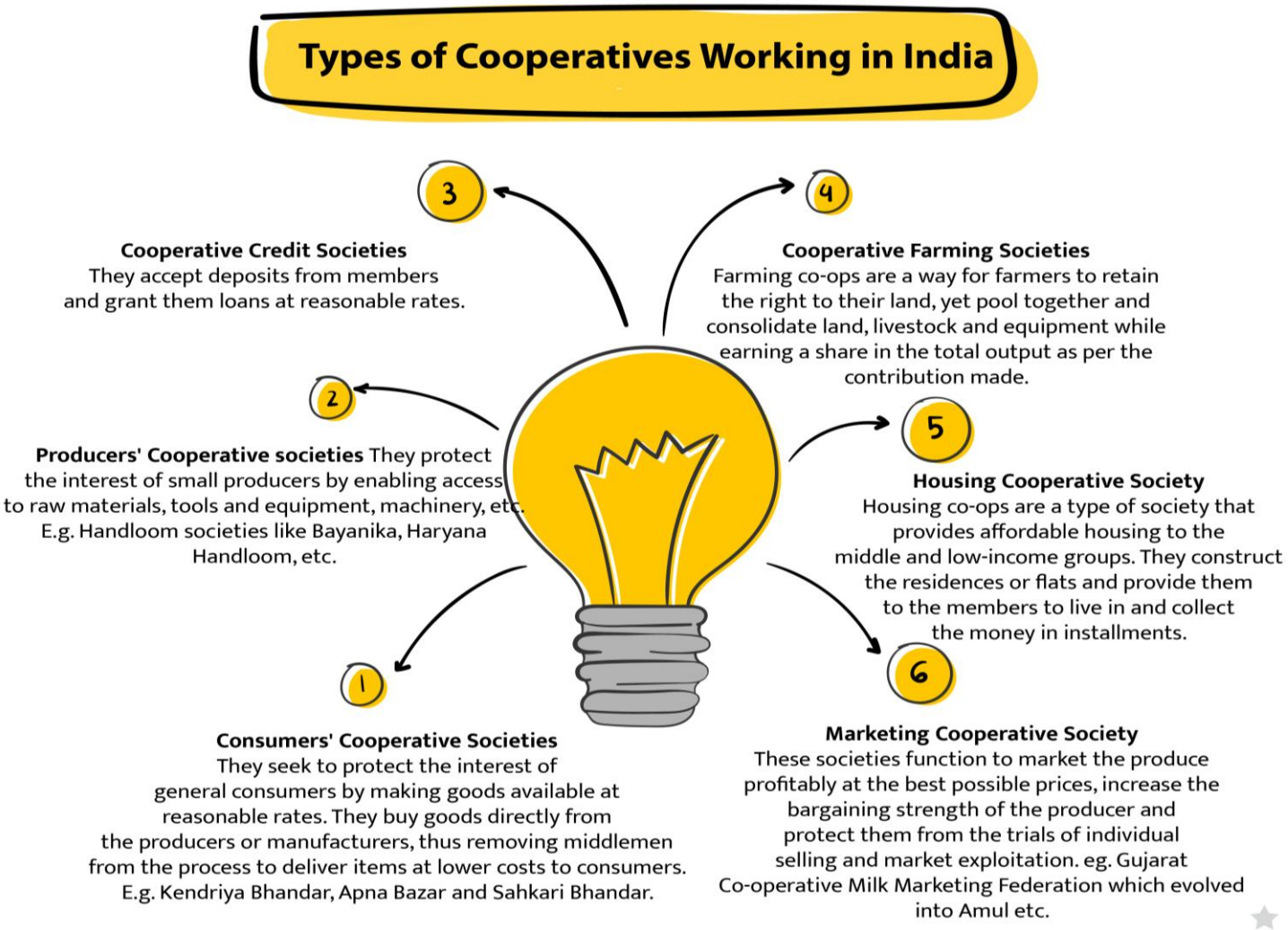
3.4. MULTI-STATE COOPERATIVE SOCIETIES (AMENDMENT) BILL, 2022

Why in News?

Recently, Multi-State Cooperative Societies (Amendment) Bill, 2022 was introduced in Lok Sabha.

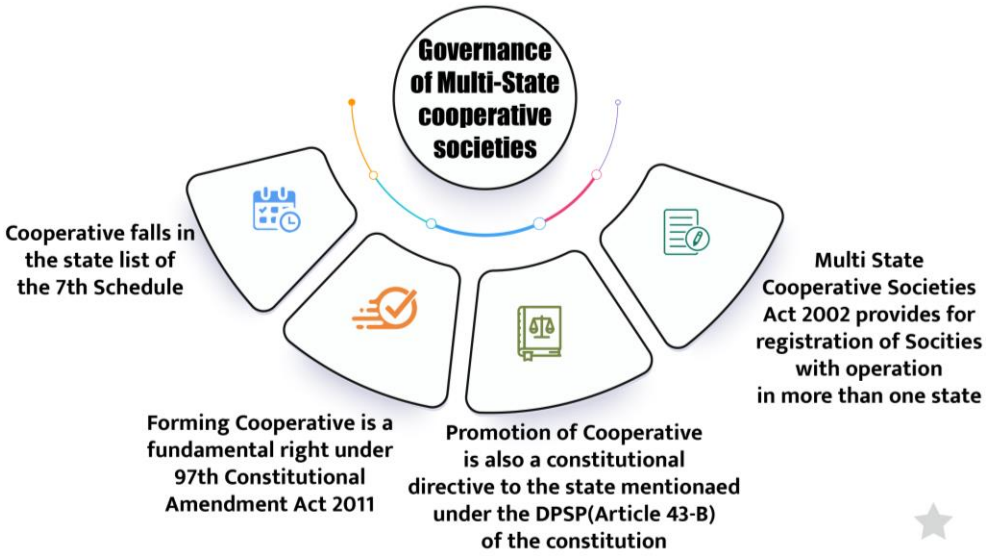
About Cooperative Societies

- A co-operative society is a voluntary association of individuals having common needs who join hands for the achievement of common economic interest.
- Cooperatives are a **state subject**, but there are many societies such as those for sugar and milk, banks, milk unions etc whose members and areas of operation are spread across more than one state.
- These inter-state Cooperatives are governed under **Multi-State Cooperative Societies Act 2002.** Administrative and financial control of these societies is with the central registrar.
- **Maharashtra has the highest number at 567**, followed by Uttar Pradesh (147) and New Delhi (133).



About the Multi-State Cooperative Societies (Amendment) Bill, 2022

- It seeks to **amend the Multi-State Cooperative Societies Act, 2002** aiming to bring **transparency and accountability** in the Multi-State Cooperative Societies sector.
- **Key Amendments**:
    - **Establishment of Co-operative Election Authority**: Central government will establish the Co-operative Election Authority consisting of Chairperson, Vice-chairperson and up to 3 members appointed by Central Government to:
        - ✓ Conduct such elections,
        - ✓ Supervise, direct and control the preparation of electoral rolls,
        - ✓ Perform other prescribed functions.
    - **Co-operative Ombudsman**: The central government will appoint one or more Co-operative Ombudsman with territorial jurisdiction for redresses of complain.
    - **Amalgamation and Division:** The Bill allows co-operative societies (registered under state laws) to merge into an existing multi-state co-operative society.
        - ✓ **At least two-thirds of the members of the co-operative society** present and voting at a general meeting must pass a resolution to allow such a merger.
    - **Establishment of Co-operative Rehabilitation, Reconstruction and Development Fund** for revival of sick multi-state co-operative societies.
    - **Composition of Board of Directors:** Bill amends the composition of the board of directors to mandate the inclusion of:
        - ✓ 1 Scheduled Caste or Scheduled Tribe member
        - ✓ 2 women members
    - **Increased penalties for offences:** The Bill adds that the failure to file any return or information will also be an offence. The fine for all these offences will extend from Rs 5,000 to 1 lakh rupees.
    - **Concurrent audit:** Insert a new **Section 70A**, for such multi-state societies with an annual turnover or deposit of more than the amount as determined by the Centre.



Multi-State Cooperative Societies Act, 2002

- 2002 Act was **enacted to:**
    - **consolidate and amend the law relating to co-operative societies**, with objects not confined to one State and serving the interests of members in more than one State,
    - **facilitate the voluntary formation and democratic functioning of co-operatives** as people's institutions based on self-help and mutual aid
    - **enable them to promote their economic and social betterment** and to provide functional autonomy.

Key Issues with the Bill

- Bill **seeks to "take away" state governments' rights** and affecting Federal structure.
- Centre is **indirectly encroaching into rights of State Co-operative Societies** in terms of merging a cooperative society
- **Extra burden on multi-State co-operative societies** which are in profit for the preceding three financial years shall annually credit 1 crore rupees or 1% of their net to the Co-operative Rehabilitation, Reconstruction and Development Fund".
- Bill prohibits redemption of shares of multi-State co-operative societies without Centre's approval. This strike at **heart of principles of autonomous functioning of cooperative societies** which the 97th **Constitutional Amendment sought to introduce**.

Benefits of the Amendment

- **Equity and facilitate inclusiveness:** provisions relating to representation of women and Scheduled Caste/Scheduled Tribe members on the boards of multi-State cooperative societies.
- **Promote Transparency and Accountability** through Concurrent auditing, Co-operative Ombudsman, etc.
- **Democratizes the Cooperatives:** Election to be conducted on regular basis and conducted by Co-operative Election Authority.
- **Revival of Sick** multi-state Cooperatives societies ensure no loss of jobs and their effective working.
- **Discipline promotion**: As bill ensures higher penalties in violation of Act which will help to promote discipline among cooperatives.

Persistent issue with Cooperative societies in India

- **Politicization of Cooperatives:** Many Cooperatives are dominated by local powerful members or family of the society, with strong political affiliation.
- **Skewed Geographical presence:** The Cooperatives in Northeast, West Bengal, Bihar, Odisha are not well developed as compared to Maharashtra and Gujarat.
    - Cooperative societies have struggled to be successful and financially viable, and the cooperative movement remains unevenly spread in the country.
- **Functional Weakness:** Due to Absence of Economies of scale, Shortage of skilled workforce, lack of Professionalism among the members.
- **Operational Challenges** because of Lack of Fair Audit Mechanism and Lack of coordination among cooperatives existing at different levels.
- **Dominance of single purpose societies** hence unable to take a total view of the people seeking help, nor can they analyse and solve problems from different angles.

Way forward

- **Promoting Multipurpose Societies:** It will help to have balanced and integrated view about the needs of its members and can meet them accordingly.
- **Ensure Efficiency in Functioning:** Providing the training to workforce and conducting regular audit of Cooperatives.
- **Awareness:** Need to adopt strong communication and public relation strategies, which can promote the concept of cooperation among the masses.
- **Legislative reform for improving functioning** of Cooperative Banks by adopting the recommendation of Narasimham Committee.
- **Complete Transparency in** working by bringing them under purview of Right to Information (RTI).
- **Digitization of Cooperatives:** especially in governance, Banking and businesses as it can ensure accountability and Transparency.

3.5. COMPETITION LAW AND BIG TECHNOLOGY COMPANIES

Why in News?

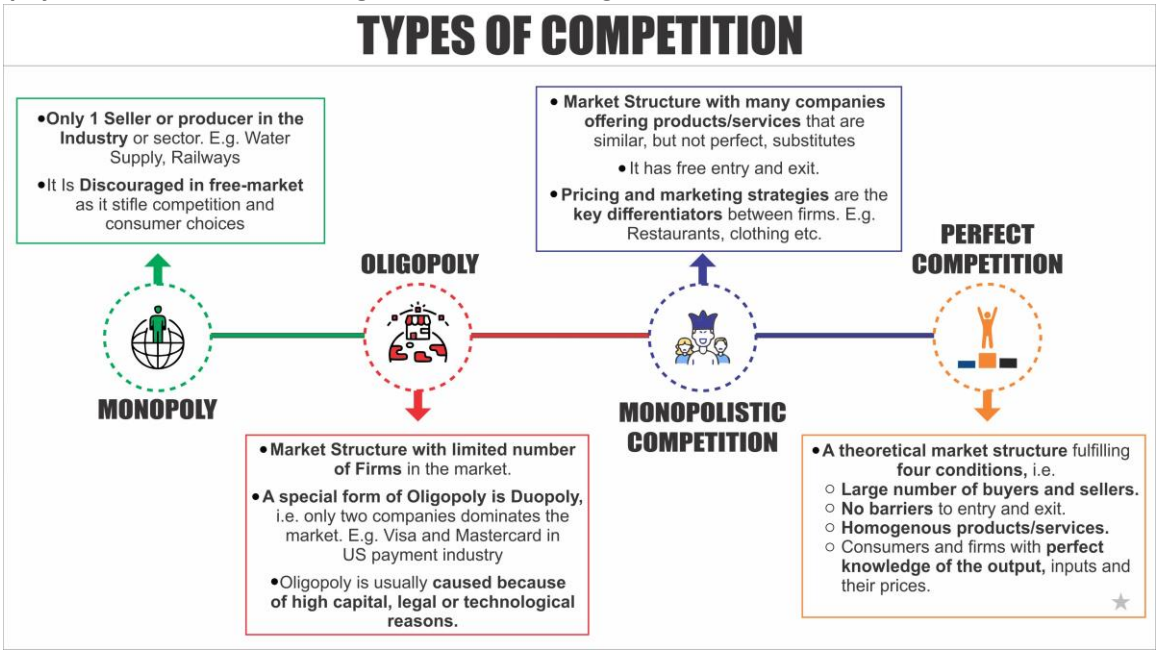
Recently, the Parliamentary Standing Committee on Finance gave a report titled '**Anti-competitive practices by Big Tech companies**' and urged for a **Digital Competition Act** and **code of conduct** for tech companies.

Competition: Its Meaning, Types and Role in an Economy

- **Competition** refers to 'a situation in a market in which firms or sellers independently strive for the patronage of buyers in order to achieve a particular **business objective**.'
    - The objective can be **profits, sales** and/or **market share**.
- Based on the **market structure**, economists identify **four main types of competition** (refer **image**).
- In an economy, competition is viewed as an **important process** as it:
    - **Incentivizes companies to innovate** and **specialize** in order to withstand competition.
    - **Protect consumer's interest** by offering greater choices and quality at reduced costs.

- **Leads to higher payments** and **better working conditions** from organizations to attract and retain workers.
- **Sign of a healthy** and **profitable marketplace**, attracting others to invest as well.

- **Without competition**, **dominant firms** can use their **market power** to **charge higher prices**, **lower quality of products/ services** or/and **block potential competitors' entry** into the market.



Digital Markets and Committee Findings

Widespread adoption of **Information and Communication Technology (ICT)** and **rise of multiple digital companies**, is leading to **distinct digital markets** in various sectors.

- Presently, at **national** and **global level**, sectors with significant digital markets include **healthcare, transportation, finance, education** etc.
- India's **overall digital market is** huge with an expected **907 million users** by **2023**.
- India's consumer **Digital Economy** is expected to **double from 2020 to 2030.**

The underlying economic drivers of digital markets have inevitably led to the rise of relatively few leading players, collectively referred to as **Big Tech Companies**. The committee has identified **10 types of anti-competitive practices** which are practiced by Big Tech companies as:

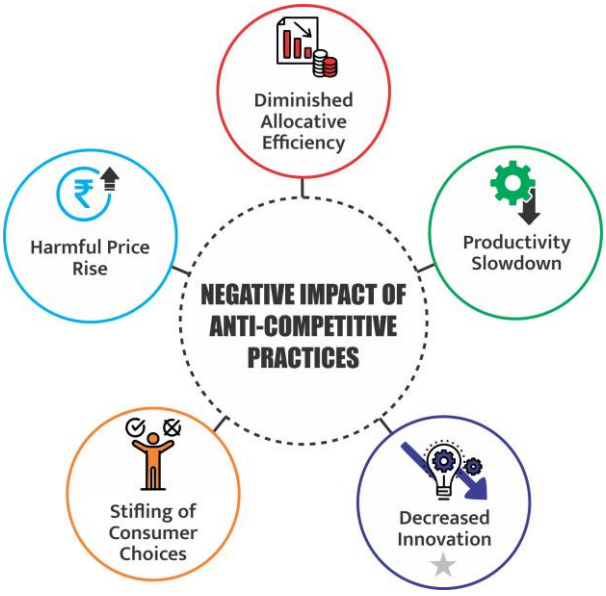
S. No.	Anti-Competitive Practice	Description
1.	**Anti-Steering Provisions**	Prominently associated with '**App Stores**' (Google and Apple App Stores), the app publishers **prevent their business users** (app users) from **moving out** of the platform and **use other alternatives** for payments.
2.	**Platform Neutrality/ Self-Preferencing**	Commonly associated with '**marketplaces**', some platforms **place their own products prominently**. E.g., prominent placement of Google Pay on Play Store by Google.
3.	**Adjacency/ Building and Tying**	In it, digital firms **force people to buy related services**. E.g., **Food delivery apps** making it mandatory for restaurants to use the platform's delivery services.
4.	**Data Usage (use of non-public data)**	**Monopolistic usage of data** by digital firms, especially from leading platforms with **vast repositories of data**. E.g., Past purchase data is used by Swiggy and Zomato to customize offerings for users, dissuading other players from entering.
5.	**Mergers and Acquisitions**	'**Killer acquisitions**' is a repeated issue in digital markets where **Big Techs buy highly valued start-ups**, disallowing the smaller firms to grow beyond a certain limit. E.g., Facebook acquisition of WhatsApp.
6.	**Pricing/ Deep Discounting**	Prominently associated with **e-commerce sales**, huge discounts are also used by leading platforms in hotel booking, food delivery etc. It **compromises service providers control** over the final price and offline player's ability to compete. E.g., Amazon, Flipkart.
7.	**Exclusive Tie-ups**	**An exclusive arrangement of e-commerce platforms with a brand hampers** the business of other platforms as well as of brick-and-mortar sellers. Similarly, platforms use **price parity clause** to stop businesses from selling at lower rates on other platforms.

8.	**Search and Ranking Preferencing**	Giving preference to **sponsored products in algorithms** used to show results for users search rather than showing organic search results. E.g., **Preferential listing** by Amazon and Flipkart.
9.	**Restricting Third-Party Applications**	**Presence of gatekeepers** in digital markets which **restrict installation or operation** of **third-party applications**. E.g., for app developers, **Apple's App Store** is the only channel to distribute their apps to iOS consumers.
10.	**Advertising Policies**	Digital advertising market faces issues of **conflict of interest** and **self-preferencing** when **platforms operate at all levels** of the **ad-tech supply chain**.

These Anti-competitive practices **hurt the digital markets negatively** (refer **image**) which ultimately led to **reduced Market Dynamism**, **increased Wage Inequality** and **Wealth Concentration**.

Legislative Framework in India and its issues

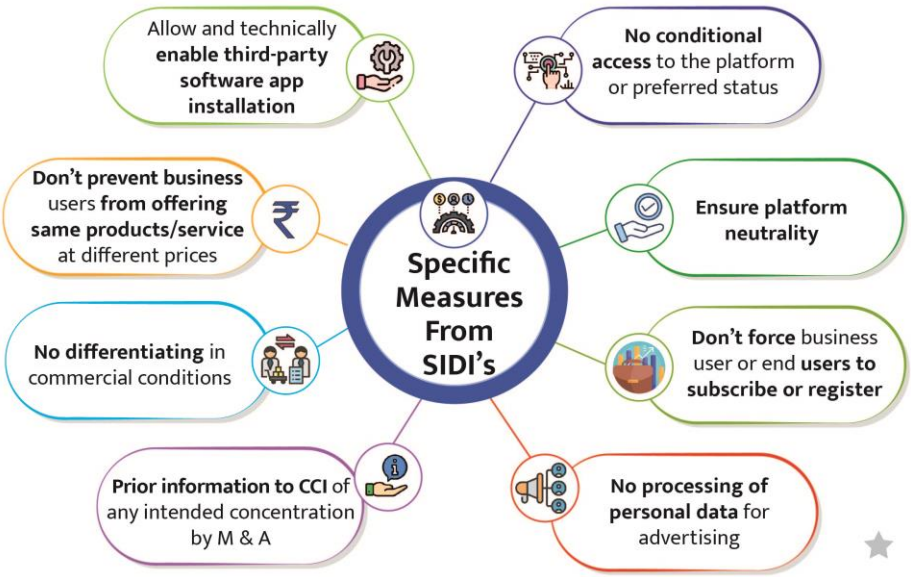
- To **promote** and **sustain fair competition**, i.e., to **prevent practices** having **adverse effect on competition**, the government of India enacted the '**Competition Act, 2002**.'
- The act provides for the establishment of **Competition Commission of India** or **CCI** (established in 2009) for the **administration, implementation,** and **enforcement** of the Act.
  - CCI also **protects** the **interests of consumers** and **ensures freedom of trade** carried on by other participants in markets in India.
- The **National Company Law Appellate Tribunal (NCLAT)**, constituted under the **Companies Act of 2013**, is the **Appellate Tribunal** to hear and dispose appeals against CCI directions, orders, or findings.
  - But it is an **ex-post approach**, i.e., law designed to penalize anti-competitive behavior only after its occurrence.
  - In comparison, digital markets move at high pace due to the **Increasing Return of Size Economies** – making ex post effects **too delayed** to prevent irreparable harm to affected parties from **Big Techs**.
    - ✓ It leads to **limited fair competition** quickly, with 1 or 2 winners taking all, in comparison to traditional markets which tend to be **fair** and **contestable**.
    - ✓ It also leads to **Network Effect**, i.e., increased utility of platforms with increased users, making the larger platforms **more efficient**.
    - ✓ **Cornering of valuable market inputs** (e.g., talented workforce) and quick **unlocking** of **increasing return effects in adjacent markets** are other harms.



Way Forward: Committee Recommendations and Other Measures

To ensure a **fair, transparent,** and **contestable digital ecosystem**, India needs a **Digital Competition Act** based on the unique needs of digital markets. On lines of global **ex-ante approaches**, this Digital Competition Act should:

- **Define and identify** a small number of **Systemically Important Digital Intermediaries (SIDIs)/Digital Gatekeepers** that can negatively influence competition.



- Impose **ex-ante competitive restraints on SIDIs** in India to regulate competition in digital markets.
- **Global Harmonization of digital regulations** to reduce the regulatory burden for companies and help Indian companies compete globally.
- **Harmonize competition law** with **Consumer Protection Act 2020** and the **e-commerce rules** under it.
- **Mechanism** to **ensure fair compensation** to the consumers.
- **Revamping CCI and strengthening it** to take new responsibilities. E.g., Setting up **specialized digital Markets** within the commission with skilled experts, academics, and attorneys.
    - Also, it should **closely monitor the SIDIs** and make **recommendations** on **designating of SIDIs**, **compliance** and **adjudicate**.
- Prescribe a **code of conduct** with **specific measures for SIDIs** to **prevent them** from **abusing their market power** to **stifle competition** (refer **image**).

3.6. LEGAL REFORMS AND EASE OF DOING BUSINESS (EODB)

Why in news?

Recently, **Ministry of Commerce and Industry** has introduced the **Jan Vishwas (Amendment of Provisions) Bill, 2022** in Lok Sabha.

More on news

- Bill **amends 42 Acts** administered by **19 ministries** to **reduce the compliance burden on individuals and businesses** and **ensure ease of doing business**.
    - Some Acts that are amended by the bill include Indian Post Office Act, 1898, Environment (Protection) Act, 1986, Public Liability Insurance Act, 1991, Information Technology Act, 2000 etc.
- It will help in **settlement of a large number of issues by adjudication and administrative mechanism**, without involving courts.
    - It also **enables persons to remedy minor contraventions and defaults** and save time, energy and resources.
- **Key Provisions of Bill**

Specifications	Detail
Decriminalizing certain offences	• Several offences with an imprisonment term (in certain Acts) have been **decriminalized by imposing only a monetary penalty**. o For example, **under Agricultural Produce (Grading and Marking) Act, 1937,** counterfeiting grade designation marks is punishable with imprisonment of up to three years and a fine of up to five thousand rupees. Bill replaces this with a penalty of **eight lakh rupees**.
Revision of fines and penalties	• **Increases fines and penalties for various offences** in specified Acts by 10% of minimum amount every three years.
Appointing adjudicating officers	• Central government may **appoint one or more adjudicating officers** for purpose of determining penalties. • Adjudicating officers may **summon individuals for evidence**, and **conduct inquiries into violations** of the respected Acts.
Appellate mechanisms	• It specifies **appellate mechanisms for any person aggrieved by order passed by an adjudicating officer.** For instance, in Environment (Protection) Act, 1986, appeals may be filed with National Green Tribunal within 60 days from order.

About Ease of Doing Business

- Ease of Doing Business (EODB) was an **index published by World Bank since 2003 (discontinued in 2021)**.
- It measured the overall Ease of doing business in a country, **measured by 10 indicators** (see figure).
    - It **ranked 190 economies.** In 2020, **India was ranked at 63rd in EODB.**

Although, the index has been discontinued, the idea of improving Ease of Doing Business has been taken by India as a key parameter of growth and development.

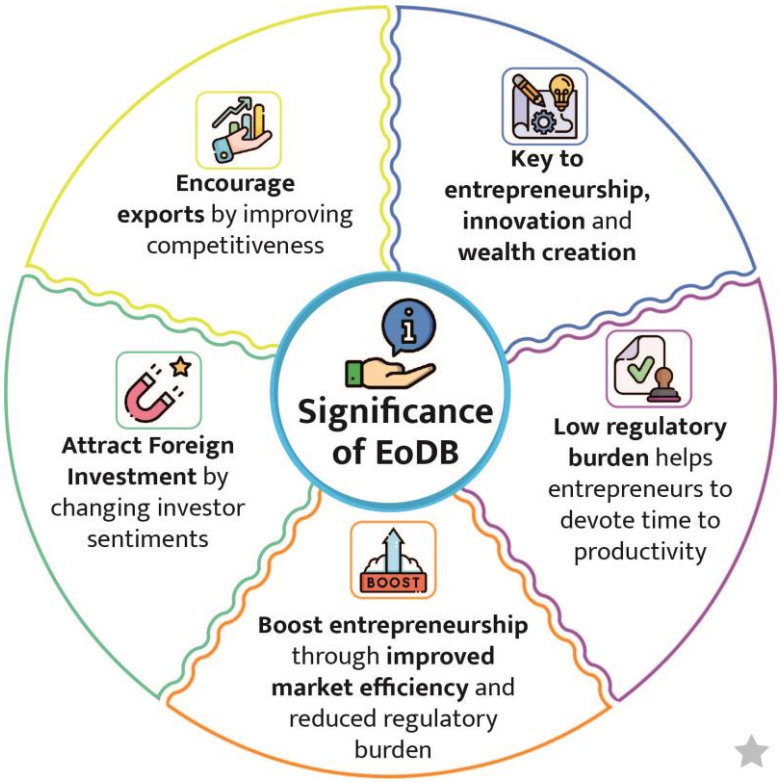
Legal hurdles in Ease of Doing business

- **Legal variance from State to State:** Varying legal framework in India imposes hurdles to effective business in India due to different legal structures in different states.
  - For example, sale of Alcohol is allowed in Maharashtra, but it is illegal in Gujarat.
- **Complex legal processes:** Legal processes are highly complex with involvement of multiple departments and need of numerous compliances to be fulfilled before starting any business.
- **Import/Export hurdles:** There are various **hurdles in import and export business in India** such as custom duty varying from zero percent to 150 percent and various charges like countervailing duty, educational cess, etc. that **discourages investment and setting up of business.**
- **Land acquisition issues:** Consent clause, fair compensation and social impact assessment brought under Land acquisition, Rehabilitation, and Resettlement Act, 2013 have added to investor woes without being able to effectively balance the interests of landowners and buyers.
- **Labor issues:** Lack of consolidation of labor laws as it lies in Concurrent List under Seventh Schedule of the Constitution and has more than 40 central laws and about 100 state laws.
- **Adjudication issues:** Several businesses have to resort to courts for resolution of even minor issues. Also, delays in adjudication of commercial disputes aggravates financial costs for businesses.

With **Jan Vishwas (Amendment of Provisions) Bill,** Government has attempted to resolve these adjudicatory issues.

Other Initiatives taken for improving EoDB

- **Labor laws:** Government has notified **4 Labor laws** by rationalizing relevant provisions of 29 Central Labour Laws.
  - **Code on Wages, 2019:** It subsumes the provisions of four laws -- Payment of Wages Act, Minimum Wages Act, Payment of Bonus Act, 1965 and Equal Remuneration Act.
    - ✓ It applies to **all establishments and all employees in both organized and unorganized sectors**.
  - **Industrial Relations Code, 2020:** It'll **improve ease of doing business by allowing firms with up to 300 workers** to go ahead for lay-offs, retrenchment, and closure without government permission**.**
  - **Social Security Code, 2020:** It empowers Centre to frame any other **schemes for self-employed, unorganized workers, gig workers and platform workers** and members of their families.
  - **Occupational Safety, Health and Working Conditions Code, 2020:** It applies to factories having **at least 20 workers if manufacturing process is being carried** on with aid of power and 40 if manufacturing process is being done without power.



- **Dedicated Commercial Courts (DCC):** For speedy resolution of commercial cases, Commercial Courts Act, 2015 was passed and again amended in 2018 which led to establishment of DCC in Delhi, Mumbai, Kolkata and Bengaluru with dedicated infrastructure and exclusive judicial human power.
- **Insolvency and Bankruptcy Code (IBC), 2016:** It aims to resolve claims involving insolvent companies so as to **tackle the bad loan problems** that were affecting the banking system.
- **SPICE+ (Simplified Performa for Incorporating Company Electronically):** Launched by Ministry of Corporate Affairs to provide speedy incorporation in line with international best practices.
- **Shram Suvidha Portal (SSP):** One-stop-shop for Labour Laws compliance to facilitate reporting of Inspections, and submission of Returns.

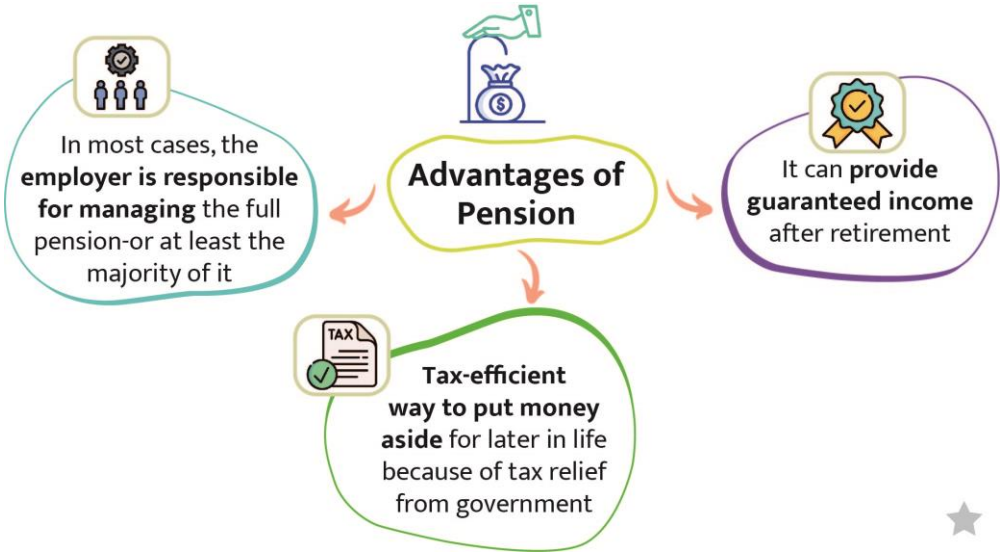
Way forward

- **Ease compliance:** A systematic exercise across Centre and States should be undertaken to eliminate or reduce compliances having an adverse impact on time and cost of businesses.
- **Dispute resolution: Fast-track courts and alternate dispute resolution mechanisms** should be institutionalized and made independent of judiciary to fast-track dispute resolution process.
- **Land acquisition: Fast-track digitization of land records** to ensure clearer land titles; avoid litigation and land pooling to further ease the land acquisition process for businesses.
- **Creating Awareness:** Awareness needs to be generated regarding Startup India Initiative, i.e., eligible companies can get themselves registered under DPIIT to get access to benefits such as tax benefits, easier compliance, IPR fast-tracking, self-certification, etc.
- **Tax Holidays:** Tax holding of three consecutive years under Income Tax Act, 1961 provided to startups incorporated between 2016-2022 needs to be extended.

3.7. PENSION SYSTEM IN INDIA

Why in News?

Recently, because of the discussion over the **Old Pension Scheme (OPS)** versus the **New Pension Scheme (NPS)**, the debate on pension reforms has intensified.



India's Pension System

- The Indian Pension System is **highly complex** and **fragmented** with a wide variety of options. E.g.
  - **Public Pensions** such as **OPS** for civil servants and **NPS** (replacing OPS from 01 January 2004) for new entrants.
    - ✓ The **Civil Servants Provident Fund and Gratuity** after a certain period of service are other benefits enjoyed by Civil Servants.
    - ✓ Armed forces personnel are an exception to NPS and are still covered by OPS.
  - **Employee Pension Scheme (EPS)** for employees in the **organized sector** by **Employees' Provident Fund Organisation (EPFO)**.
  - **Government Pension Schemes** such as **Atal Pension Yojana, Pradhan Mantri Vaya Vandana Yojana (PMVVY), Indira Gandhi National Old Age Pension Scheme (IGNOAPS)** etc.
  - **Pension Plans from Organizations** such as LIC's Saral Pension etc.

Difference between NPS and OPS

Basis of Difference	New Pension System (NPS)	Old Pension System (OPS)
Nature	NPS is a **defined contribution pension** where employees contribute towards NPS during their years of employment.	OPS is a **defined benefit pension** for government employees on the basis of their **last drawn salary**.
Eligibility	**All Indian citizens** between 18 and 65 years.	**Government employees** only.
Risk	It **involves risk** as the NPS amount is **invested** in **market-linked securities**.	**No Risk involved**.
Tax Benefits	**Tax-deductible** annual investments of up to **₹1,50,000** are under **Section 80C** and **₹50,000** under **Section 80CCD (1B)** of the **Income Tax Act, 1961**.	**No tax benefits** are applicable to the employees.
Pension Amount on retirement	**60%** of pension fund is **tax-free** when redeemed, while the remainder is taxable and remains **invested in annuities**.	It provides a **fixed monthly pension** of **50%** of the **last drawn salary.**

Why was NPS introduced?

NPS was introduced in **2004** based on the report of **OASIS (Old Age Social and Income Security) Project** due to:

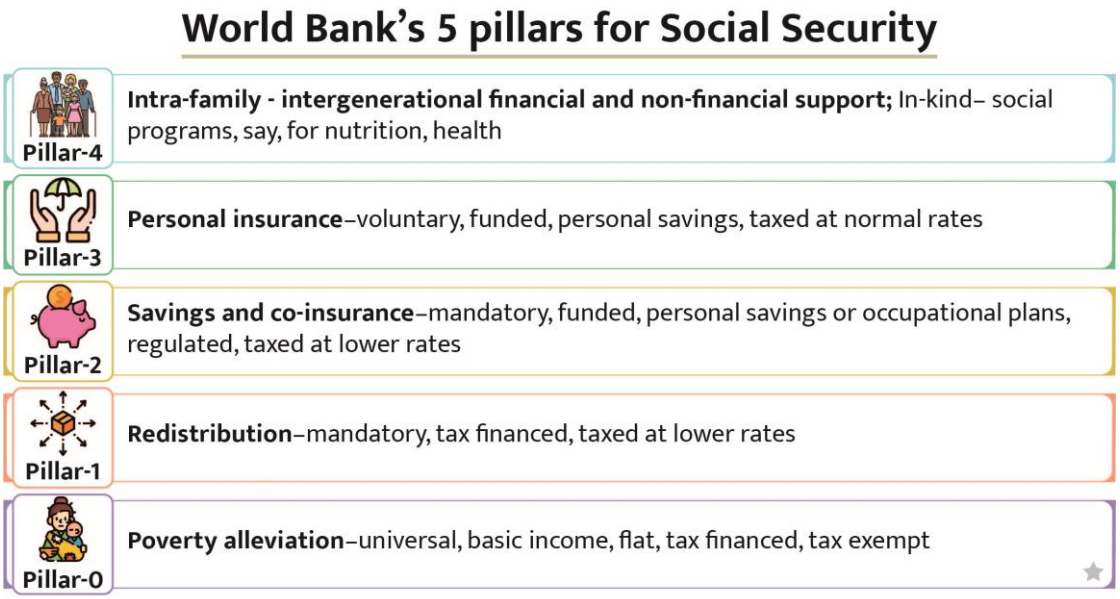
- **Increasing pension liability** of the government with **no specific growing corpus** for payments.
- **Unsustainable nature of OPS** as pension liabilities kept climbing with increasing life expectancy due to better health facilities. E.g.
  - By **2020-21**, the **Centre's** pension bill jumped by **58 times from its 1991 figure**. For some states, it is very serious. E.g. for Himachal, pensions accounts for almost 80% of the state's own tax revenues.

Other challenges in the Indian Pension System

Apart from the rising financial burden, the Indian Pension System faces other challenges as well. According to a **National Institute of Public Finance and Policy** study, the **Indian Pension System** has:

Longevity risk is a scenario where rising life expectancy could result in pension and insurance companies needing more cash because people are living longer than anticipated.

- **Low and Skewed Coverage** of the formal pension system or limited to civil servants and employees in the organized sectors. E.g., **at least 85% current workers** are not members of any pension scheme.
- **Provide Limited Social Safety net** for the elderly poor. Of all elderly,
  - **57%** receive **no income support** from public expenditure.
  - **26% collect social pension** as part of poverty alleviation.
- **Longevity Risk** due to the rising Life Expectancy.
- **Large Percentage** of informal employment.



- **High Asymmetry and Burden** of **public pensions.** E.g.
  - **11.4%** draw defined benefit as **government ex-workers** (or their survivors), **amounting 62% of system expense.**
  - Over **60%** of the pension burden is on state governments.

Way Forward

To overcome these challenges, significant reforms are needed in the pension system based on the World Bank's five-pillars for social security. This can be done by:

- **Introducing a minimum level of support** for the poorest aged individuals.
- **Increasing coverage of pension arrangements** for the unorganized working class.
- **Introducing a minimum access age** so that it is clear that benefits are preserved for retirement purposes.
- **Improving the regulatory requirements** for the private pension system.
- **Revive Traditional Old Age Support Mechanisms** to overcome aging population issues.
- **Reduce Government Regulatory Control** over the pension sector which impedes the growth of the private annuity market.
- **Enhancing the retirement age:** Given the increased ability citizens to work beyond the current retirement age, it could be beneficial for citizens as well as reduce the pension burden on the Government.

3.8. LAND TITLING

Why in News?

Recently, NITI Aayog published **Model Conclusive Land Titling Act.**

Background

- In 2008, the **Digital India Land Record Modernisation Programme** for digitization of land records.
  - It **highlighted the goal of replacing presumptive title system in India** with that of conclusive titling with title guarantee.
- In 2011, the government drafted a **Model Land Titling Bill 2011** aimed for States to move towards establishing conclusive titles.
  - However, the Bill was not clear on how the current system would transition to the new system and what the roles of authorities and officers would be.
- In 2021, a **Model Bill on Conclusive Land Titling was sent to States and Union Territories** last June seeking their comments.
  - However, many States have failed to send in their feedback.

About Land Titling

- Land titling is a generic term used to **denote the programmes implemented by the state to enable the individuals and the state to exchange or trade in land or property right**s.
- Access to the land and its documented ownership is the **core of livelihood for the majority of poor specially the most vulnerable groups** like marginal, farmers, tribes, other backward categories etc.
- **India currently follows a system of presumptive land titling**.
  - This means that land records are maintained, with information on possession, which is **determined through details of past transactions**.
  - Ownership, then, is established **on the basis of current possession**.
  - Registration of land is actually a **registration of transactions, such as sale deeds, records of inheritance, mortgage and lease**.

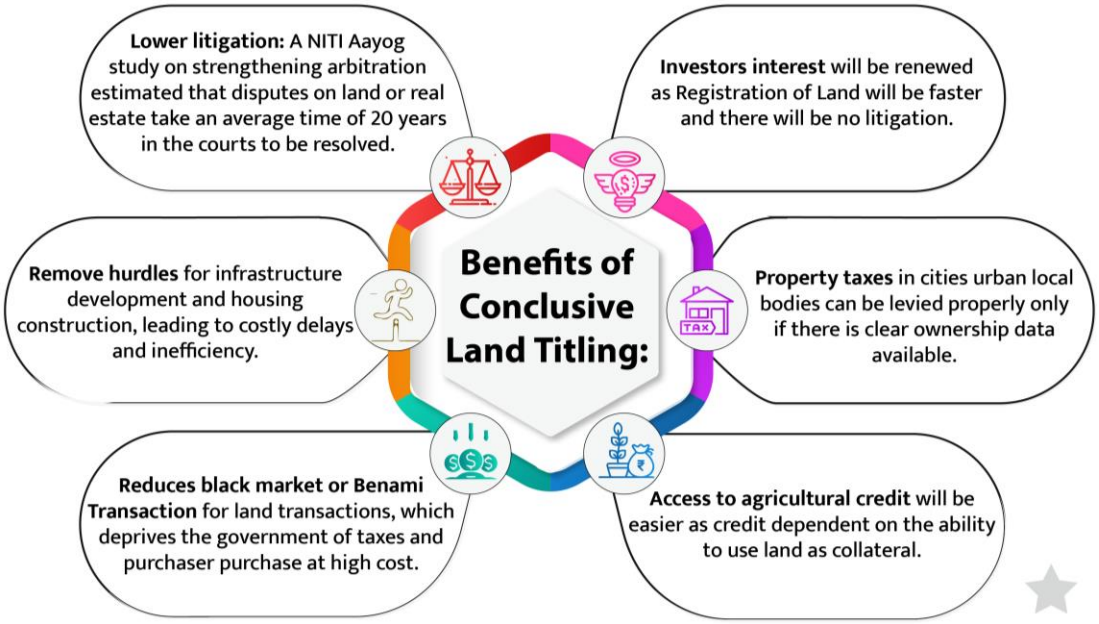
Key Features of Model Conclusive Land Titling Act

- **Land Authorities** to be set up by each State government, which will appoint a Title Registration Officer (TRO).
  - Having considered and resolved all the disputed claims, the Land Authority will publish a Record of Title.
- **Title Registration Officer (TRO)** need to prepare and publish a draft list of land titles based on existing records and documents.
- **Land Dispute Resolution Officer (LDRO**) if disputing claims are received, the TRO will verify all the relevant documents and refer the case to a LDRO for resolution.
- **Land Titling Appellate Tribunals: o**ver a three-year period, titles and the decisions of the TRO and the LDRO can be challenged before Land Titling Appellate Tribunals.
- **Conclusive proof of ownership** after a three-year period, entries in the Record of Titles will be considered conclusive proof of ownership.
- After last stage of verification, appeals can only be taken up in High Courts.

- Holding registration papers does not actually involve the government or the legal framework guaranteeing the ownership title of the land.

- On the other hand, **under a conclusive land titling system** which is being recently proposed, land records designate actual ownership.
  - **State provides guarantee** on land titles and also include provisions for compensation in case of any dispute.
  - Once a title is granted, any other claimant will **have to settle disputes with the government, not the title holder.**
  - Further, the government may **provide compensation to claimants in case of disputes,** but the title holder is not in any danger of losing ownership
  - This system originated in South Australia and spread to other commonwealth nations.

Challenges in implementing in Conclusive Land Titling



- **Records are in a bad shape:** Many title transfers are unrecorded and changes on the land often go undocumented.
- **Different scripts and languages:** Existing records are fragmented and are maintained in different **scripts** and **languages** in different states making land titling difficult.
- **States have low fiscal capacity** to actually underwrite buyers of land and property in case the title is not clear.
- **Burden the government:** Adding disputes around claims to have the government compensate buyers defrauded by incorrect titles.
  - It will be passing another burden on to an already stretched legal system.
- **Lack of clarity on Registration system:** As it doesn't mention or define what the new title registration system will be.
  - It only lays down that the authority will set it up via a notification.
- **Accountability of state low:** The TRO so appointed can also be a non-state official, i.e., a private person, and this could jeopardize accountability and can lay the entire procedure vulnerable to manipulations by private interests.

Conclusion

India will need a lot of political will to first improve the state of its poor land records before it can plan to overhaul the presumptive titling system.

With an aspirational goal of India becoming a $5-trillion economy by 2025 the imperative need is to unleash the power of land and reap fruits by bringing about the much-needed Land Reforms.

3.9. PRICE MONITORING CENTRES (PMC)

Why in News?

Recently, Ministry of Consumer Affairs, Food & Public Distribution suggested to have price monitoring centres for critical goods in all districts of India.

More about news

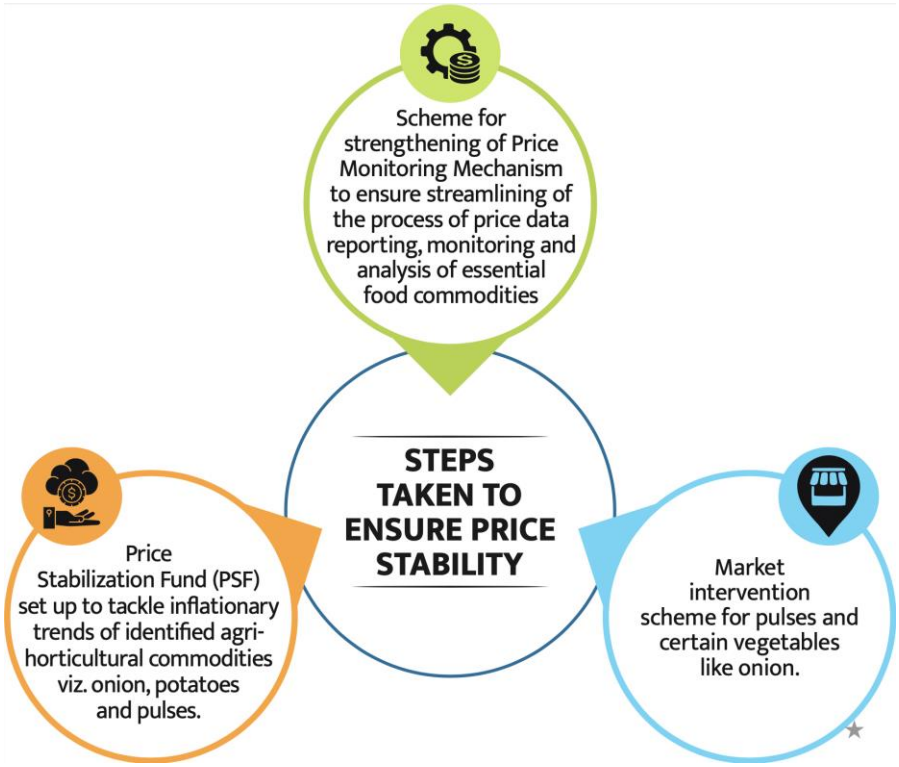
- Centre intends to achieve target of having **750 price monitoring centres by March 31st 2023** for which financial support will be assured to states.
- As per current status **50% will be funded by State government and 50% will be funded by Central Government** for having necessary infrastructure.

Benefits of PMC

- **Inflation** will be controlled as prices of essential commodities will be monitored through PMC and controlled by centre.
- **Consumer interests** will be better protected in terms quality, quantity, standards, testing and benchmarks through BIS, NTH, Legal Metrology and National Consumer Helpline.
- **e daakhil:** Better use of portal for online filing of consumer complaints as PMC will be able to take action fast.
- **Market intervention**: Regular retail price reviews will be instrumental in deciding on strategies for market intervention to stabilize the market and ensure that shortages do not adversely affect the consumers.

Current setup for Price Monitoring

- **Price Monitoring Division (PMD)** in the Department of Consumer Affairs is responsible for monitoring prices of selected essential commodities.
  - The activities of the division include monitoring of the **retail** and **wholesale prices**, and **spot** and **future prices** of selected essential commodities on a daily basis.
  - Prices are reported **daily** on the website.
  - **State Civil Supplies Departments** of the respective State Governments report the price on the **PMS App** daily about 22 essential food products.
- **22 essential food commodities** monitored based on data collected from 340 market centres spread across the country.
- To cross-check accuracy of prices reported by centres from States/UTs, **services of FCI and NAFED are utilised.**

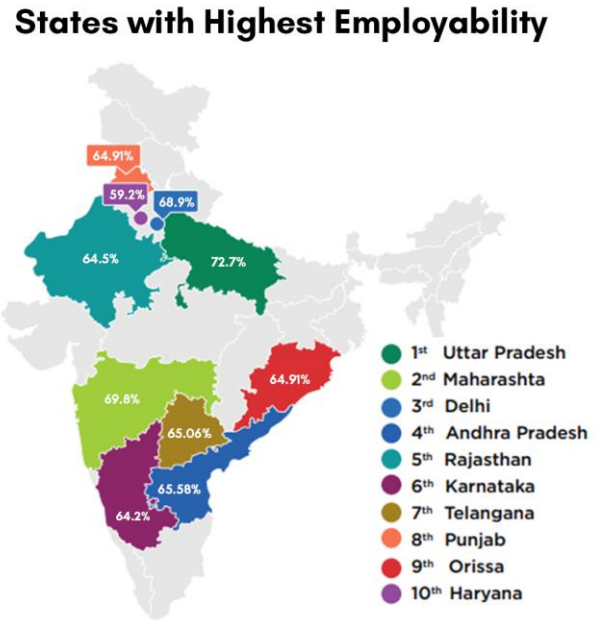


3.10. NEWS IN SHORTS

3.10.1. INDIA SKILLS REPORT 2023

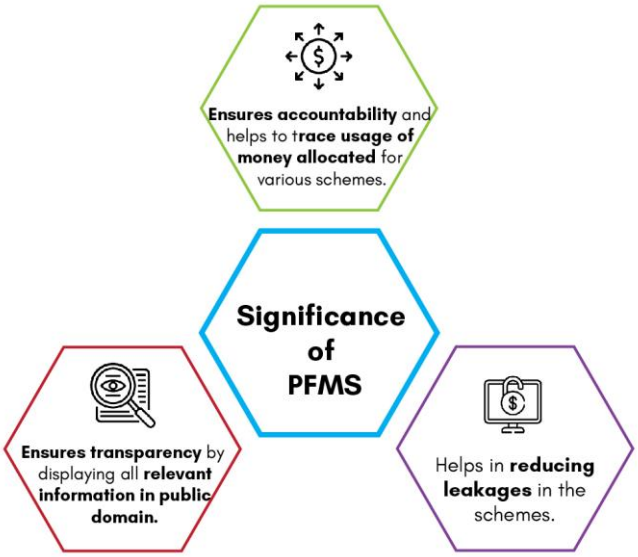
- It was released by **Wheebox in partnership with All India Council for Technical Education (AICTE), Confederation of Indian Industry (CII) and others**.
  - It examines the strategic overview of India's Skills and Talent Economy by 2030.
- **Key Highlights**
  - India's employable workforce has **increased from 46.2 % to 50.3 %.**
  - **52.8 % of women workforce are employable**, higher than the 47.2 % of employable men.
  - Although, little over **33% of women were working, the ratio of men to women** indicates that more men are employed than women.
  - Significant **skills gap in the fields of data science,** cloud computing, healthcare, and finance.
  - Soft- skills **such as adaptability & flexibility, problem-solving, stress management**, etc. will become non-negotiable for every job position.
- The report has recommended to **instill the required vocational and skill development programs** in our secondary, high secondary, and undergraduate education.
- **Government Initiatives for Skill Development**
  - **National Policy on Skill Development and Entrepreneurship, 2015.**
  - **Skill India Mission 2015.**
  - **PM Kaushal Vikas Yojana for recognition and standardisation of Skills.**

- **SANKALP and STRIVE initiatives to boost Skill India Mission.**



3.10.2. PUBLIC FINANCIAL MANAGEMENT SYSTEM (PFMS)

- Public Accounts Committee (PAC) recently stressed on fiscal prudence in implementing Public Financial Management System (PFMS).
- PFMS is a **web-based online software application** developed and implemented by Office of Controller General of Accounts (CGA), Ministry of Finance.
  - It was started with **objective of tracking funds released** under all Plan schemes of Government, and **real time reporting of expenditure** at all levels.
  - Subsequently, **scope was enlarged to cover direct payment** to beneficiaries **under all Schemes.**
- **Key issues highlighted by PAC**
  - **Implementation of PFMS dealt with a casual approach** and there was **no proper financial planning** of process.
  - **Lack of human resource deployment, infrastructure,** and technological advancement.
  - **Absence of full coverage** of all Direct Benefit Transfer (DBT) schemes.
- **Recommendations**
  - Incorporating **scientific methods into budgeting, projecting and utilisation of funds** will ensure maintenance of fiscal prudence.
  - **Assessment of physical and technical infrastructure** along with back-up arrangements.
  - **Swift inclusion of all implementing agencies** and integration of payment-transfer software within fixed timelines **to ensure transparency, accountability and revenue saving**.
  - **Thorough assessment of nature of DBT scheme** and its components prior to integration in PFMS.



3.10.3. 48TH MEETING OF GOODS AND SERVICES TAX (GST) COUNCIL

- **Key decision taken in GST Council meet**
  - **Measures for facilitation of trade**
    - ✓ **Decriminalised GST offences** under Section 132 of Central GST Act, 2017 such as **obstruction or preventing any officers from discharging their duty,** deliberate tampering of material evidence etc.
    - ✓ **Doubling of threshold of tax amount for launching prosecution** from **₹1 crore to ₹2 crore**.
    - ✓ Reduction in compounding amount from 50-150% of tax amount to 25-100%.
  - **Reduced GST on husk of pulses to Nil** from 5% and on **ethyl alcohol (biofuel) to 5%** from 18%.
  - **No decisions** on taxation of **tobacco and gutka, determination of tax treatment for online gaming, casinos and horse-racing, and tribunal** to settle disputes with taxpayers.
- **GST Council is a constitutional body,** established under **Article 279A (1),** introduced through **101st Constitutional Amendment Act** to decide issues relating to GST.
  - GST Council is **a joint forum of Centre and States**, consist of following members:
    - ✓ Union Finance Minister (Chairman),
    - ✓ Union Minister of State in-charge of Revenue or Finance (Member)
    - ✓ Minister in charge of Finance or Taxation or any other Minister nominated by each State Government (Member).

3.10.4. SHORT-TRANSFERS OF CESS FUNDS BY CENTRE

- Recent, report of the CAG on Union Government Accounts for FY 21 highlighted **non utilization of cesses and levies.**
- Cess is imposed as **an additional tax** besides the existing tax **(tax on tax)** with a purpose of **raising funds for a specific task**.
    - Surcharge is a tax on tax that is **not collected for any particular cause**, and the union government **may use the proceeds of surcharges for any purpose it sees as important.**
- Cess is not a permanent source of revenue for the government, and it is **discontinued** when the purpose of levying it is fulfilled.
    - It can be levied on **both indirect and direct taxes.**
    - **Article 270** of the Constitution allows cess to be excluded from the purview of the **divisible pool of taxes** with the States.
- **Key findings**

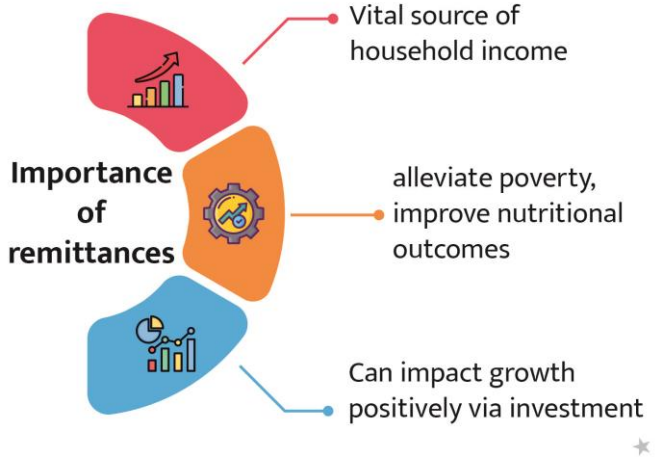
Cess	Cess Feature	CAG observation
Universal Access Levy (UAL)	• It is a **revenue generating mechanism under Universal Service Obligation Fund (USOF, 2002).** ○ It aims to **provide for quality and affordable mobile and digital services** across the rural and remote areas of the country. ○ It **implements BharatNet project.**	**Short transfer of Universal Access Levy (UAL) to USO fund.**
Mineral Trust Levy	• Trust is funded through payments made by **holders of mining leases as a percentage of royalty paid.**	**Short transfer of National Mineral Trust Levy**
Madhyamik and Uchchatar Shiksha Kosh	• Health and Education Cess (HEC) is levied at the rate of **4 %from Finance Act 2018.** • **75% of the proceeds collected** are to be utilized for education sector schemes.	**Non operationalization of Madhyamik and Uchchatar Shiksha Kosh**

3.10.5. BANCASSURANCE

- Government has notified **new norms on Bancassurance.**
- Bancassurance is an **arrangement between a bank and an insurance company allowing the insurance company to sell its products to the bank's client base.**
- **Banks earn additional revenue** by selling insurance products, and **insurance companies expand their customer bases** without increasing their sales force.

3.10.6. WORLD BANK MIGRATION AND DEVELOPMENT BRIEF

- **World Bank Migration and Development Brief** analyzes trends in migration-related SDG indicators.
- **Key global findings**
    - Top five recipient countries are **India, Mexico, China, Philippines, and Egypt.**
    - **Downside risks in remittance** include a further deterioration in **war in Ukraine**, **volatility in oil prices and currency exchange** rates, and **downturn in major high-income countries.**
- **Key findings related to India**
    - **Remittance flows will rise 12% to reach $100 billion** this year and are expected to account for **3% of its GDP**.
    - **US surpassed UAE as top source** country.
    - Remittance flows were **enhanced by wage hikes and a strong labor market** in US and other OECD countries.
    - **Share of remittances from US, UK, and Singapore increased** while share from **5 Gulf Cooperation Council (GCC) countries** (Saudi Arabia, UAE, Kuwait, Oman, and Qatar) **dropped.**



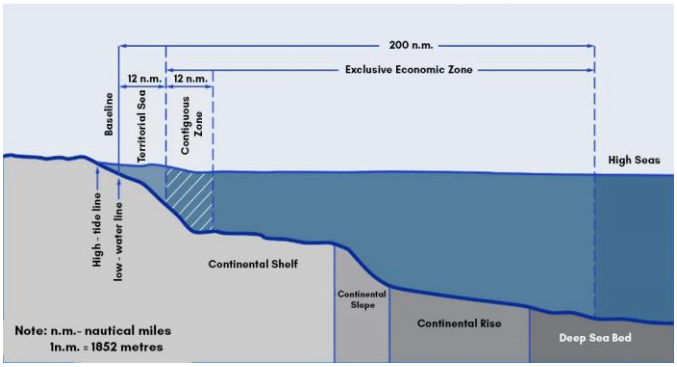
3.10.7. GLOBAL WAGE REPORT 2022-23

- Report, **by International Labour Organisation (ILO)**, presents an analysis of **how concurrent crises** – COVID-19 pandemic followed by cost-of-living crisis – **have impacted wages and purchasing power across countries and regions.**
- **Key highlights**
  - **Rising inflation is causing real wage growth to dip into negative figures** in many countries there by reducing purchasing power.
  - On average, **Wage employees lost six weeks of wages due to COVID-19 crisis**.
  - **Low wage earners, workers in the informal economy and women wage earners** group suffered most.

3.10.8. EXCLUSIVE ECONOMIC ZONE (EEZ)

- Defence, Space Agencies released 99% of Exclusive Economic Zone (EEZ) prohibited areas for oil exploration and production (E&P).
- Prohibited for security reasons, **decision came as part of prioritising energy security of India.**
  - It **will reduce the 'no go' areas** of around 2.37 million sq km **of India's EEZ from 42% to just 1%.**
- Under **United Nations Convention on the Law of the Sea (UNCLOS)**, EEZ is the **area beyond and adjacent to the territorial sea,** generally **extending 200 nautical miles** from shore.
  - Within this area **coastal nations claim and exercise sovereign rights** to explore and exploit, and the responsibility to conserve and manage, both living and non-living resources.
  - With a 7,516 km long coastline, **India has the 12th largest EEZ in the world.**
- **Significance of opening of EEZ for E&P.**
  - **Out of 3.4 million sq km of sedimentary basins of India**, 51% is offshore, of which **40% lies in prohibited areas.**
    - ✓ It **limits survey and exploration activities** in EEZ, leading to lower discoveries and production.
  - With India being one of the **largest energy consumers,** it will help in **increasing oil and gas production**, **reduced import dependence** etc.

Exclusive Economic Zone (EEZ)



3.10.9. KIRIT PAREKH PANEL ON GAS PRICES

- **Panel provided gas pricing recommendations to**
  - **Ensure a fair price** for consumers.
  - **Increase share of gas in India's energy mix** to 15% by 2030.
- Presently, **there are multiple gas pricing mechanisms** including, APM (Administered Price Mechanism), non-APM etc.
  - **Mechanism is formula based** and considers **prices prevailing at major international markets** such as Henry Hub, National Balancing Point, Alberta and Russia.
  - Prices are **notified after every six months**.
- **Key recommendations**
  - Completely free and **market-determined pricing for natural gas extracted from legacy fields** and remove all caps by January 1, 2027.
    - ✓ **Legacy or old fields** are given to ONGC and OIL on a **nomination basis without any condition of sharing profits** and therefore government controls its price.
  - **Linking price of gas produced** by state-owned firms **to imported crude oil prices.**
  - Including **natural gas in GST regime**.
- **India has been taking steps to move towards a gas-based economy** considering its significance such as:
  - **Economic advantage:** CNG is around 60% cheaper than gasoline and 45% cheaper than diesel.
  - **Environment friendly** because of very low emission of particulate matter.
  - Fulfilling **climate change mitigation commitments.**

Measures taken

- **Natural Gas Marketing Reforms announced** to increase domestic production of natural gas.
- **Planned $60bn investment** for creating gas infrastructure till 2024**,** including for pipelines and CGD (city gas distribution) networks.
- **Connected eastern and north-eastern parts with gas grid** by developing Pradhan Mantri Urja Ganga project and North East Gas Grid project.

3.10.10. INITIATIVES FOR URBAN REJUVENATION

- **Ministry of Housing and Urban Affairs (MoHUA)** launched two key initiatives for Urban Rejuvenation.

City Finance Rankings	• **Purpose:** To **evaluate, recognize and reward** Urban Local Bodies (ULBs) on the basis of the **quality of their current financial health** and **improvement over time in financial performance**. • **Ranking Parameters: Three** financial parameters viz. **resource mobilisation**, **expenditure performance** and **fiscal governance systems**. • **Rankings: National Level ranking** of cities under **four categories**: (i) Above 4 million (ii) Between 1-4 million (iii) 100K to 1 million (iv) Less than 100,000. ○ Top 3 cities in each category will be recognized and rewarded at the national level as well as within each state/state cluster. • City Finance Rankings are an effort to **analyse and help the ULBs in identifying areas in their financial performance** where they can make further improvements, to be able to deliver quality infrastructure and services to its citizens.
City Beauty Competition	• **Purpose:** To **encourage** and **recognize the transformational efforts** made by the **cities and wards** in India towards **creating beautiful, innovative** and **inclusive public spaces**. • **Competition Parameters:** Wards and public places of cities to be judged against the five broad pillars (i) **accessibility** (ii) **amenities** (iii) **activities** (iv) **aesthetics** and (v) **ecology**. • **Awards:** Most beautiful wards and beautiful public places will be felicitated at the city, state and national level from successive shortlisting. ○ **Participation** in the competition is **voluntary**.
	• This initiative will also encourage wards and cities to preserve **their rich cultural heritage.**

3.10.11. URBAN-20 (U20)

- Under the G20 presidency of India, **Ministry of Housing and Urban Affairs is organizing U20 event.**
- U20 provides a platform for cities from G20 countries **to facilitate discussions on various important issues of urban development** including climate change, social inclusion etc. **and propose collective solutions.**
- It **facilitates a productive dialogue between the national and local governments** and helps promote the importance of urban development issues in the G20 agenda.

3.10.12. SPECIAL WINDOW FOR AFFORDABLE & MID-INCOME HOUSING (SWAMIH) FUND

- Union government has infused **about ₹5,000 crore** in SWAMIH Investment Fund.
- SWAMIH Fund **aims to provide priority debt financing** to complete **stressed, brownfield and RERA-registered** residential projects.
  - It is a category II **Alternative Investment Fund (AIF)** which was announced in 2019.
    - ✓ AIF refers to **any privately pooled investment fund,** (whether from Indian or foreign sources), in the form of a trust or a company or a body corporate or a Limited Liability Partnership (LLP).
  - **Sponsored by Ministry of Finance** and managed by SBICAP Ventures, a **unit of State Bank of India.**

3.10.13. AGRICULTURE INVESTMENT PORTAL

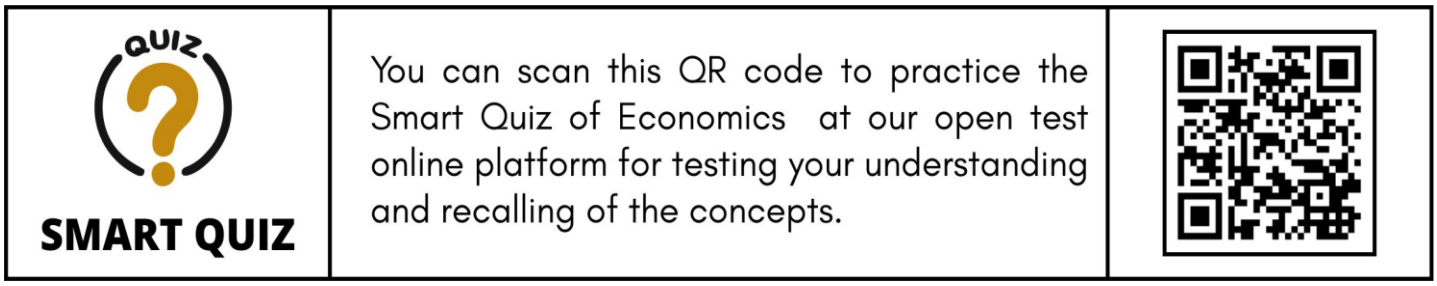
- Union Minister for Agriculture and Farmers Welfare inaugurated integrated Agriculture Investment Portal.
- Portal will be **a centralized one stop portal for agri-investors to avail benefits of various government schemes** implemented by various departments related to agriculture and allied sectors.
- Aim is **to boost investments, ease the handholding process** for investors, **tap potential of all sub-sectors** in Agriculture etc.
- **Focus sectors for investment promotion** include Agriculture machinery, Seeds, Fertilisers, agrochemicals, Precision agriculture, Logistics, warehousing and cold chain etc.

3.10.14. SCHEME FOR FACILITATING STARTUPS INTELLECTUAL PROPERTY PROTECTION (SIPP)

- SIPP has been **revised and facilitation fees has been notably increased** by at least 100%.
  - Patent applications filed by Startups have increased **from 179 in 2016-17 to 1500 in 2021-22.**
- **About SIPP**
  - Launched in 2016 to **encourage and facilitate IPR protection** by Startups.
  - Implemented by office of **CGPDTM (Controller General of the Patents, Designs and Trademarks).**
  - Provides facilitators to start ups for **filing and processing of their applications for patents, designs and trademarks.**
    - ✓ Professional charges of facilitators are **reimbursed by office of CGPDTM**.

3.10.15. AVIATION SAFETY RANKINGS

- As per latest rankings, **India's position has jumped to the 48th place from the 102nd spot in 2018.**
- **About the rankings**
  - Released by: **International Civil Aviation Organisation.**
  - 187 countries were ranked**,** topped by **Singapore.**
  - Index measures **eight critical elements of the safety oversight system**, including primary aviation legislation, resolution of safety issues etc.

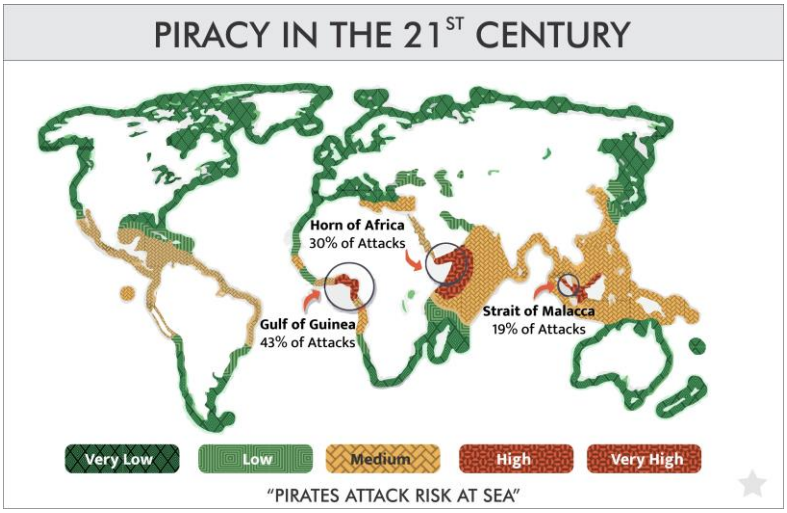


4. SECURITY

4.1. ANTI-MARITIME PIRACY BILL

Why in News?

The reintroduced Anti-Maritime Piracy Bill based on Standing Committee recommendation was passed by both the Houses of the Parliament.



Key Highlights of the Bill

- **Definition of Piracy:** The Bill defines piracy as "**any illegal act of violence or detention or any act of depredation committed for private ends by any person or by the crew or any passenger of a private ship and directed on the high seas against another ship or any person or property on board such ship"**.
  - Inciting or intentionally facilitating such acts and voluntary participation in the operations of a pirate ship or aircraft also amounts to an act of Piracy.
- **Punishment:** Those found **guilty of piracy or attempting piracy shall be sentenced to either imprisonment or imprisonment for life in prison or fine or death** penalty.
- **Applicable regions:** The Bill will apply to high seas which includes EEZ and all waters beyond the jurisdiction of any other state.
  - The inclusion of the High seas as an applicable region was recommended by the Standing Committee.
- **Piracy an Extraditable Offence:** The accused can be transferred to any country for prosecution with which India has signed an extradition treaty.
  - In the absence of such treaties, offences will be extraditable on the basis of reciprocity between the countries.
- **Designated Courts: Central Government, in consultation with the Chief Justice of the concerned High Court**, will specify certain courts as Designated Courts for speedy trial of offences of piracy.
- **Authorized Personnel:** Only authorized personnel are allowed to out arrest and seizure of the Pirate ships.
- **Disposing the seized property:** The Committee recommended that there was a need of creating an appropriate agency to deal with the seized property. Now the ship or property seized will be disposed of only by a Court order.

Need for Anti-piracy bill

- India being a **signatory to the United Nations Convention on Laws of Seas (UNCLOS)**, is expected to cooperate in full to control the menace of Piracy all around the world.
- The **growing menace of Piracy along the Gulf of Aden**, which is the major gateway connecting Asia, Europe and East coast of Africa.
- India **does not have a specific law or legal provision in Indian Penal Code or Criminal Procedure Code for piracy. T**here is a need of an effective legal instrument to combat piracy as a whole.
  - The need to provide **maritime security as more than 90 percent of India's trade is through sea routes and more than 80 percentage of our hydrocarbon** requirement is ferried through sea route.
- Only the sections of the Indian Penal Code relating to armed robbery like Section 392, as well as the admiralty jurisdiction of Specific Courts are used to prosecute pirates caught by the Indian Navy and Coast Guard.
- India's **marine sovereignty is delimited by the outer boundary of its territorial waters** (12 nautical miles from the coast).
  - Any **acts of piracy committed by a foreigner outside India's territorial waters** have been acquitted due to the lack of jurisdiction.

Concerns associated with the bill

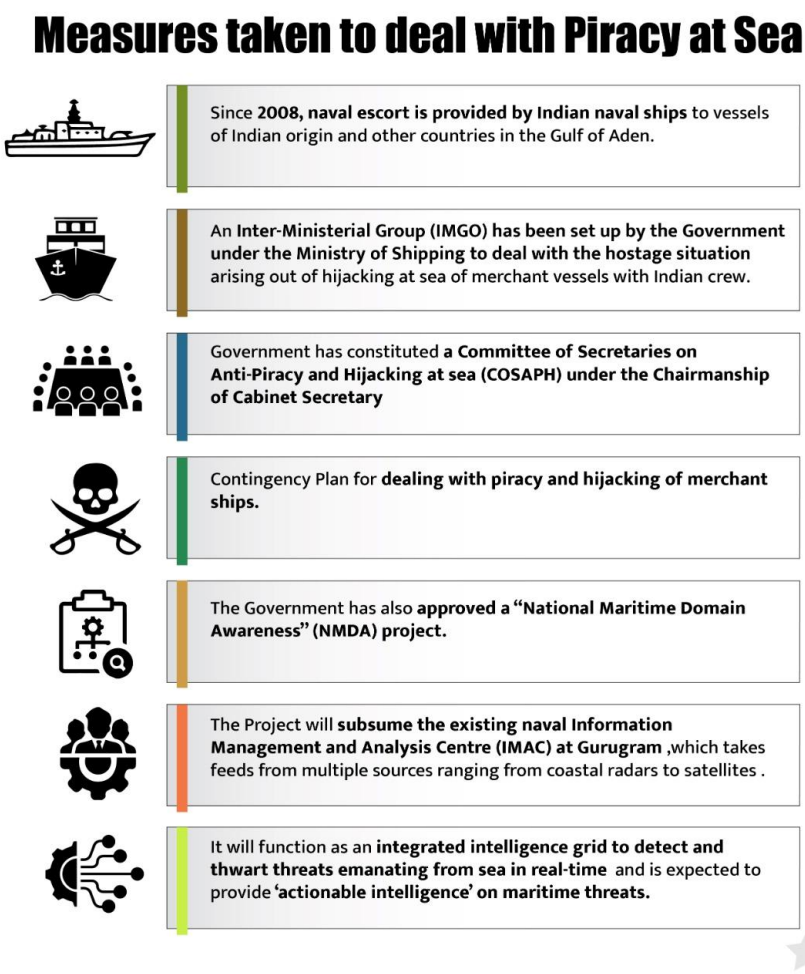
- **Death Penalty: The Provision of death penalty,** as a punishment for an act or attempt of piracy, is against the Supreme Court's directive of rarest of rare case, as it violates Article 14 and 21.
- **Lack of Clarity: There is a lack of clarity over what acts would amount to helping in a piracy**.

- Also, how such a person would be defined and treated is not clearly mentioned.
- **Plus, overlapping circumstances** may occur between committing an act of Piracy and participating in an act of piracy, but the bill has provided with different years of imprisonment for both.

- **Extradition difficulties-** The Bill provides for **presumption of guilt of accused in case certain conditions are satisfied**.
  - If accused has to be extradited from a third country, **that country will not extradite an accused who is already proven to be guilty** till the time he doesn't prove himself to be innocent.
- **Cyber Attacks**- The Bill is **silent on the potential cyber-attacks on the vessels/ships.**

Conclusion

Ensuring maritime security is a key to safeguard India's security and economic wellbeing, having a piracy free Indian Ocean region is also essential for the growth of maritime trade in the region and this will also help India to establish its regional supremacy.



United Nations Convention on the Law of the Sea (UNCLOS)

- The United Nations Security Council (UNSC) has **recognised piracy as a crime** having universal jurisdiction under customary international law.
- The **UNCLOS Convention was opened for signature on December 10, 1982, in Montego Bay, Jamaica,** the same was adopted by India in 1982 and ratified in 1995.
- The UN Convention on the Law of the Sea (UNCLOS) is **a set of rules to govern the oceans and the use of their resources.**
- **UNCLOS governs all aspects of ocean space, including delimitation, environmental control, marine scientific research, economic and commercial activities,** transfer of technology and the settlement of ocean-related disputes.
- **To deal with incidents of piracy on the high seas, UNCLOS says that member States are allowed to seize a pirate ship or aircraft** or a vessel that has been captured by pirates.

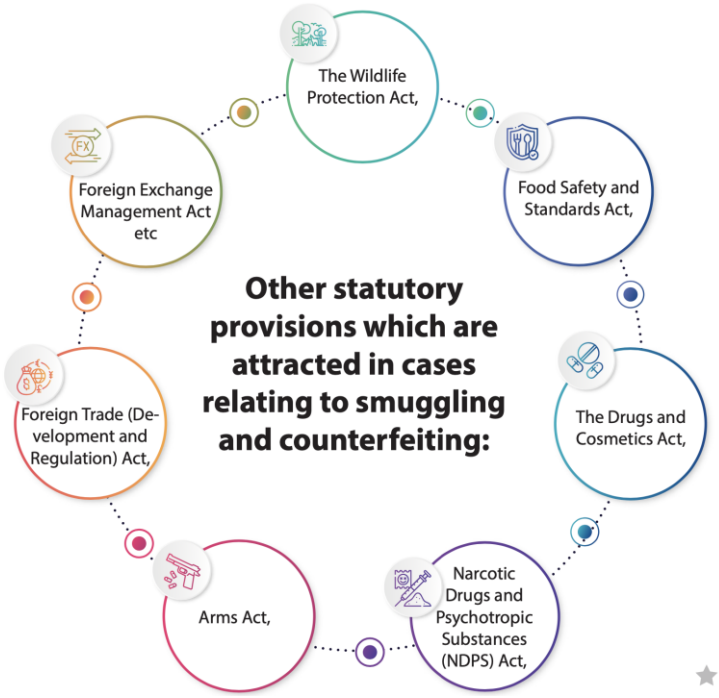
4.2. SMUGGLING AND COUNTERFEITING

Why in news?

Economic Advisory Council to the Prime Minister (**EAC-PM**)'s Working Paper titled '**SMUGGLING AND COUNTERFEITING A Re-look at Strategies'** was released recently.

About Smuggling and Counterfeiting

- **Smuggling:** World Customs Organization (WCO) has defined smuggling as, "Customs offence consisting in **movement of goods across a Customs frontier in any clandestine manner**, thereby evading Customs control." In India, it is regulated by **Customs Act, 1962.**
- **Counterfeiting:** Defined under **Section 28, IPC** as: A person is said to "counterfeit" who causes one thing to resemble another thing, intending by means of that **resemblance to practise deception**.



Major Sectors affected by Counterfeit products

Drugs

As per global counterfeit goods ranking, counterfeited drugs are at top of list with a **market value of $ 200 billion.**

Estimation of all **counterfeit and fake drugs producing and selling in India is 12 to 25 %.**

Automobiles

Demand for counterfeit or fake auto parts is very high in India because of **20-30% less price than the original.**

Loss caused to government of India was Rs 3,113 Cr and **losses to the industry was Rs 10,501 Cr in 2014.**

Others

Software: Earlier pirated software market in India was of $2.90 billion, now this market has reduced down to **$2.68 billion in 2015**

Movies & Music: Film Industry suffers **losses around Rs 18000 crore** every year due to piracy of the original CDs.

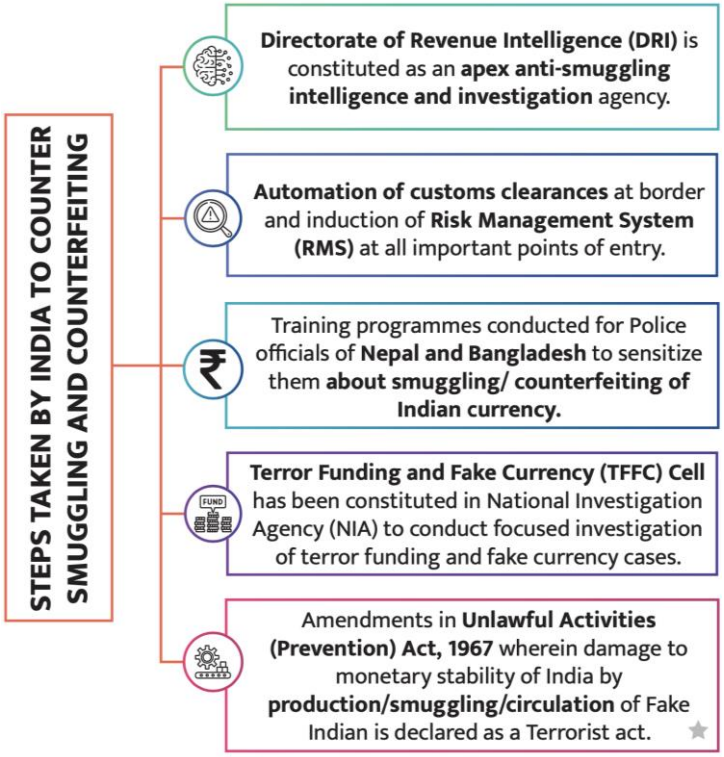
Books: Estimates suggest that near about **20% books** sold in market are pirated.

Thrives due to huge domestic demand	• Other than **pecuniary gains**, smuggled goods like drugs are **addictive in nature** and their demand from users is **self-sustaining**.
Lacunae in countering supply	• Lack of **political will,** • Inadequate **infrastructure or financial resources,** • Lack of **stringent enforcement**, • A sense among some that counterfeiting and smuggling is a **victimless crime.** • **Traditional examination techniques are proving inadequate in light of** sophisticated concealment and extraction methods used by smuggling syndicates.
Violations of Foreign Trade Policy and misuse of Foreign Trade Agreements	• Misuse of **Merchandise Exports from India Scheme / Service Exports from India Scheme, Advance Authorisation scheme** etc. • **Misclassification of imports** to such categories of CTH (change in tariff heading) which is eligible for benefits under FTAs.

Rising use of electronic platforms	• Use of dark net sites (transactions through **crypto currency assets** and allows both buyer/seller to **remain anonymous**); • Ecommerce and social media sites have allowed a number of **small retail counterfeiters** without links to larger organizations **to proliferate**.

Effects of Smuggling and Counterfeiting

- **Loss to Indian economy:** As per a FICCI report, Counterfeiting and smuggling have caused a loss of Rs **1.17 lakh crore to Indian economy** in 2017-18 in five key industries: textiles, tobacco products (cigarettes), readymade garments, capital goods (Machinery and Parts), and consumer (Electronics) durables.
- **Additional cost incurred**: Government incurs **additional costs** for implementing **anti-counterfeiting measures and crime prevention, detection, regulation and deterrence** measures.
  - **Police raids, custom seizures, execution of mass public awareness campaigns etc** put a strain on limited government resources.
- **Loss of tax revenue**: Loss of revenue to government has a **direct impact on welfare spending** such as health care, education etc.
- **Loss of jobs and businesses:** A 2019 study by FICCI held that prevention of smuggling in five key industries can increase **employment in India** by up to **16.36 lakh jobs.**



- **Harm to environment**: Counterfeiters rarely follow **safety standards or guidelines** for drawing natural resources, quality of materials used or in **disposing waste**.
  - Facilities for s**afe containment or destruction of seized goods** or a mechanism to hold counterfeiter **liable for costs of destruction** are largely absent.
- **Health Issues:** Smuggling and counterfeiting also increase the health burden on the state as people, often belonging to **economically weaker sections**, fall prey to **substandard, expired, or hazardous goods**.
- **Vicious Cycle**: Illicit trade **generates huge profits**, most of which **go back to the crime syndicates** that control this illegal activity.

Way forward for countering smuggling and counterfeiting

- **Countering internal demand:** Given internal domestic demand for such goods, it's important to **regulate places that can be breeding grounds** for proliferation of such illegal goods. For countering spread of such markets, it may be worthwhile to **constitute an institution** that specializes in this task.
  - For Drugs, there should be **flying squads of Customs/NCB/Police, etc** to check for drug use in **hotels and restaurants.**
  - **Public officials, international governmental organizations, industry and consumers** need to work more collaboratively to **build awareness of the significant impacts** of counterfeiting and smuggling.
- **Comprehensive law and policy on counterfeit goods:** There is a need to create an **uniform legal structure, dedicated redressal structure, and time-bound disposal setup**.
  - Since counterfeiting **directly impinges on the revenue and profitability** of companies, there should be provisions of c**ommensurate compensations and speedy settlements.**
- **Capacity enhancement for effective enforcement:** A two-pronged **approach of coordination** with **area experts** like drug experts, wildlife experts, etc with Customs along with **domain expertise among border officers** would go a long way in effective enforcement.
- **Countering presence of counterfeit and fake products**: Following steps can be taken in this regards:

- A robust **Know your supplier/ know your customer** program should be invariably put in place by the component manufacturer. It will address **risk of counterfeit infiltration** into supply chain.
- Develop **standards and guidelines** for third-party **accreditation mechanisms**.

- **Blacklisting of offenders and easily accessible database**: A **national level database for profiling of offenders** should be created with access for each agency for **all-round cooperation**.
- **Zero tolerance policy**: There should be a **zero-tolerance policy** for offenses related to certain goods which are **extremely harmful** from the point of view of national or social security like arms and ammunition, drugs, nuclear materials, etc.

4.3. LONE-WOLF TERRORISM

Why in news?

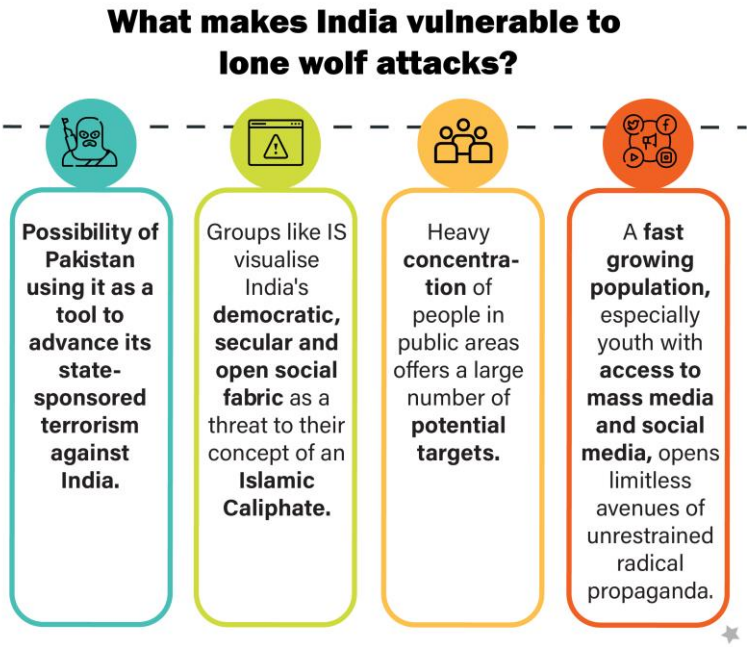
Experts have raised concerns about growing threat of **lone-wolf terrorism** in India.

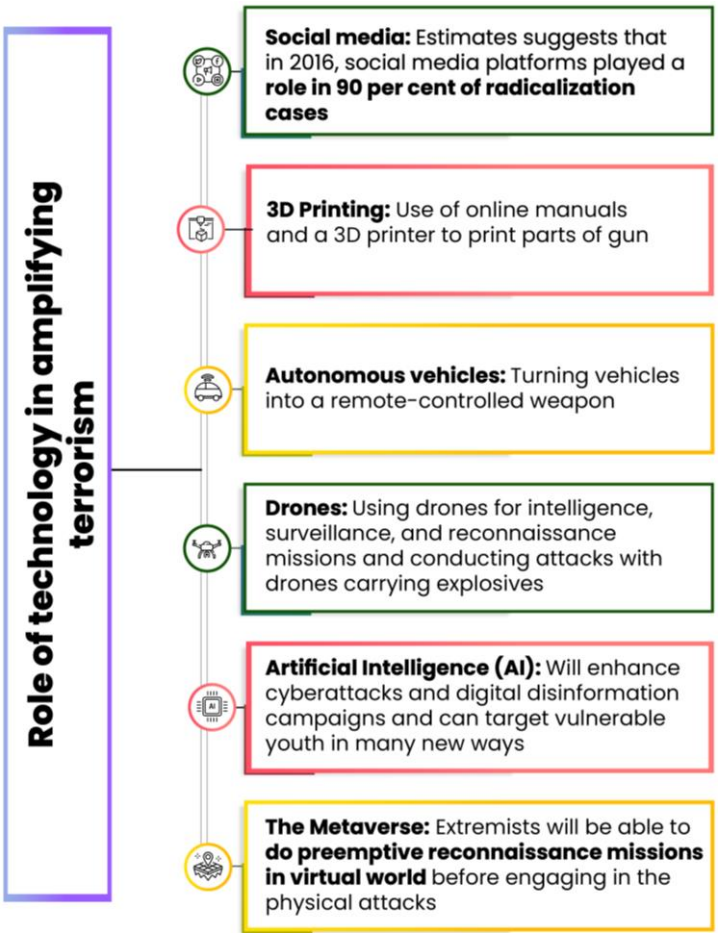
About Lone wolf terrorism

- Violent terror attacks by **extremist individuals** acting upon their **radicalized beliefs** are termed 'Lone-wolf terrorism'. Their actions are either **inspired or influenced** by a specific terrorist organisation and ideology or operate within a **particular social atmosphere**.
- They are **different in nature from organised or networked** terror attacks like the 9/11 attack in US or 26/11 Mumbai terror attack.
  - While latter entails several years of **planning, communications, money transfers**; former is usually a **small-scale attack, easy to be carried** out by individuals with **no assistance.**
- Ranging from **threatening and intimidating** people to indiscriminate **shootings, vehicle ramming, stabbing and suicide bombings**, lone wolf terror attacks have become a grave threat.

Challenges associated with lone wolf terrorism

- **Unpredictable nature:** Lone-wolf terrorists and their attacks have an **element of unpredictability**, because of which counter-terrorism agencies, police and intelligence organizations have **found it challenging** to tackle.
- **Use of internet**: **Radicalization** plays a critical role in the making of a lone-wolf terrorist, which **mostly happens online**. Also, internet provides lone wolves with the **anonymity to communicate**.
- **Easy to carry out:** Such attacks are **becoming logistically simple**.
  - Lone wolves inspire **copycat behaviour**, become **role models** for other alienated youngsters, and **often invite band wagon attacks.**





Steps taken by India

- **Unlawful Activities (Prevention) Act, 1967** provides special procedures to **deal with terrorist activities**, among other things.
- Establishment of **National Investigation Agency (NIA)** which is functioning as Central **Counter Terrorism Law Enforcement Agency** in country.
- **National Intelligence Grid or NATGRID** that aims to provide a "cutting-edge technology to enhance India's **counter-terror capabilities**.
- Establishment **of Counterterrorism and Counter-Radicalisation Division and Cyber and Security division** in Ministry of Home affairs.
- National Security Council Secretariat has been given a **constitutional and legal mandate** to develop **a new counter-radicalisation programme.**
- **Difficulties in obtaining weapons:** Unlike in US where **sophisticated weapons can be easily bought** by ordinary citizens, gaining access to such weaponry in India is **difficult** as is **ability to obtain licenses**.
- State-supervised **counselling initiatives** like Kerala's Operation-Pigeon.

Measures required to counter lone wolf terrorism

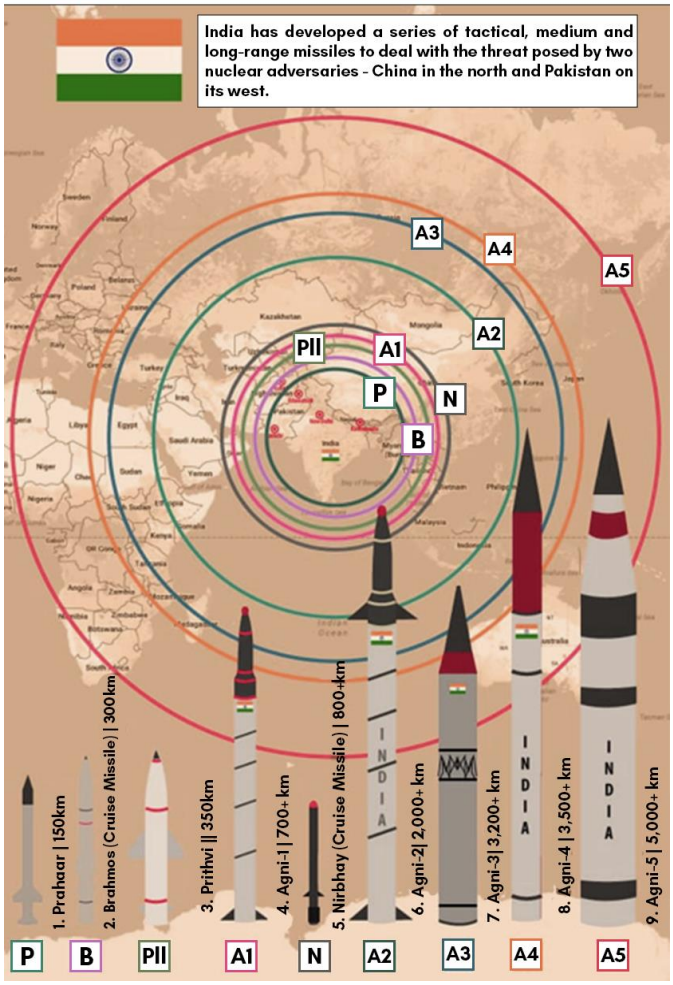
Policy measures	• Diversify India's counterterrorism capabilities and develop a **robust national counter-terrorism doctrine** addressing the different nuances of terrorism. • Invest in understanding of new, developing threats coming from the **intersection of technology, nationalism and counter-terrorism.**
Capacity building measures	• Strong **technical intelligence** capacities like **social media and cyberspace monitoring,** • **Contingency plans** by the intelligence and counter-terrorism structures, • Need for specialised police teams to be **trained, equipped and organised** in every state to act as **first-responders.**
De-radicalisation and counter-radicalisation strategies	• India should undertake **regular revision and tightening** of laws. • **Hardened ideologues** must be prosecuted under the counter terrorism laws of the state. • Need to **expand on the community engagement** efforts to mount de-radicalisation and counter-radicalisation efforts. • Helplines should be created and manned by p**rofessional counsellors and psychologists** who can help reverse process of radicalisation as part of the efforts of Non-Governmental Organisations (NGOs) supported by the state.
Strengthening international cooperation (transnational nature)	• Strengthen "coalition of willing" to improve **intelligence sharing mechanisms**, • **Reduce time** for processing information requests, • Strengthen **counter-measures for finance of terrorism**.

4.4. NEWS IN SHORTS

4.4.1. AGNI-5

- **The Strategic Forces Command (SFC)** carried out the successful test of the missile from **APJ Abdul Kalam Island** off the coast of Odisha.
  - SFC is a **key tri-services formation** that **manages and administers** all the strategic assets.
  - It falls under **purview of the Nuclear Command Authority (NCA).**
    - ✓ NCA has **2 councils, one Political (Headed by PM) and another Executive (Headed by National Security Advisor).**
- Agni-V is a **nuclear capable advanced surface-to-surface ballistic missile** developed **indigenously by DRDO** under the **Integrated Guided Missile Development Programme (IGMDP)**.
  - The **IGMDP** had **five missiles** as **Prithvi, Agni, Trishul, Nag** and **Akash**.
  - Agni-V uses a **three-stage solid fuelled engine**.
- Crucial to India's defence, **Agni-V** and **3,500 km range K-4 nuclear submarine launched ballistic missile** are the spearheads of **India's nuclear triad**.
  - It is in line with India's **minimum credible deterrent nuclear doctrine** that highlights the commitment to '**No First Use**'.

INDIA'S MISSILES



4.4.2. BRAHMOS

- **Indian Air Force successfully fired Extended Range Version of BrahMos** air-launched cruise missile.
- **About BrahMos missile**
  - It is a **joint venture of India and Russia**, and its name is derived from Brahmaputra and Moskva rivers.
  - It can be **launched from land, air, sea, and underwater.**
  - Its range was originally capped at **290 km as per obligations of the Missile Technology Control Regime** (MTCR).
  - Following India's entry into MTCR, it was decided to **extend range to 450 km** and **600 km at a later stage.**

4.4.3. SCORPÈNE-CLASS SUBMARINE VAGIR

- Fifth Scorpène-class submarine Vagir was delivered to Navy recently.
- Six Scorpene submarines are **being built indigenously under Project-75** by Mazagon Dock Shipbuilders Limited (MDL) **under technology transfer from Naval Group of France.**
  - **Other 5 are:** Kalvari, Khanderi, Karanj, Vela, Vagsheer.
- These submarines have **capability of operating in a wide range of Naval combat** including anti-warship and anti-submarine operations, intelligence gathering and surveillance and naval mine laying
- **Classification of submarines**

Submersible Ship Ballistic Nuclear (SSBNs)	Nuclear-Power attack Submarines (SSNs)	Diesel-electric attack submarines (SSKs)
• Serve as an **undetectable launch platform for intercontinental missiles.** • **Designed specifically for stealth** and **precise delivery** of nuclear warheads. • **INS Arihant** is India's SSBN.	• It is a nuclear-powered attack submarine **armed with non-nuclear weapons.** • Designed to **engage in mine warfare, seek out and destroy enemy ships,** and support **battle group operations.** • Only **six countries** currently have **nuclear-powered submarines- UK, US, China, Russia, India and France**	• They have **diesel engines.** • Battery capacity **constrain amount of time a diesel sub can stay underwater,** leading to frequent resurfacing. • **India's SSKs** include **Shishumar Class** (from Germany); **Kilo Class or Sindhughosh Class** (from Russia); **Kalvari Class Scorpene submarines.**

- In related development, **'Arnala', first of the eight indigenously-built Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)** was launched recently.

4.4.4. INS MORMUGAO

- Indian Naval Ship (INS) Mormugao was commissioned into Indian Navy.
- Mormugao is **second warship of P15B class** of stealth guided-missile destroyers.
  - It is equipped with **surface-to-surface and surface-to-air missiles besides modern surveillance radar** that provides target data to weapon systems.
  - It can **fight under nuclear, biological and chemical warfare conditions.**
  - Propelled by **four powerful gas turbines**, it is capable of achieving **speeds of over 30 knots**.

- **Indigenous content in P15B Class Destroyers is 72%,** above their predecessors P15A (59%) and P15 (42%).

4.4.5. MARINE COMMANDO FORCE (MARCOS)

- In a historic move, **Indian Navy to allow women to opt for special forces.**
  - Women can now **choose to become marine commandos** only if they meet eligibility criteria as described by Indian Navy.
  - It will be **available to both sailors and female officers** joining service as Agniveers in 2023.
- MARCOS was raised in 1987.
  - Exclusivity of the unit lies in its competence to operate in all three mediums namely Sea, Air and Land.
  - **Achievements of MARCOS**: Operation Pawan, 1987; Operation Cactus, 1988; Operation Rakshak, 1995; Operation Black Tornado, 2008

4.4.6. EXERCISES IN NEWS

- **Kazind – 2022:** It is an **India - Kazakhstan joint training exercise** that was instituted in 2016 as Exercise Prabal Dostyk and was renamed as Ex Kazind in 2018.
- **Surya Kiran:** It is the 16th edition of joint training exercise between **India and Nepal.**
- **Agni Warrior:** It is a bilateral exercise between **Singapore & Indian Army.**
- **Coordinated Patrol (CORPAT):** Indian Navy conducts CORPATs with several countries in Indian Ocean region. Recently, one such **exercise** was conducted with **Indonesian Navy.**

4.4.7. CRIME AND CRIMINAL TRACKING NETWORK SYSTEM (CCTNS)

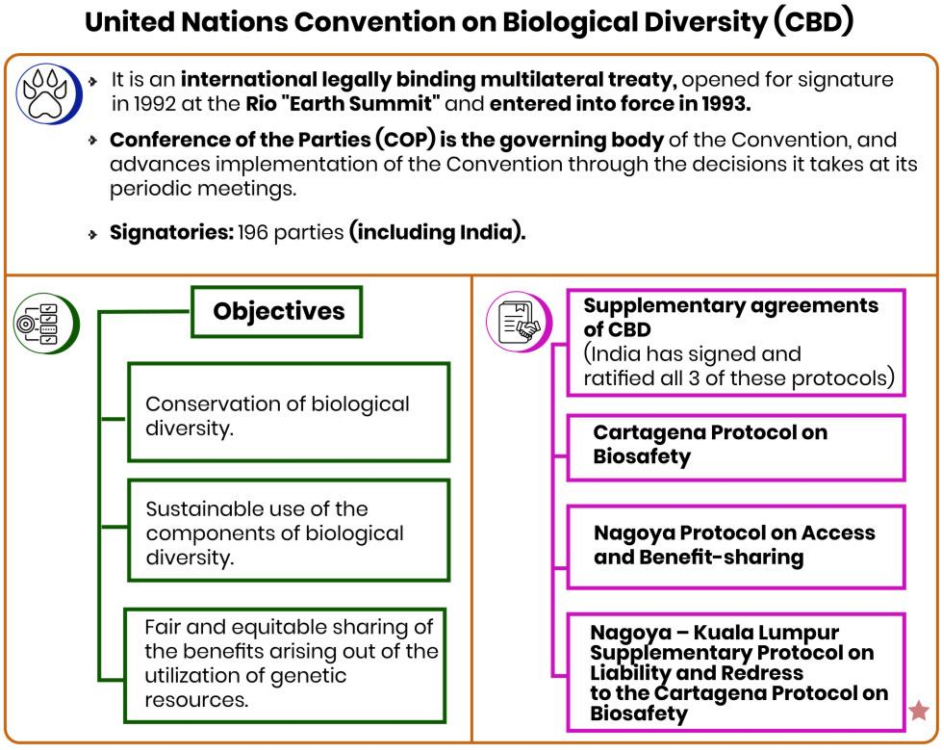
- Haryana Police was awarded first rank among all major state police in implementation of CCTNS.
- CCTNS is a Mission Mode Project under **National e-Governance Plan (NeGP).**
  - It is aimed at creating a **comprehensive and integrated system** for enhancing efficiency and effectiveness of policing through adopting of principle of e-Governance.
  - CCTNS has been **implemented in 99% police stations**. 100 percent FIRs are being registered directly in CCTNS.
- It was approved by Cabinet Committee on Economic Affairs in 2009.

5. ENVIRONMENT

5.1. COP15 TO THE UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

Why in news?

The 15th Conference of Parties (COP15) of the Convention on Biological Diversity recently concluded in Montreal, Canada.

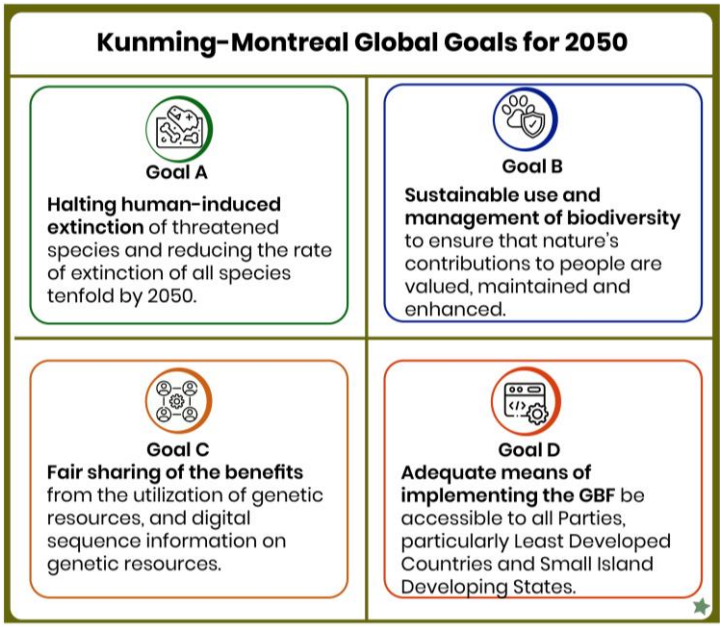


About COP15

- The COP15 was **chaired by China and hosted by Canada**.
- COP 15 was **held in two phases**:
  - Phase one took place virtually in Kunming, China, in October 2021 and
  - Phase two was recently held in Montreal, Canada.
- The main objective of COP15 was to adopt a **global biodiversity framework (GBF)**, which will **replace the Aichi Biodiversity Targets that expired in 2020.**
  - GBF and its underlying documents are not legally binding.

Major outcomes of COP15

- **Adoption of Kunming-Montreal Global Biodiversity Framework (GBF):** The GBF aims to address biodiversity loss, restore ecosystems and protect indigenous rights.
  - The framework has **four long-term goals for 2050** related to the 2050 Vision for Biodiversity and **23 action-oriented global targets** for urgent action over the decade to 2030.
- **Dedicated and accessible GBF Fund**: The **Global Environment Facility** has been requested to **establish a Special Trust Fund** in 2023, and until 2030, to support the implementation of the Global Biodiversity Framework.
  - This fund would have its own **"equitable governing body"** dedicated to achieving the goals of the GBF and must be prepared to receive **"financing from all sources",** including official development assistance.
- **Effective mechanisms for planning, monitoring, reporting and review:** Clear indicators to measure progress have been set to form an agreed synchronized and cyclical system based on National biodiversity strategies and action plans (NBSAPs), National reports, Global review of collective progress, Voluntary peer reviews etc.



- Revised or updated NBSAPs in alignment with the Kunming-Montreal global biodiversity framework and its goals and targets have to be communicated in a standardized format by COP-16 in Turkey in 2024.
- Further, Parties should submit national reports containing agreed headline indicators in 2026 and 2029.

- **Multilateral mechanism for benefit-sharing from the use of digital sequence information on genetic resources**: This may include innovative revenue generation measures and a global fund.
- **Adoption of the Gender Plan of Action:** Its purpose is to support and promote the gender-responsive implementation of the GBF and its associated mechanisms.

Kunming-Montreal 2030 Global Targets		
1.	Effective management of land- and sea-use change, loss of highly important biodiverse areas close to zero by 2030	Reducing threats to biodiversity
2.	Effective restoration of at least 30% of degraded ecosystems by 2030	
3.	Effective conservation and management of at least 30% of land and 30% of oceans by 2030	
4.	Halt human-induced extinctions and maintain and restore genetic diversity	
5.	Sustainable use, harvesting and trade of wild species	
6.	Mitigate or eliminate the impacts of invasive alien species, reduce the rates of establishment of invasive species by 50% by 2030	
7.	Reduce pollution risks and impacts from all sources by 2030, reduce excess nutrients lost to the environment and the overall risk from pesticides by at least half	
8.	Minimise the impacts of climate change and ocean acidification on biodiversity	
9.	Ensure sustainable use and management of wild species, while protecting and encouraging customary sustainable use by indigenous peoples and local communities	Meeting people's needs through sustainable use and benefit-sharing
10.	Sustainable management of areas under agriculture, aquaculture, fisheries and forestry	
11.	Restore and enhance ecosystem function through nature-based solutions and ecosystem-based approaches	
12.	Increase the area and quality of green and blue spaces in urban and densely populated areas sustainably	
13.	Fair and equitable sharing of the benefits arising from the use of genetic resources and from digital sequence information and traditional knowledge on genetic resources	
14.	Integration of biodiversity into policies and development across all sectors	Tools and solutions for implementation and mainstreaming
15.	Enable large and transnational companies and financial institutions to monitor, assess and disclose their impacts on biodiversity	
16.	Encourage sustainable consumption, including by reducing food waste by half by 2030	
17.	Strengthen capacity for biosafety measures and ensure benefits-sharing from biotechnology	
18.	Eliminate, phase out or reform harmful subsidies in a just way, reducing them by $500bn by 2030	
19.	Substantially increase financial resources, mobilise $200bn per year by 2030 from all sources, including at least US$ 20 billion per year by 2025, and US$ 30 billion per year by 2030 from developed to developing countries	
20.	Strengthen capacity-building and technology transfer	
21.	Integrated and participatory management, including the use of traditional knowledge	
22.	Equitable representation and participation of Indigenous peoples and local communities	
23.	Ensure gender equality in the implementation of the framework	

Issues with Kunming-Montreal GBF

- **Lack of ambition in targets**: 30×30 target was diluted with target to protect '30% of land and 30% of sea area by 2030' being replaced by 'at least 30% of terrestrial, inland water, and of coastal and marine areas by 2030'.
  - A group of experts **observe that 50% of land and ocean should have been protected in the framework if parties want to reverse biodiversity loss.**

About Digital Sequencing Information

- DSI, is a term that refers to data derived from or linked to genetic resources.
- It is a placeholder term for what has variously been **called genetic information, bioinformation, sequence information, natural information**, genetic sequence data, nucleotide sequence data or genetic resources.

- **Lack of finance**: With the **biodiversity finance gap** estimated at roughly $700bn per year for conservation over the decade, the target to mobilise $200bn per year by 2030 falls short.
- **Prioritization:** GBF contains **limited direction on which terrestrial and marine areas** to prioritise for conservation.
- **Lack of clarity regarding for Digital Sequencing Information (DSI) mechanism**: Several details regarding the mechanism for benefit-sharing from use of DSI are yet to be finalized, such as who will govern the global fund, where would contribution come from and how monetary and non-monetary benefits will be distributed.
- **Absence of USA**: **US is the only major economy that is not a signatory to the GBF**, as it is not a member of the UN Convention on Biological Diversity. Without the second largest emitter of greenhouse gases, the GBF's capacity to galvanise international action may be limited.
    - The **United States signed the treaty in 1993 but has not ratified it.**
- **Greenwashing:** There were fears from some observers that representatives from industries harmful to nature, such as large pharmaceutical and fossil-fuel companies were having undue influence around the summit and on the negotiations.

Way Forward

- **Raising adequate finance**: The provision of the means of implementation to developing countries must match new targets and ambition, especially through public finance.
- **Following principle of equity**: Global Biodiversity Framework must be followed in the light of science and equity, and the sovereign right of nations over their resources, as provided for in the CBD.
- **Undertake affirming measures to formulate a mechanism** for benefit-sharing from the use of digital sequence information on genetic resources.
- **Adopting zero tolerance towards greenwashing**.

India and CBD

- India became a party to the convention in 1994 and enacted **the Biological Diversity Act in 2002** to give effect to the convention.

India's stance in negotiations for Post-2020 GBF

- **Support to 30x30 goal:** As a part of the High Ambition Coalition (HAC) for Nature and People, India supports the 30 by 30 goal by seeking to integrate other effective area-based conservation measures (OECMs) into the wider landscapes and seascapes.
- **Principle of equity**: As per India, conservation of biodiversity must also be based on '**Common but Differentiated Responsibilities and Respective Capabilities' (CBDR)** as climate change is profoundly linked nature.
    - Further, as developing countries bear most of the burden of implementing the targets for conservation of biodiversity, they require adequate funds and technology transfer from developed nations.
- **Unfeasibility of numerical targets**: India agrees to targets like judicious use of pesticides and reducing highly hazardous chemicals in principle.
    - However, it does not support numerical targets regarding the same without the necessary baseline and relevant scientific evidence.
- **Sustainable consumption**: Through its LiFE initiative India encourages mindful and deliberate utilization, to protect and preserve the environment, which is in line with the Framework's Target 16 on sustainable consumption.
- **Digital Sequencing Information**: India wants DSI to be linked to access and benefit sharing in a just and fair manner.
    - Doing so, will ensure flow of funds from users such as biotechnology companies, which access its biodiversity and related genetic information, to help the indigenous communities.
- **Against subsidy elimination**: As per India, support to the agriculture sector should not be targeted for subsidy elimination as agriculture is a paramount economic driver for rural communities.
    - Therefore, subsidies need to continue but in such a way that doesn't harm nature, e.g., by adopting agroecology practices like natural farming.

The High Ambition Coalition (HAC) for Nature and People

It is an intergovernmental group of **more than 100 countries** co-chaired by Costa Rica and France and by the United Kingdom as Ocean co-chair, championing a global deal for nature and people with the central goal of protecting at least 30% of the world's land and ocean by 2030.

5.1.1. WORLD RESTORATION FLAGSHIPS

Why in news?

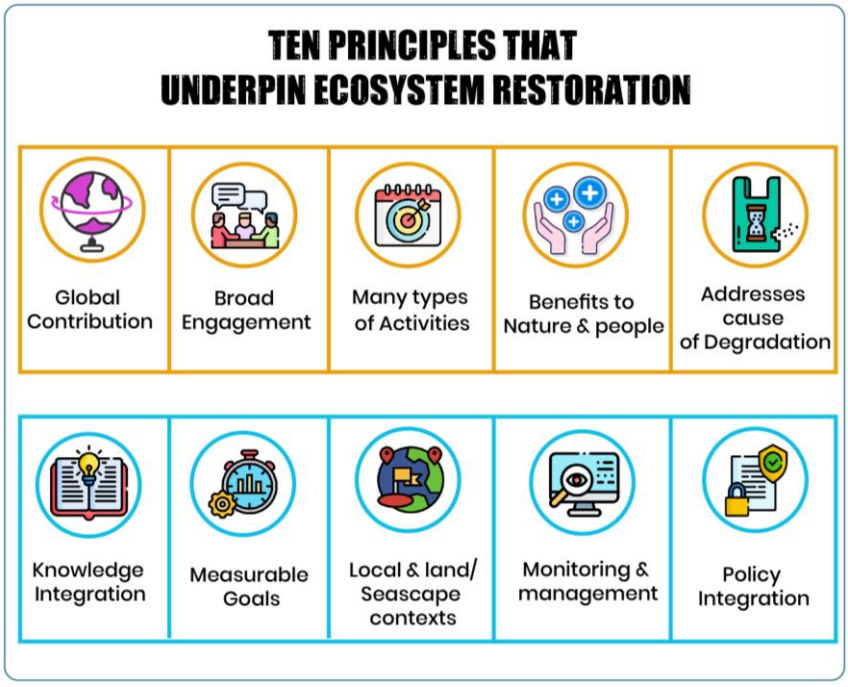
The UN Decade on Ecosystem Restoration declared first 10 World Restoration Flagships at the side-lines of COP15 of CBD.

About World Restoration Flagships

- With the World Restoration Flagships, the UN Decade on Ecosystem Restoration is honouring the best examples of large-scale and long-term ecosystem restoration in any country or region, embodying the **10 Restoration Principles of the UN Decade.**
- These initiatives are **now eligible to receive United Nations-backed promotion, advice or funding.**
- Progress of all 10 World Restoration Flagships will be transparently monitored through the **Framework for Ecosystem Restoration Monitoring**, the UN Decade's platform for keeping track of global restoration efforts.
- **Flagship Initiatives Selection Criteria**
  - Clearly identifiable geographically.
  - Part of nominated area already under successful, measurable, and well-documented restoration.
  - Well-defined ecological, cultural, and socio-economic objectives and goals.
- The first World Restoration Flagships stretch across 23 countries and all ecosystems.
  - Together, the 10 flagships aim to **restore more than 60 million hectares** − an area roughly equal to the whole of Madagascar or Ukraine − and **create more than 13 million jobs**.

About the UN Decade on Ecosystem Restoration

- The United Nations General Assembly has declared the years **2021 through 2030** the UN Decade on Ecosystem Restoration.
- Led by the **UN Environment Programme** and the **Food and Agriculture Organization** of the UN, together with the support of partners, it is designed to prevent, halt, and reverse the loss and degradation of ecosystems worldwide.
- It aims at **reviving billions of hectares**, covering terrestrial as well as aquatic ecosystems.



List of 10 inaugural World Restoration Flagships

Flagship initiative	Countries	Details
Trinational Atlantic Forest Pact	Argentina, Brazil, Paraguay	**Aim**: To mend South America's iconic Atlantic Forest and restoring 15 million ha of degraded forest by 2050. **Coordinated by:** The Pact for the Restoration of the Atlantic Forest and the Trinational Network for the restoration of the Atlantic Forest.
Abu Dhabi Marine Restoration	United Arab Emirates	**Aim**: To **restore coral, mangrove and seagrass** in Abu Dhabi, creating a **refuge for the dugong**, a fast-disappearing aquatic mammal. **Coordinated by:** The Environment Agency – Abu Dhabi.
Great Green Wall for Restoration and Peace	Burkina Faso, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Senegal, Sudan, Chad	**Aim**: To **restore savanna, grasslands and farmlands** across an 8,000km belt of Africa known as the **Sahel**. **Coordinated by**: Pan-African Great Green Wall Agency, Initiative of the Great Green Wall for the Sahara and the Sahel Burkina Faso, UNEP Finance Initiative etc..
Namami Gange	India	**Aim:** To **rejuvenate India's sacred Ganges River** and surrounding basin and restore people's connection to the river, while reducing pollution and reversing deforestation.

		Coordinated by: National Mission for Clean Ganga under the Government of India, and supported by the **World Bank,** the Japan International Cooperation Agency and the German Development Agency.
Multi-country Mountain Flagship	Democratic Republic of the Congo, Kyrgyzstan, Rwanda, Serbia, Uganda	**Aim**: To **protect mountain landscapes** in Kyrgyzstan, Rwanda, Serbia and Uganda and to **safeguard a range of imperilled species**, including mountain gorillas and snow leopards. **Coordinated by**: The United Nations Environment Programme, The Carpathian Convention, and The Mountain Partnership.
Small Island Developing States	Vanuatu, Comoros, Saint Lucia	**Aim**: To **restore sensitive ecosystems** in Vanuatu, St. Lucia and Comoros and help the island nations **safeguard wildlife, brace for climate change and strengthen their economies**. **Coordinated by:** Governments of Comoros, Saint Lucia, and Vanuatu, The Small Island Developing States Coalition for Nature, The United Nations Department of Economic and Social Affairs, FAO and UNEP.
Atlyn Dala Conservation Initiative	Kazakhstan	**Aim**: To **conserve and restore Kazakhstan's steppe, semi-desert and desert ecosystems** across the historical range of the **Saiga antelope**. **Coordinated by**: Association for the Conservation of Biodiversity of Kazakhstan, Frankfurt Zoological Society etc.
Central American Dry Corridor	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama	**Aim**: To **restore 300,000 ha of drought-stricken Central American farmland and forests**. **Coordinated by:** Central American Commission on Environment and Development, Green Climate Fund, IUCN etc.
Building with Nature in Indonesia	Indonesia	**Aim**: To naturally regenerate mangroves and **protect Indonesia's coast against flooding**. **Coordinated by**: Indonesian Ministry of Marine Affairs, Wetlands International etc.
Shan-Shui Initiative in China	China	**Aim**: To **restore 10 million hectares of ecosystems across China**, including forests, grasslands and waterways. **Coordinated by**: Ministry of Natural Resources and Ministry of Finance, People's Republic of China.

5.1.2. RESTORATION BAROMETER REPORT 2022

Why in news?

At the Convention on Biological Diversity's Conference of the Parties (CBD COP15), **the International Union for Conservation of Nature (IUCN) launched its first Restoration Barometer Report.**

About the report

This report **documents financial investments of $26 billion across 18 countries and 14 million hectares of degraded landscapes**.

- The **Restoration Barometer was launched in 2016** as the Bonn Challenge Barometer.
- The **Barometer tracks restoration progress across terrestrial ecosystems** including coastal and inland waters where use or management rights can be identified (i.e., not high seas).
    - The Barometer has eight indicators that build a comprehensive picture of a country's restoration progress.

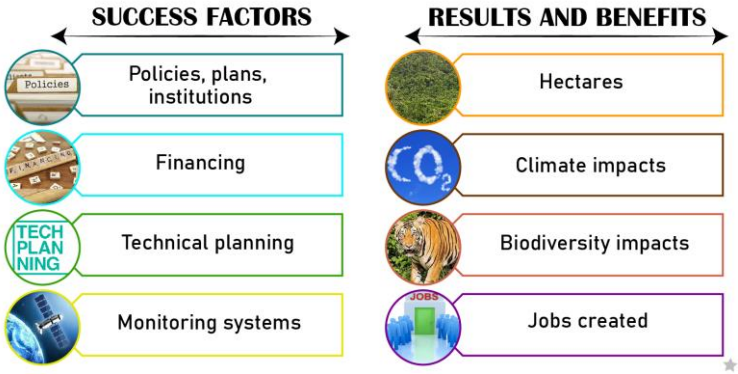
The ecosystems

Users of the Barometer have reported restoration progress on the following eight ecosystems.

Ecosystem type	Countries reporting progress on ecosystem type in 2022	
	#	%
Coasts and mangroves	9	15%
Deserts and semi-Deserts	5	8%
Farmlands & mixed-use areas	10	17%
Forests & woodlands	17	28%
Grasslands, shrublands & savannahs	6	10%
Peatlands	2	3%
Rivers streams & lakes (wetlands)	8	13%
Urban areas	3	5%

- It records the **size of the area being brought under restoration as well as the corresponding climate, biodiversity and socio-economic benefits**, and covers the enabling policies and funding structures at the heart of successful restoration.

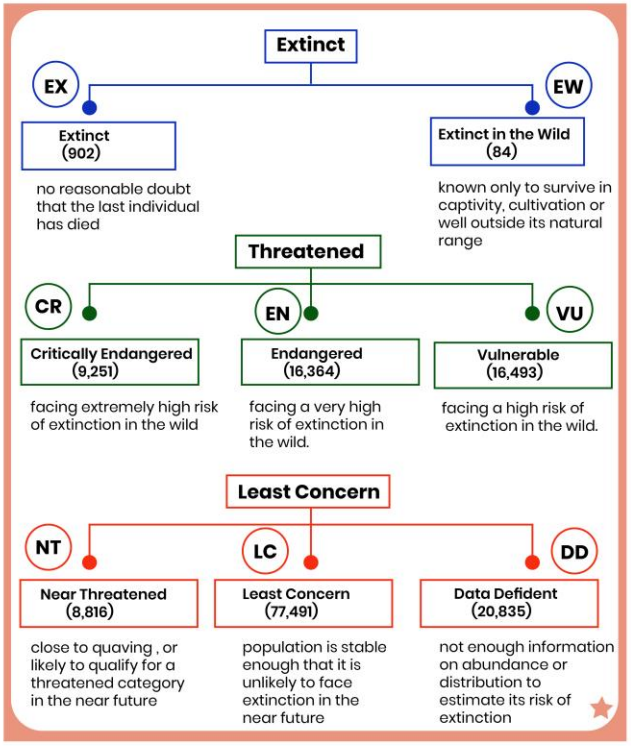
- The Barometer provides an **opportunity for national and sub-national governments to simplify and streamline reporting on their restoration commitments** and can help track and record progress towards global goals. These include:
  - The Bonn Challenge
  - The 30x30 target under the Post-2020 Global Biodiversity Framework
  - The Paris Agreement
  - The Land Degradation Neutrality Target
  - 1 trillion Trees
- Currently, **22 countries are using the Barometer to report the progress** of their restoration targets and more than 50 have endorsed it.
  - Though 22 countries submitted data to the Restoration Barometer in 2022, recently published report **documents financial investments of $26 billion across 18 countries and 14 million hectares of degraded landscapes**.
  - Data from **Ecuador, India, Pakistan, and Uzbekistan is being finalized** and will be published later.



5.1.3. UPDATED RED LIST OF THREATENED SPECIES

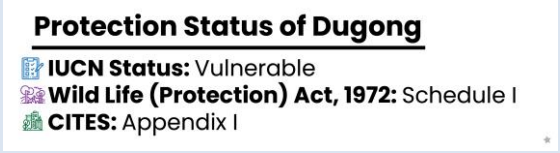
Why in News?

- The International Union for Conservation of Nature's (IUCN) has unveiled its **updated Red List of Threatened Species** during the **COP15 biodiversity conference** in **Canada**.
- **Key Updates**
  - The IUCN Red List now includes 150,388 species, of which 42,108 are threatened with extinction.
  - Over 1,550 of the 17,903 marine animals and plants assessed are at risk of extinction, with **climate change impacting at least 41% of threatened marine species**.

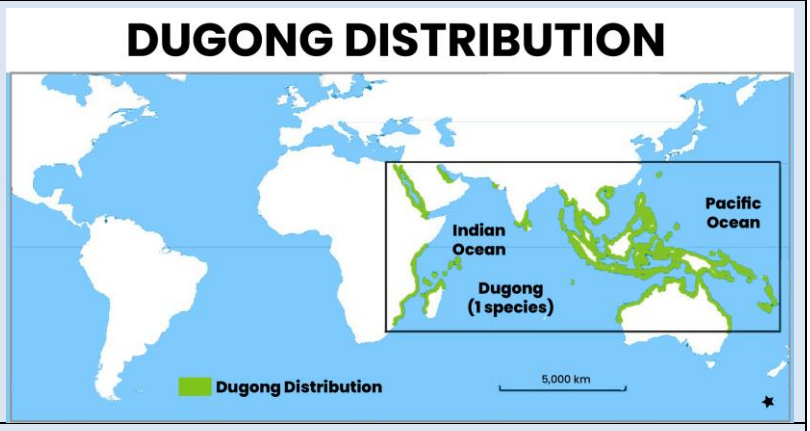


Affected Marine Species

Dugong



- **Dugong populations in East Africa and New Caledonia** have entered the IUCN Red List as **Critically Endangered and Endangered** respectively.
  - The species remains Vulnerable globally.
- Threats include **unintentional capture in fishing gear** in East Africa and **poaching** in New Caledonia, and boat injuries and destruction of seagrass habitats in both locations.
- **Characteristics of dugong**
  - Also known as **Sea Cows**, they are the **only herbivorous marine mammals** and feed on seagrass.
  - The only member of the Order Sirenia found in India.
  - They **live in groups** and come to the **surface to breathe** with a distinct dolphin-like tail and have mammary glands.
- **Habitat and distribution:** Shallow coastal waters of the Indian and western Pacific Oceans.
  - In India, found in **Gulf of Mannar, Palk Bay, Gulf of Kutch and Andaman and Nicobar Islands.**
- **Conservation Measures in India:**
  - **Listed under the Species Recovery Programme** of India.

	○ State animal of the Andaman and Nicobar Islands. • Tamil Nadu government announced **India's first conservation reserve** for Dugongs in Palk Bay.	
Pillar coral (*Dendrogyra cylindrus)* 	• Pillar coral found throughout the Caribbean from the Yucatan Peninsula and Florida to Trinidad and Tobago, has moved from **Vulnerable to Critically Endangered,** after its population shrunk by over 80% across most of its range since 1990. • Threats include **Stony Coral Tissue Loss Disease and bleaching** caused by increased sea surface temperatures and excess antibiotics, fertilisers and sewage.	
Abalone 	• **44%** of all **abalone** shellfish species enter the IUCN Red List as threatened with extinction. ○ Poaching threatens **Endangered perlemoen abalone of South Africa**. ○ Marine heatwaves have exacerbated abalone diseases worldwide, affecting the **Critically Endangered black abalone** in California and Mexico, and the **Vulnerable green ormer** (*H. tuberculata*), found from the English Channel to Northwest Africa and the Mediterranean.	

- **India specific findings:** 239 new species analysed in India have entered the list, of which, 29 are threatened.

Details of some of New Threatened species in India

Species	Status	Description
White-cheeked Dancing Frog (Micrixalus candidus) 	**Endangered**	• Only known from a small range with an extent of occurrence of 167 square kilometers (km2) in the **Western Ghats of Karnataka, a biodiversity hotspot.** • Threatened due to loss of their **habitat, pollution, changes in temperature, diseases, pests, invasive species.**
Andaman Smoothhound shark (Mustelus andamanensis) 	**Vulnerable**	• Shark is found in the **Andaman Sea in the Eastern Indian Ocean** off the coast of Myanmar, Thailand, and the Andaman and Nicobar Islands. • It is **subject to fishing pressure** including trawl, longline, and gillnet.
Yellow Himalayan Fritillary (Fritillaria cirrhosa) 	**Vulnerable**	• **Mostly found in the Himalayas**, it occurs in Bhutan, China, India, Myanmar, Nepal and Pakistan. • Species is threatened due to **unorganised harvest, over-extraction, unsustainable and premature harvesting of bulbs**, coupled with illegal hidden markets. • **Medicinal uses:** This is supposedly antiasthmatic, antirheumatic, febrifuge, galactagogue, haemostatic, ophthalmic and oxytocic.

5.2. NATURE BASED SOLUTIONS

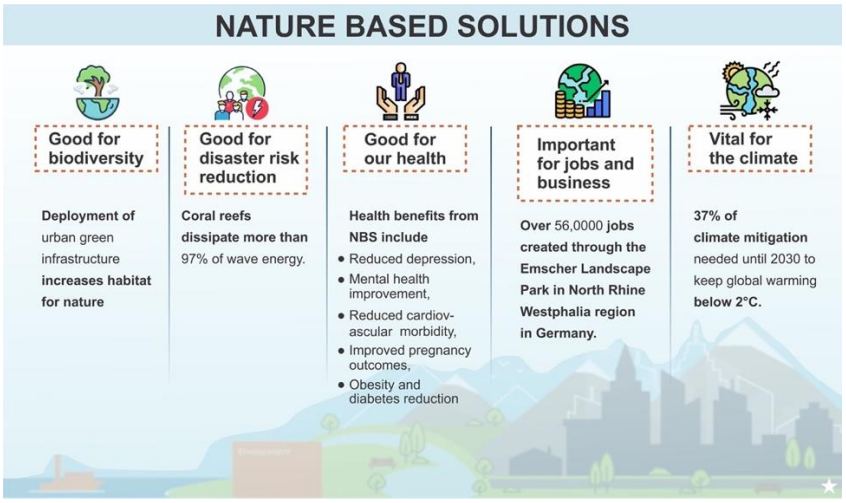
Why in news?

The recently released 'State of Finance for Nature (SFN) 2022' report revealed that nature-based solutions are still significantly under-financed.

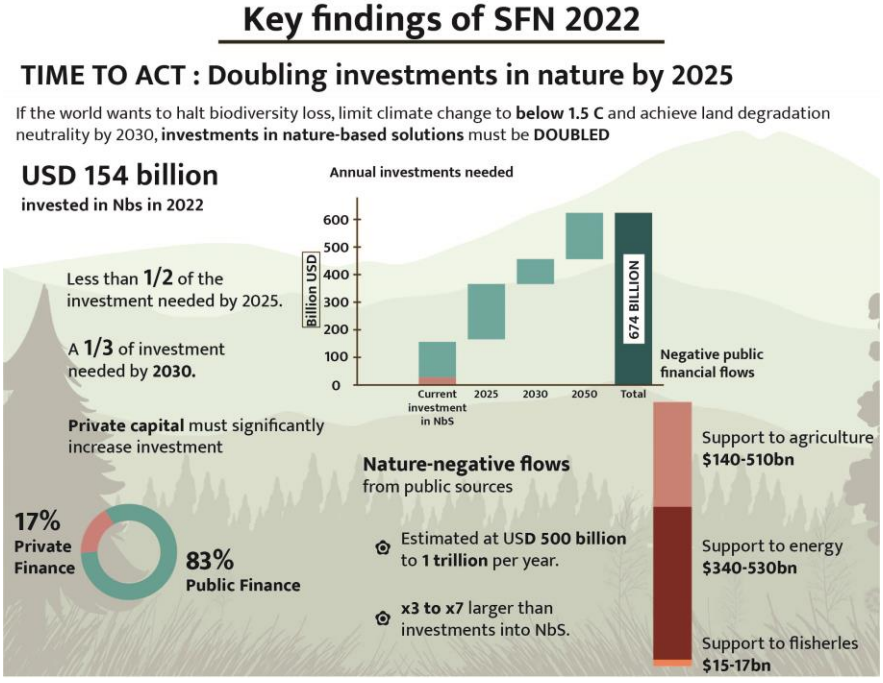
About State of Finance for Nature (SFN) 2022 report

- The report was released by the **UN Environment Programme (UNEP)** and the BMZ-financed **Economics of Land Degradation (ELD) Initiative** with support from Vivid Economics by McKinsey.
  - ELD is a global initiative aimed at **integrating the true value of land into decision-making processes and promoting sustainable land use**.
  - It was launched in 2011 by the **German Federal Ministry for Economic Cooperation and Development (BMZ), the United Nations Convention to Combat Desertification (UNCCD) and the European Commission.**
- It quantifies public and private finance flows to nature-based solutions (NbS) to tackle global challenges related to biodiversity loss, land degradation and climate change.

About Nature based solutions (NbS)



- **NbS** is an umbrella term that **aim to protect, sustainably manage, and restore natural or modified ecosystems to meet critical societal needs** today while building long-term environmental and economic resilience.
- **NbS use and work with nature in different ways**, which can be broadly categorised as **conservation, protection, restoration, management, and sustainable use**.
  - NbS involve the protection, restoration and/or management of a wide range of natural and semi-natural ecosystems on land and in the sea.
- **NbS are solution-oriented**, reflecting the fact that they can be used to address a range of social, economic, and environmental challenges.

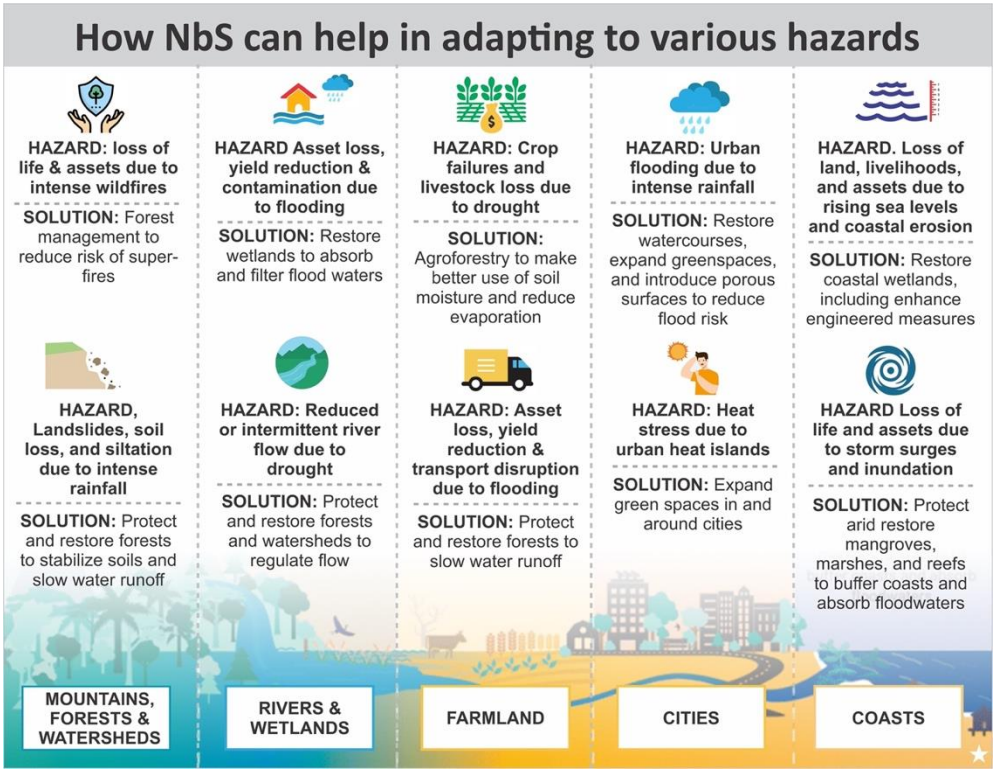


Challenges associated with NbS

- **Lack of investment:** Finance flows to NbS in 2022 were less than half of the investment in NbS needed by 2025 and only a third of investment needed by 2030 to limit climate change to below 1.5°C, halt biodiversity loss and achieve land degradation neutrality.
  - Further, the share of private sector investment In these finance flows was very low (17%).
- **Nature Negative financial flows**: Government expenditure on environmentally harmful subsidies to fisheries, agriculture and fossil fuels is estimated at US$500 billion to 1 trillion per year, which is three to seven times greater than public and private investments in NbS.

- Nature-negative expenditures far outweigh investments in nature-based solutions.

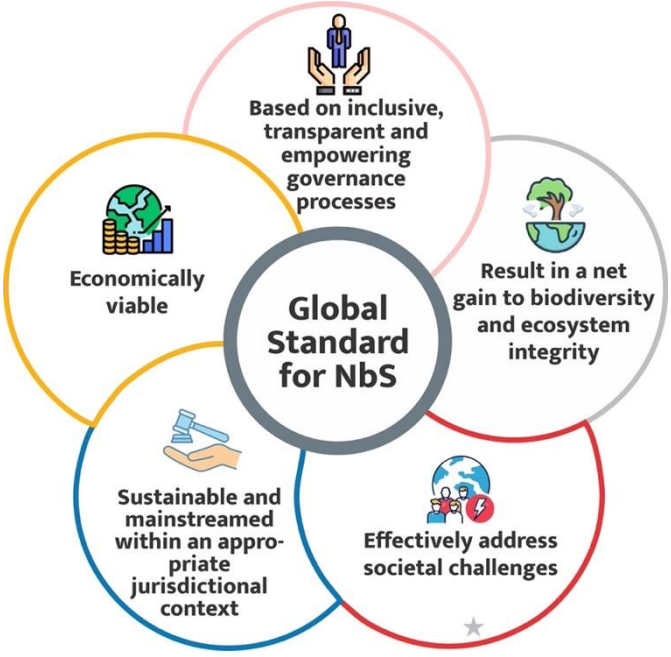
- **Effectiveness of NbS:** NbS for adaptation tend to be highly context-specific, adding to uncertainties about their effectiveness under changing climate conditions.
- **Infringe upon rights of indigenous peoples and local communities (IPLCs)**: Poor practices around NbS may raise concerns around the security of land tenure rights, access to natural resources, and underestimation of the IPLC role in managing ecosystems sustainably.
- **Misuse:** NbS can be misinterpreted and misused by decision-makers and stakeholders, leading to result in harm to nature and people, de-incentivising its use, eroding donor confidence and misdirecting efforts.
    - E.g., a tree-planting project using just one non-native species could result in poor soil biodiversity, ultimately making it more costly or impossible to sustain a diverse forest in the future.



- **Difficulties in monitoring and governance:** NbS often involve multiple actions taking place over broad landscapes and seascapes, crossing jurisdictional boundaries, requiring active cooperation and coordinated action.

Way forward

- **Scale up and improve targeting of investment in NbS:** In this regard SFN, 2022 provides the following recommendations-
    - **Increase direct finance flows to NbS** by ensuring that multilateral development banks (MDBs) and development finance institutions (DFIs) prioritise green finance, and providing regulation and incentives for private sector investment.
    - **Companies and financial institutions should transition to "net zero, net positive" and equitable business models** in a time-bound manner with short-term targets through measures like disclosure of climate and nature-related financial risks.
    - **Integrate just transition principles, safeguarding human rights** in public and private sector efforts to scale up NbS investments



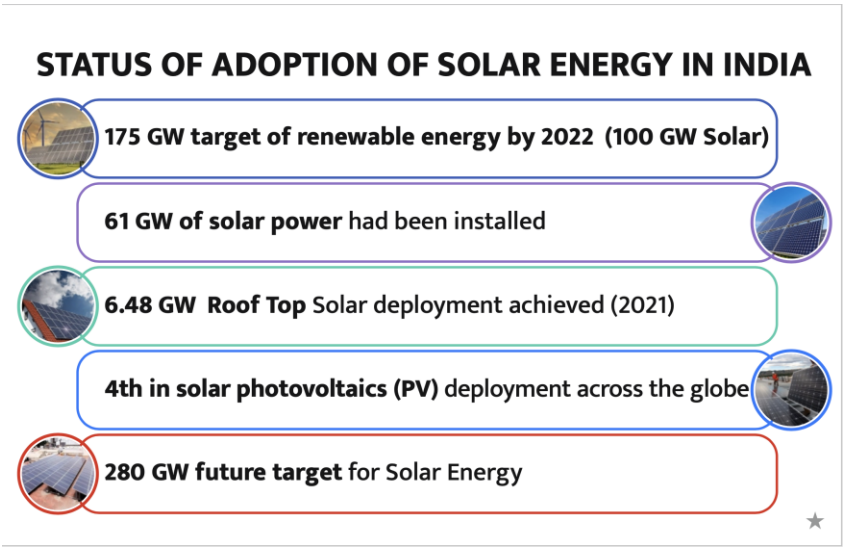
- **Mainstream NbS within national governance**, climate action and climate policy-related instruments, including Nationally Determined Contributions, Adaptation Communications etc.
- **Robust monitoring and evaluation of NbS**, to ensure up-to-date information on the generation and distribution of impacts, costs, and benefits, and to enable adaptive management.

- **Empower locally led action on NbS** that is built on respect for the rights of **Indigenous peoples and local communities**, through targeted funding and technical support to local actors.
- **Promote the positive impacts that NbS can deliver to vulnerable groups** - such as women, Indigenous People, the elderly, and youth who bear the brunt of climate impacts and ecosystem degradation - to scale the use of nature-based solutions for adaptation outcomes.
- **Enhancing regional and international co-operation**, in ways that encourage ambition, transparency and environment integrity and are supported by popular mobilization and campaigns.
- **Undertake NbS projects based on IUCN (International Union for Conservation of Nature) Global Standard for Nature-based Solutions.**

5.3. ADOPTION OF SOLAR ENERGY IN INDIA

Why in news?

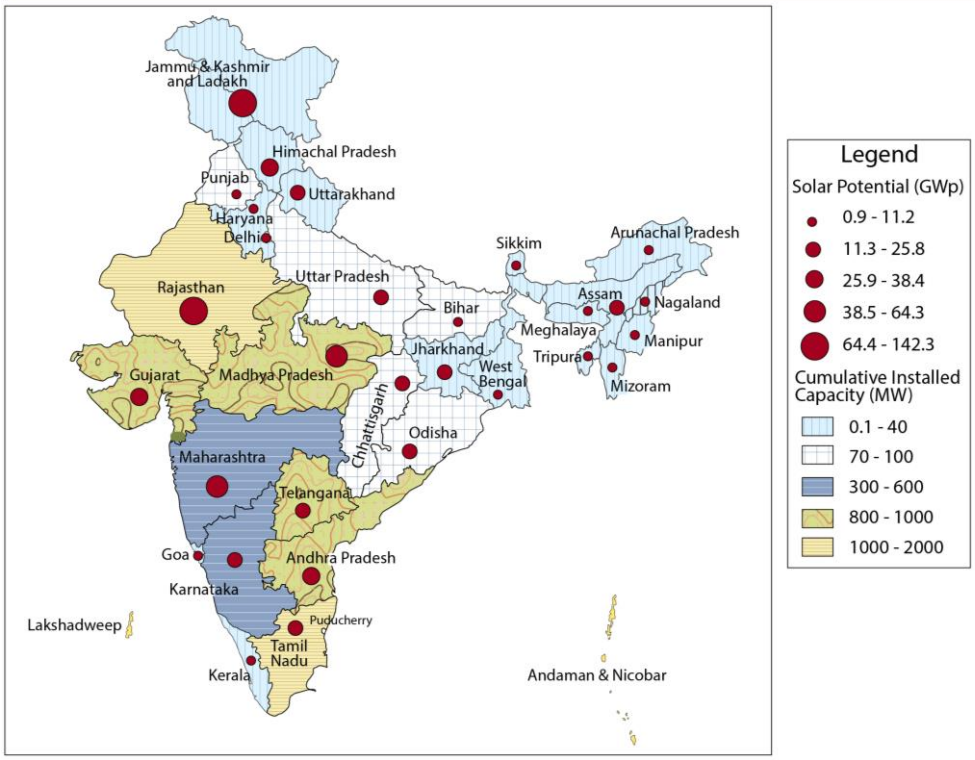
Recently, a total of **57 solar parks of aggregate capacity of more than 39 GW were sanctioned** under the **Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects.**



More on news

- Despite the sanction, **only solar power projects of about 10 GW have been commissioned** in these solar parks.
  - Solar parks are areas which provide **suitable developed land with all clearances, transmission system, water access**, road connectivity, communication network, etc.
- **Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects** was rolled out by **Ministry for New and Renewable Energy (MNRE) in 2014** to help solar project developers set up projects in a plug-and-play model.
  - Under this, it was **proposed to set up at least 25 Solar Parks and Ultra Mega Solar Power Projects** targeting over 20 GW of solar power installed capacity within a span of 5 years starting from 2014-15.
  - Capacity of the Scheme was **enhanced from 20 GW to 40 GW** in 2017.
  - **Solar Power Park Developer (SPPD)** will be the implementing agency for the scheme.
  - The scheme **facilitates and speeds up installation of grid connected solar power projects** for electricity generation on a large scale.

Solar Estimated State-wise Potential & Cumulative Installed Capacity



Challenges in adoption of Solar Energy in India

- **Production issues**:
  - **Land Scarcity:** Adoption of solar energy on a large scale requires **land to install ground-mount solar systems**. However, increasing population and urbanization is leading to land scarcity.
    - ✓ As per Economic Survey, India is expected to be one of the most land-scarce countries in the world by 2050.
  - **High cost:** India is **dependent on countries like China, Germany etc. for solar panels**, equipment's and inverters. Also, **low solar tariffs in India** further hinder development of solar parks.
  - **Domestic Manufacturing:** In India, domestic manufacturing industry of solar PV cells and modules is severely **lacking due to lack of infrastructure, skilled workforce**, high cost of production and issues in manufacturing due to COVID-19.
- **Transmission issues:**
  - **Grid Challenges:** Solar energy production is **highly variable, uncertain and location specific**. This makes operating the transmission grid a technically demanding task, as **grid requires a constant supply** which can be ramped up/down as per the demand.
  - **Financial health of DISCOMs:** Poor financial condition of Power Distribution Companies (DISCOMS) leads to **long and unsustainable payment cycles.** Most Renewable Energy projects report delays in payments ranging from 6-18 months which further hinders the production.
- **Impact on Ecosystem:**
  - **Waste management:** India's solar waste has been **predicted to grow by 1.8 million tonnes by 2050**. Currently, India's **e-waste rules are not mandatory on solar cell manufacturers** which lead to a large generation of solar waste every year.
  - **Biodiversity loss:** Habitat of Great Indian Bustard has been encroached upon by solar power projects particularly by transmission lines that endangers the bird.

Other Initiatives for Solar Energy

- **International Solar Alliance (ISA):** Joint initiative of India and France to **scale up solar energy, reduce the cost of solar power generation through aggregation of demand for solar finance**, technologies, innovation, research and development, and capacity building.
- **One Sun, One World, One Grid (OSOWOG):** It aims to **connect different regional grids through a common grid** that will be used to **transfer renewable energy power** and, thus, **realize potential of renewable energy sources,** especially solar energy.
- **Production Linked Incentive (PLI) Scheme on National programme on High Efficiency Solar PV Modules**: It aims to build an ecosystem for manufacturing of high efficiency solar PV modules in India, and thus **reduce import dependence** in area of Renewable Energy.
- **Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM):** Aims to provide energy and water security, de-dieselise farm sector and generate additional income for farmers by producing solar power.
- **National Solar Mission (NSM):** Launched in 2010 to promote ecologically sustainable growth while addressing India's energy security challenges.

Way Forward

- **Land Requirements:** Floating PV plants and **utilizing Building Integrated Photovoltaics (BIPV),** which are thinner and flexible than traditional solar PV technologies can address the issue of land scarcity.
- **Funding:** Banks need to be **more flexible in regard of loans for PV installations for small and medium enterprises** and residential consumers along with removing duties on imports of panels to reduce high capital costs of PV plants.
- **Rooftop Generation:** Create **awareness among residential consumers and provide information on factors regarding rooftop generation** like market for PV, availability, service and maintenance, net metering benefits etc.
- **Research and Development (R&D):** Investment should be done in R&D to **develop cost effective technologies**, boost domestic manufacturing and **reduce import dependence for solar panels**, equipment's and batteries.
- **Storage solutions:** Grid operators can store electricity generated from renewable projects in large battery systems in low-demand situations, and then promptly release that electricity into grid when demand increases to address grid integration issues.

5.4. ENERGY CONSERVATION (AMENDMENT) ACT, 2022

Why in news?

Recently **Energy Conservation (Amendment) Act, 2022** came into force.

About Energy Conservation (Amendment) Act, 2022

- It amends **Energy Conservation Act, 2001** which provides a framework for regulating **energy consumption and promoting energy efficiency and energy conservation.**
- While 2001 act deals **with saving energy**, 2022 amendment deals with **saving the environment and tackling climate change**, thus broadening **scope and objective** of principal Act.

Key Features

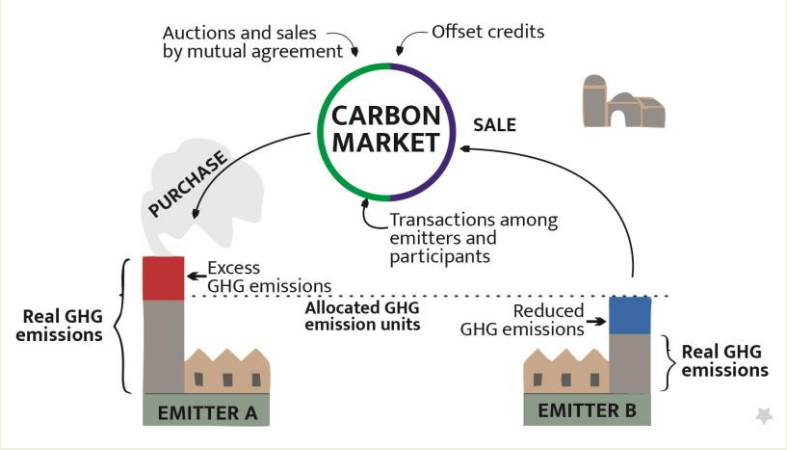
- **Carbon credit trading:** It empowers central government to specify a **carbon credit trading scheme**.
  - Carbon credit implies a **tradable permit** to produce a specified amount of carbon dioxide or other greenhouse emissions.
  - Central **government or any authorized agency** may issue carbon credit certificates to entities registered and compliant with scheme.
- **Obligation to use non-fossil sources of energy: The** 2001 Act empowered the central government to **specify energy consumption standards.**
  - The amendment adds that government may require **designated consumers** to meet a minimum share of energy consumption from non-fossil sources like green hydrogen, green ammonia, etc.
  - Failure to meet obligation will be **punishable with a penalty** of up to Rs 10 lakh.
- **Energy Conservation code for buildings: The** 2001 Act empowered central government to specify Energy Conservation Code for buildings. The amendment amends this to provide **an 'Energy Conservation and Sustainable Building Code'.**
  - This new code will provide norms f**or energy efficiency and conservation, use of renewable energy, and other requirements** for green buildings.
  - Under 2022 amendment, new Code will also apply to the **office and residential buildings** meeting above criteria. It also empowers state governments **to lower the load thresholds.**
- **Standards for vehicles and vessels:** Under 2001 Act, energy consumption standards may be specified for **equipment and appliances** which consume, generate, transmit, or supply energy.
  - The amendment expands the scope to **include vehicles** (as defined under the Motor Vehicles Act, 1988), **and vessels** (includes ships and boats).
- **Regulatory powers of SERCs:** The 2001 Act empowers State Electricity Regulatory Commissions (SERCs) to **adjudge penalties** under the Act.
  - The 2022 amendment adds that SERCs may also **make regulations for discharging their functions.**

2010 amendments to Energy Conservation Act (ECA), 2001.
The Act was **first amended in 2010** to expand **its scope** and bring the **following subjects under its ambit**

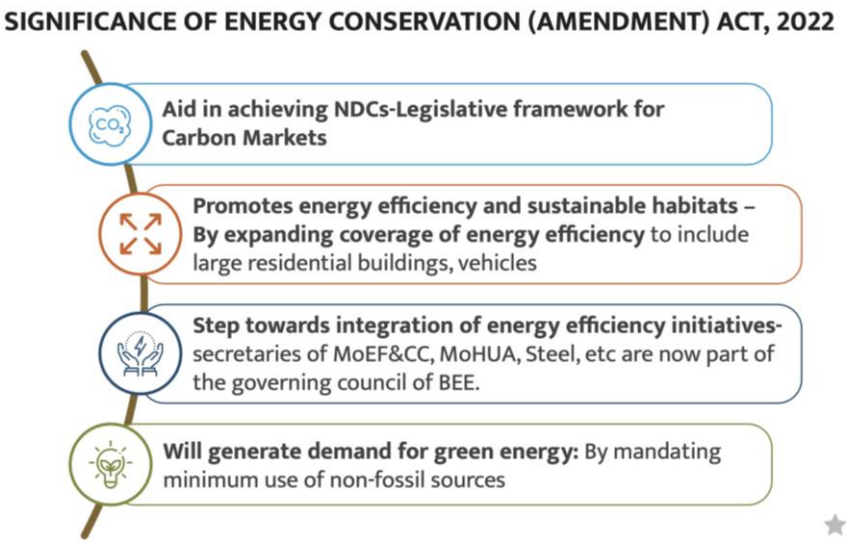
- **Energy conservation norms for buildings**; enhanced energy efficiency norms for appliances and equipment,
- A framework for the **trade of energy savings** among energy-intensive Designated Consumers (DCs).
- **Increased penalties** for offences committed under the Act, including violation of norms for **efficiency and consumption standards**.
- Provided room for **appeals to be heard by the Appellate Tribunal for Electricity (APTEL).**

About Carbon Markets

- They are essentially a tool for putting a **price on carbon emissions i.e.** establish **trading systems** where carbon credits or allowances can be **bought and sold.**
- **They are broadly of two types namely Voluntary and Compliance Market.**
  - **Voluntary Markets**- Emitters buy carbon credits to offset emission of one ton of CO_2or equivalent greenhouse gases.
    - ✓ **Such carbon credits are created by activities which reduce CO_2 from the air**, such as afforestation.
  - **Compliance Markets**- They are **set up by policies at national, regional, or international level** and are officially regulated. They mostly operate under '**cap-and-trade" principle**.
    - ✓ Cap and trade is an idea that **the limit on the total amount of greenhouse gas that could be emitted is set by policymakers, and the allowance corresponding to the level of emissions is freely traded.**



- **State Energy Conservation Fund:** The amendment requires State Governments to **constitute energy conservation funds** for promotion of energy efficiency and conservation measures. This fund shall receive contribution by both Union and State govt.
- **Composition of governing council of BEE**: The 2022 amendment **increases and diversifies number** of **members and secretaries** in governing council of BEE.



Concerns associated with 2022 amendment

- **Carbon Market as a concept**- Critics contend that carbon markets serve to **sustain the status quo**.
  - Interest groups mobilize around carbon pricing schemes to render **them ineffective or even counterproductive.**
  - Council on Energy, Environment and Water (CEEW)'s industry engagement shows that India's industry stakeholders **do not have deep experience of the cap-and-trade market**.
- **Carbon credit market regulation**: Typically, trading platforms are regulated by respective **sectoral regulators**. For example, share and commodity trading is regulated by Securities and Exchange Board of India. Regulating entities for trading have been **specified in respective Acts**.
  - However, 2022 amendment does not give clarity on **how carbon credit certificates** will be traded, or **who will regulate** such trading.
  - As per Act, **Ministry of Power** will be nodal Ministry for regulation of scheme, and BEE under Ministry of Power will be implementing agency.
    - ✓ In jurisdictions like **USA, UK, Switzerland**, Environment Ministry/Regulator **implement schemes** proposed by 2022 amendment.
  - Experts have also raised concerns about issues related to overlap between the existing policies – **Energy Saving Certificates, Renewable Energy Saving Certificates** and the new policy – **carbon credit certificates trading.**
    - ✓ **2022 amendment** does not specify on their regulation.
- **Challenges in meeting obligations:** There may not be a **widespread generation of power** from some of these sources that the consumer can access. For instance, share of biomass in India's total installed electricity generation capacity was **2.5%, as of August 2022.**
  - Technologies like green hydrogen and green ammonia are still at a **nascent stage**. Currently, it **may not be feasible** to produce energy from **them affordably**. Energy is a key input to industrial activity, and such an obligation may **adversely impact competitiveness** of industry.
- **Curtails rights of states**: Some experts raised concerns that the **amendment has a centralized structure**, despite the fact that each state has its **own dynamics** of energy production and consumption. 2022 amendment proposes **only five representatives of the States** in governing council of BEE.
  - It means that a majority of the States would **not be able to register their opinion** in BEE.

Conclusion

It is hoped that **important structural details** will emerge soon to provide **more clarity on certain aspects** discussed above. There is also a **need to train industry participants** on the **operational aspects** of the market to ensure **success of this intervention and institutionalize** it in the Indian ecosystem.

To know more about Energy Conservation, please refer to our following Weekly Focus Document.

Transitioning to a Sustainable Energy Ecosystem	Energy is the engine that fuels our economies and modern human activities. Societal and economic disruptions due to the COVID-19 pandemic have given rise to calls for nations to "build back better", and to steer economies towards more sustainable trajectories. The document analyses the developmental benefits of investing in a sustainable energy ecosystem and India's progress in this domain. It further discusses models such as Energy Trilemma to develop greener and more inclusive energy systems that offer greater resilience to future crises.	

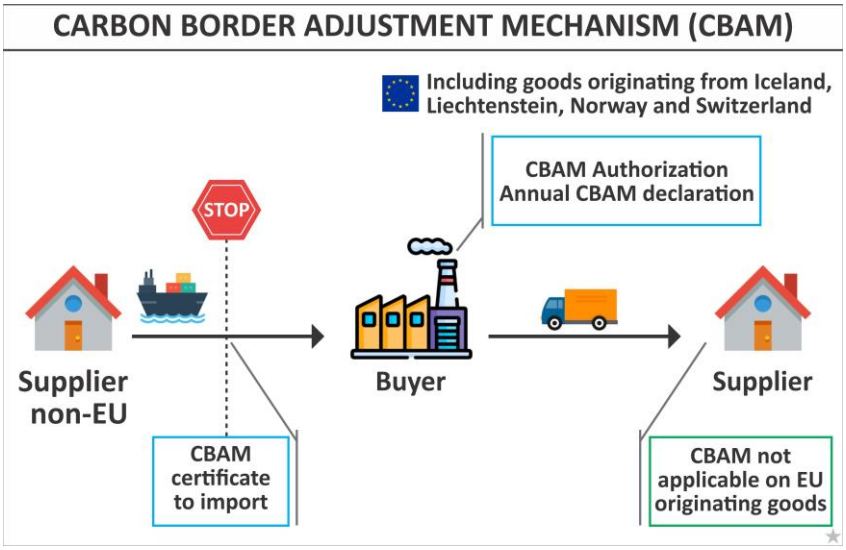
5.5. CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

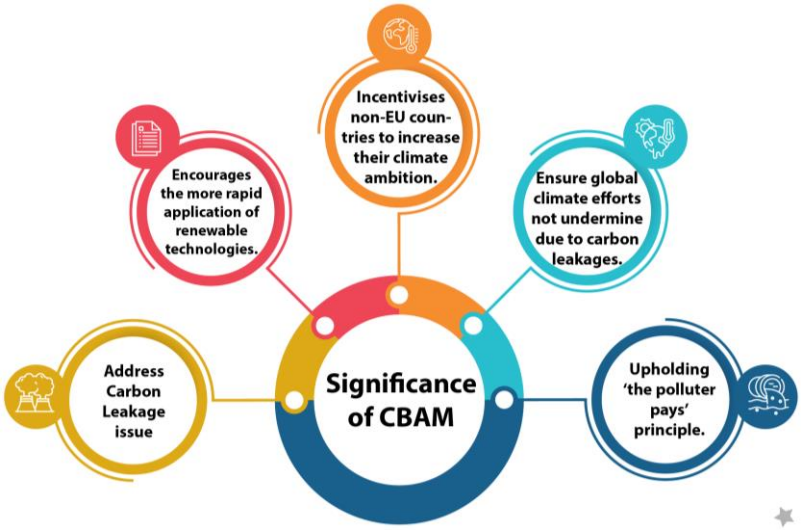
Why in News?

Recently, **India opposed CBAM or carbon border tax** proposed by European Union (EU) in 27th edition of Conference of Parties (COP) in Sharm El Sheikh.

About Carbon Border Adjustment Mechanism (CBAM)

- It is a **plan from the European Union (EU) to tax carbon-intensive products**, such as iron and steel, cement, fertilizer, aluminum, electricity, and hydrogen, from 2026.
  - EU came up with the **idea of CBAM in 2021.**
- Under the CBAM, **EU importers will have to buy carbon certificates corresponding to the carbon price** that would have been paid had the goods been produced under the EU's carbon pricing rules.
  - If a non-EU producer has already paid for the emission in the country where the production took place, the **EU importer can claim deductions from their CBAM liability against this.**
- CBAM is part of the **"Fit for 55 in 2030 package",** which is the EU's plan to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels, in line with the European Climate Law.





- It aims to **eliminate the difference in carbon price paid by companies subjected to the EU's Emissions Trading System (ETS)** or its domestic compliance-based carbon market.
- The CBAM is also known as a **carbon border tax or a carbon leakage instrument.**
  - A **carbon border tax** is a **tax on carbon emissions imposed on imported goods** from countries with less strict climate policies.
    - ✓ It aims to create a **level playing field** between imports and domestic production.
  - The undermining of global climate efforts due to relocation of production is defined as **'carbon leakage'.**

India's opposition & other concerns

BASIC Group (2009)
- It is a bloc of four large newly industrialized countries – Brazil, India, South Africa and China.
- The BASIC countries constituted one of the parties in the Copenhagen Accord.

- **Discriminatory:** India have opposed CBAM calling it 'discriminatory' as it will ramp up prices of their goods in Europe and shrink demand.
- **Huge impact on India**: India **exports about $2 billion worth of products annually** to the EU that would attract the CBAM levy. Most of it is in the iron and steel space, with aluminum making up the rest.
- **Against the UN principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC)**: The principle acknowledges that richer countries have a responsibility of providing financial and technological assistance to developing and vulnerable countries to fight climate change.
- **Market distortion**: BASIC countries opposed this Carbon border taxes as it could result in market distortion besides aggravating the already widened trust deficit amongst parties.
- **Other concerns:**
  - Potential economic risks to the **Global South**, developing countries may **struggle to decarbonise** fast enough to remain competitive in the global market.
  - Other developed economies may follow suit of carbon border tax and in the short run, this will be **harmful to industries in developing countries.**
  - Additional costs will be passed on to the consumers, eventually.
  - There is also the possibility that the **CBAM may violate World Trade Organization (WTO) rules.**
    - ✓ Companies in the sectors covered **are allowed a limited number of free emissions allowances** and must pay for permits for any emissions beyond this.

Way ahead

- **Financially support developing countries:** CBAM can have achieve greater support if it also comes with a commitment to financially support developing countries to introduce the carbon price.
- **Focus on coordination:** Coordinated application of carbon taxes and related climate change avoidance measures should be given more priority instead of putting carbon border tax.
- **Bilaterally relations:** The approach for India could be to resolve this bilaterally with EU, alongside preparing to set up its own carbon trading system.
  - **Presently, India does not have a price on carbon,** though it has been implemented in indirect forms through mechanisms like a coal cess.

Conclusion

With the proposed CBAM, there is a new sense of urgency for a shared understanding on carbon-based trade policies. If countries believe a carbon border tax is the way forward, a global view on this topic should include an alignment of key parameters applicable to them, as well as agreed standards for measuring carbon that is emitted in the production of goods.

5.6. CLIMATE INVESTMENT OPPORTUNITIES IN INDIA'S COOLING SECTOR

Why in news?

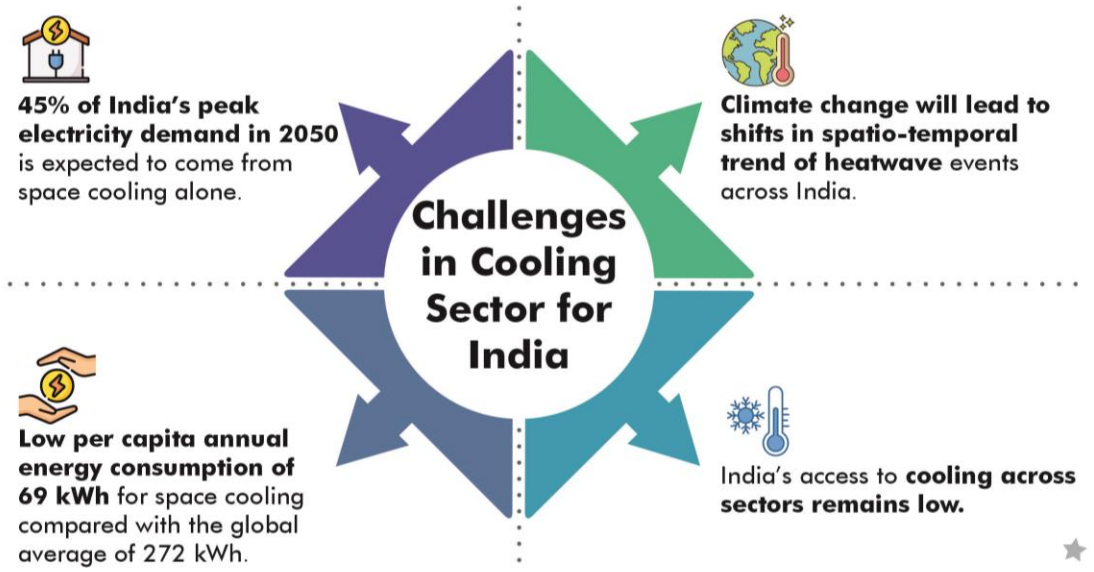
Recently, **World Bank released the report** "Climate Investment Opportunities in India's Cooling Sector".

Key Findings of the Report

- **Increased exposure to Heatwaves**: From 2030 onwards, **more than 160 to 200 million people could be exposed to a lethal heat wave in India** every year.
- **Heat stress-related productivity decline:** Around 34 million Indians will face job losses due to heat stress-related productivity decline.
- **Increased demand for cooling**: By 2037, the demand for cooling is likely to be **8 times more than the current level**.
- **Investment in space cooling:** Market potential and investment opportunity in space cooling will be US$1.6 trillion by 2040., besides reducing greenhouse gas emissions significantly and creating 3.7 million jobs.
    - With the demand for cooling shooting up, there will be a demand for a **new air-conditioner every 15 seconds**.
    - This will lead to an **expected rise of 435% in annual greenhouse gas emissions** over the next two decades.
- In this scenario, it is imperative for India to deploy **alternative and innovative energy efficient technologies for keeping spaces cool.**
- The **report analyzed the India Cooling Action Plan** and came up with suggestions for prioritizing the government's investment opportunities in the cooling sector.

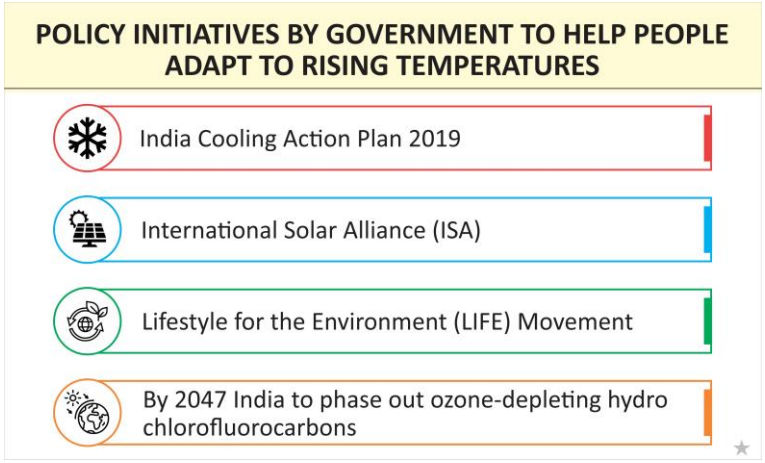
About Heat wave

- Heat wave is considered if the maximum temperature of a station reaches **at least 40°C or more for Plains and at least 30°C or more for Hilly regions**.
- **Based on Departure from Normal –**
    - **Heat wave** - Departure from normal is 4.50°C to 6.40°C.
    - **Severe Heat Wave**: Departure from normal is >6.40degree C
- **Based on Actual Maximum Temperature**
    - **Heat Wave**: When actual maximum temperature ≥ 45 degree C
    - **Severe Heat Wave**: When actual maximum temperature ≥47 degree C.
    - If above criteria met at least in 2 stations in a Meteorological sub-division **for at least two consecutive days** and it declared on the second day.



India's Cooling Strategy

- India is **one of the first countries in the world to develop a comprehensive Cooling Action plan** which has a long-term vision to address the cooling requirement across sectors.
- Cooling requirement is cross sectoral and **an essential part for economic growth.**
    - It is **required across different sectors of the economy** such as residential and commercial buildings, cold-chain, refrigeration, transport, and industries.
- **India Cooling Action Plan (ICAP)** was **launched in 2019 to provide sustainable cooling measures across various sectors** like indoor cooling in buildings, Cold chain and refrigeration in agriculture and pharmaceuticals, Air-conditioning in passenger transport etc.



- It **seeks to:**
  - **Reduce cooling demand across sectors** by 20% to 25% by 2037-38.
  - **Reduce refrigerant demand** by 25 % to 30% by 2037-38.
  - **Recognize "cooling and related areas**" as a thrust area of research.
  - **Recognize "cooling and related areas"** as a thrust area of research under national S&T Programme.

Key Recommendations

In this scenario, it is imperative for India to deploy **alternative and innovative energy efficient technologies** for keeping spaces cool.

- **Sustainable Space Cooling:** Sustainable Space Cooling solutions may **reduce annual GHG emissions by 213 metric tonnes** of carbon dioxide equivalent by 2040.
  - This can be achieved by **increasing the efficiency of cooling technologies** — air conditioners, ceiling fans and chillers — **which can save 30% energy by 2037-38.**
- **Passive Cooling Strategies:** Passive cooling strategies for buildings in cities can reduce **energy usage by 20-30% by 2038.**
  - A drop in the temperature of a building by one degree Celsius c**ould lower peak electricity demand** for cooling by two-four per cent.
- **District Cooling Systems (DCS):** DCS are centralized cooling techniques for **clusters of buildings** instead of individual buildings, which is much more efficient.
  - District cooling should be made **mandatory for real estate complexes** that are of high density.
  - DCS generates chilled water in a central plant **which can then be distributed to multiple buildings** via underground insulated pipes.
- **Cold Chain and Refrigeration:** It is suggested to use concessional finance from Multilateral Development Banks like the World Bank for investments in **strategies to plug the gaps in the cold chain distribution networks.**
  - Such investments can **help reduce food loss by about 76%** and decrease carbon emissions by 16%.
- **Thermal Comfort:** Government should include a thermal comfort programme in its affordable housing Programme, **Pradhan Mantri Awas Yojana (PMAY).**
  - Thermal comfort through passive cooling technologies in these households could **benefit over 11 million urban households and 29 million households in rural areas** that the government wants to construct.
  - This would also ensure that **the people most affected by rising temperatures** are not disproportionately affected.

Conclusion

The right set of **policy actions and public investments** can help leverage large scale private investment in cooling sector, there is need to **create a flagship government mission** to address the challenges and opportunities from rising temperatures in India.

5.7. POLLUTED RIVER STRETCHES FOR RESTORATION OF WATER QUALITY – 2022 REPORT

Why in news?

Recently, **Central Pollution Control Board (CPCB) in its report** stated that the number of **polluted river stretches (PRS)** in India's rivers has fallen, but the number of most polluted stretches is practically unchanged.

About Central Pollution Control Board (CPCB)

- It is a **statutory organization** that was constituted in 1974 under the **Water (Prevention and Control of Pollution) Act, 1974.**
- Also **entrusted with the powers and functions** under the **Air (Prevention and Control of Pollution) Act, 1981.**
- **CPCB network monitors water quality** at 4,484 locations in 28 States and 7 UTs.
- **Ministry:** Ministry of Environment, Forest and Climate Change

More about news

- CPCB monitors water quality, under National Water Quality Monitoring Programme, at locations covering rivers, lakes, creeks, drains, canals etc.
  - Water quality management is performed under provision of **Water (Prevention and Control of Pollution) Act, 1974.**

- **CPCB initiated the exercise of identifying PRS** in the country **since 2009.**
- The present assessment is based on the **river water quality data of the years 2019 & 2021** excluding monitored data of year 2020 being the pandemic year.

Key findings of report

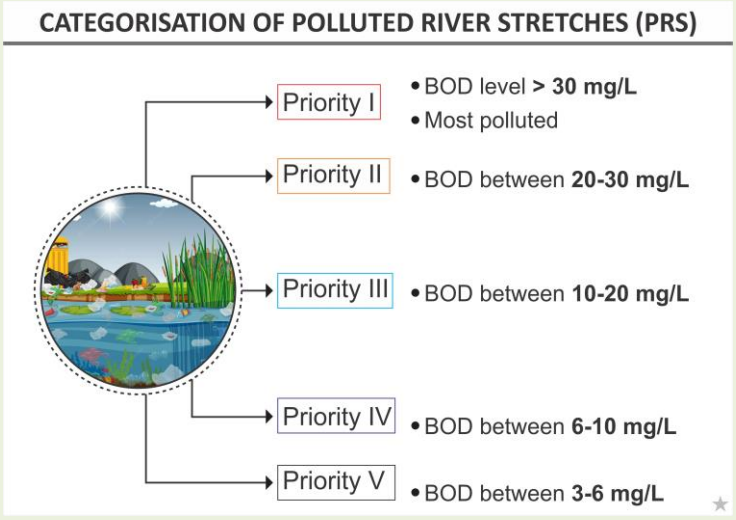
- **Decline in polluted Stretches:** The number of polluted stretches in India's rivers has fallen from 351 in 2018 to 311 in 2022.
- **Unchanged polluted stretches:** The number of polluted river stretches categorized in **'Priority I & II'** is almost unchanged.
  - **Maharashtra** has highest number of PRS **followed by Madhya Pradesh.**
- **Biological Oxygen Demand (BOD): BOD** exceeding 3.0 mg/L (milligram per litre) is identified as a polluted location.
  - Out of 1920 locations on rivers monitored during 2019 & 2021, 1103 locations **(57%) were observed complying with BOD criteria of less than 3.0 mg/L**, notified for Outdoor bathing.
- **Reduction in PRS:** Significant reduction in number of PRS is observed in Priority V.
  - Overall reduction in PRS may be **attributed to development of infrastructure for sewage management, industrial effluent management**, waste management and enforcement of regulations etc.
- **BOD exceeding 3.0 mg/L** (milligram per litre) are identified as **Polluted Locations or PRS.**

BOD

- BOD represents **amount of oxygen consumed** by bacteria and other microorganisms while they decompose organic matter **under aerobic (oxygen is present) conditions** at a specified temperature.
- The **more organic matter** there is (e.g. in sewage and polluted bodies), greater the BOD.
- Greater the BOD, **lower the amount of dissolved oxygen available for animals.**

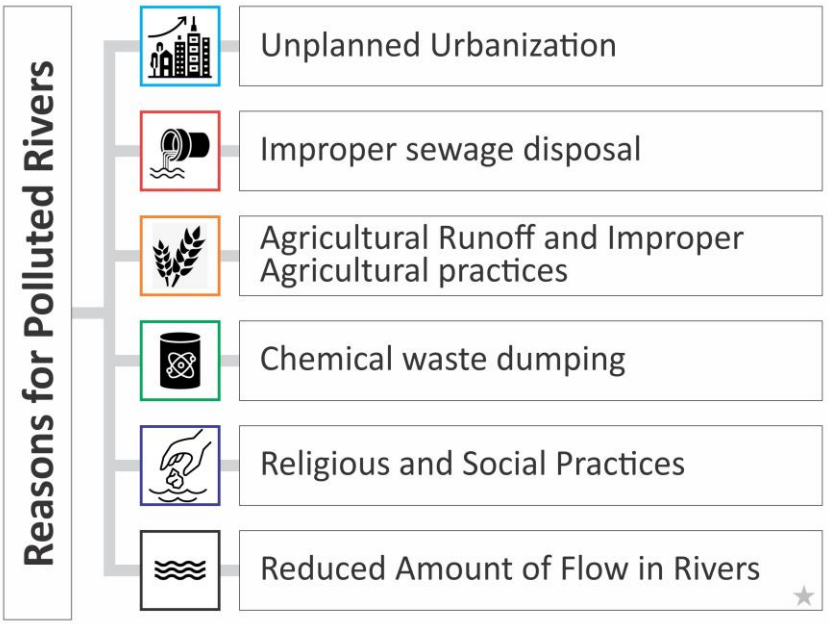
Criteria for Polluted Stretches

- **Biological Oxygen Demand (BOD) exceeding 3.0 mg/L** (milligram per liter) is identified as a polluted location.
- If there is **a single location** on river, rivulet or stream and the location is not complying to BOD, it is identified as **Polluted Location**.
- Two or more polluted locations identified on a river in a continuous sequence are considered as a **PRS.**
- **A BOD less than 3mg/L** means river stretch is fit for **outdoor bathing.**



Recommendations

- **Stringent actions** are required for control of organic pollution from various point sources of pollution.
- **Treatment of wastewater** before discharge into recipient water bodies.
- **Effective public participation** is required for effective Water Quality Management in India.
- Entire urban areas need to be covered with **sewerage system** and need to ensure treatment of entire wastewater generated.
- **Ecological flow** shall be made mandatory in all stretches and to be ensured by respective State Authorities
- **State Government** shall finalize the list of **prohibited activities** and restricted



activities including intensive surveillance for effective enforcement for needed compliance by various point and non-point sources.

- **Behavioral change and citizen participation** will bring the restoration and availability of water resources and would ease the water stress problem.

5.8. NEWS IN SHORTS

5.8.1. GLOBAL STATUS OF BLACK SOIL: REPORT OF FOOD AND AGRICULTURAL ORGANIZATION

- As per report, Black soils are **mineral soils which have a black surface horizon, enriched with organic carbon that is at least 25 cm deep.**
    - Black colour is a result of accumulation of organic matter originating from numerous dying roots of gramineous vegetation **in a process known as melanization.**
- **Status of Black soil** - Black soils occupy 725 million hectares of the land surface and constitute 5.6 percent of global soils but contain 8.2 percent of the world's soil organic carbon (SOC) stocks.
    - In India it is spread mostly across interior **Gujarat, Maharashtra, Karnataka, and Madhya Pradesh** on the Deccan lava plateau and the Malwa Plateau.
- **Threats to Black soil**
    - **Loss of organic matter** through both conversion of natural landscapes to agriculture and by continuing mismanagement of cultivated black soils.
    - **Wind erosion is a particular issue in black soils** of former grasslands as the drier climates in these soils are naturally susceptible to high rates of wind erosion.
- **Solutions suggested**
    - **Preservation of the natural vegetation cover on black soils** under grassland, forest and wetland vegetation.
    - **Adoption of sustainable soil management approaches** on cropped black soils.

5.8.2. ARCTIC REPORT CARD 2022

- **Arctic Report Card 2022** was recently released by **US National Oceanic and Atmospheric Administration (NOAA).**
- Issued **annually since 2006**, it is a **peer-reviewed source** that **provide an up-to-date environmental information** on Arctic.
- **Key highlights of Report**
    - Arctic **continues to warm more than twice as fast** as **rest of globe.**

- 2022 **sea ice extent is well below long-term average.** It is also **impacting albedo of region,** thereby inducing the melting.
- **Mean sea surface temperatures** continue to **show warming trends** leading to a boom in phytoplankton-driven production of organic matter in oceans.
- **Persistent summer sea ice** due to cooler surface waters and north winds **at Chukchi Sea.**
- **Increasing maritime ship traffic** in Arctic.
- **Precipitation has increased** across all seasons since 1950's.
- **Variability in Tundra greenness** possibly due to wildfires and extreme weather events.

- **Significance of Arctic**
  - An area of **geo-political, geo-economic and geo-ecological interest.**
    - ✓ Climate change causing melting of ice, **making region more accessible for economic exploitation** (oil & gas reserves, metals and minerals).
    - ✓ Possibilities to **open Northern Sea Route** as a **new trade route.**
  - Helps **circulate world's ocean currents.**
  - Characterized as **world's climate change "barometer"**.

ARCTIC REGION

India in Arctic

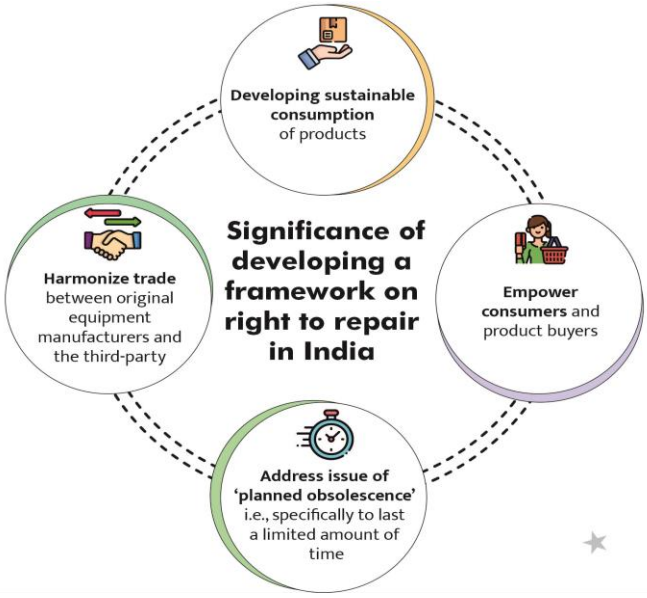
- Since 2007, **India has an Arctic research programme** with several expeditions undertaken till date.
- India also unveiled its **first Arctic policy.**
- India is one of the **Observers in the Arctic Council.**

5.8.3. UNITED NATIONS (UN) WATER SUMMIT ON GROUNDWATER (GW) 2022

- **United Nations (UN) Water Summit on Groundwater (GW) 2022 concluded in Paris**.
- Summit was organised by **UN-Water, UNESCO and International Groundwater Resources Assessment Centre (IGRAC)** to bring attention to groundwater at highest international level.
  - Summit will mark the completion of "**Groundwater: Making the invisible visible" campaign** run by UN-Water throughout 2022.
- Summit uses **UN World Water Development Report 2022** as a baseline and **SDG 6 Global Acceleration Framework (GAF)** to define actions towards more responsible and sustainable use and protection of this vital natural resource.
  - In 2020, **five pillars of SDG 6 GAF** released namely data and information, capacity development, innovation, finance and governance.
- **Recommendations by Report to promote GW**
  - **Improve exploration, monitoring and analysis of GW resources** to manage them by identifying how much GW we can extract, where and when.
  - **Protect Aquifers recharge areas** from pollution.
  - Ensuring groundwater access to all, helping to achieve SDG.
- GW is water **stored in rocks and soil**. It accounts for **99% of liquid freshwater on Earth**.
  - **India is largest user of GW** with a fourth of total global withdrawal.
  - **Concern with GW**: Depletion of water tables, saltwater encroachment, drying of aquifers, water logging and salinity, etc.
- **UN-Water**: It is **UN inter-agency coordination mechanism for all freshwater and sanitation related matters**.
- **IGRAC:** It is **UNESCO Centre** that **works under World Meteorological Organisation (WMO),** and financially supported by Netherlands.
  - It specializes in regional- and transboundary-level assessment and monitoring of GW resources.
  - One of IGRAC's flagship products is **Global Groundwater Information System (GGIS).**

5.8.4. 'RIGHT TO REPAIR' PORTAL

- **Ministry of Consumer Affairs, Food and Public Distribution unveiled 'right to repair' portal** on occasion of National Consumer Day (December 24).
- On the portal, **manufacturers would share manual of product details with customers** so that they could either repair by self, by third parties, rather than depend on original manufacturers.
    - Initially, **mobile phones, electronics, consumer durables, automobile and farming equipments would be covered.**
- Right to Repair movement **calls for companies to make spare parts, tools and information** on how to repair devices **available to customers and repair shops** to **increase lifespan of products** and to keep them from ending up in landfills.
    - Right to Repair has been **recognised in many countries including US, UK and European Union.**



5.8.5. REVISED DRAFT OF STANDARDS FOR FIRMS TO SELF-REPORT ENVIRONMENTAL IMPACT

- The draft has been published for public comment by the **Global Sustainability Standards Board (GSSB),** the independent standard-setting body of the **Global Reporting Initiative (GRI) Biodiversity Standard.**
    - GRI is a **global entity that helps businesses take responsibility for their impacts** on biodiversity.
    - GRI Standards are designed to be **used by organisations to report on their impacts on the economy, the environment and society.**
    - **GRI disclosures** on biodiversity were **last revised in 2006.**
- These standards **will play a major role as the 'post-2020 Global Biodiversity Framework'** (adopted by United Nations Convention Biological Diversity) will define collective commitments to reverse the loss of biodiversity for all relevant stakeholders.
- **Key Proposals include**
    - Reflect **reporting throughout the supply chain**
    - Help organisations **prioritise attention on their most significant impacts**.
    - **Add new disclosures** to connect with the drivers of biodiversity loss.
    - **Introduce requirements for biodiversity-related human rights impacts**.
    - **Emphasise location-specific data** to ensure businesses are transparent about the sites.

5.8.6. RENEWABLE ENERGY (RE) REPORT 2022

- Report was released by **International Energy Association (IEA).**
- **Key findings of report**
    - **RE will comprise 90 percent of global electricity capacity expansion in next five years** and much of it will be in India.
    - RE's installed power capacity addition will **grow to 2,400 gigawatts (GW) between 2022 and 2027.**
    - With addition of 145 GW, India is forecast to almost **double its renewable power capacity over 2022-2027.**
        - ✓ Solar photovoltaic accounts for three-quarters of this growth, followed by onshore wind (15 percent) and hydropower providing rest of it.

5.8.7. SINDHUJA-I

- It is an **Ocean Wave Energy Converter developed by IIT Madras.**
- It **consists of a floating buoy, a spar, and an electrical module.**
    - Electric module **generates electricity by using the relative motion between floating buoy** (moving up and down with waves) and fixed spar passing through buoy centre.
    - It **can help India to meet energy needs of its islands** and also **achieve climate change-related goal** of generating 500 GW (gigawatt) of renewable energy (RE) by 2030.
- **Seawater stores tidal, wave and ocean thermal energy,** making the harnessing of 40 GW wave energy possible in India
    - **Tidal energy is caused by gravitational interaction** between Earth, sun, and moon.
    - **Wave energy** is caused by **wind blowing across ocean's surface.**

- **Ocean thermal energy** is caused by **temperature differences** (thermal gradients) between **ocean surface waters** and **deep ocean waters.**

- **Advantages:** No pollution, Renewable, Higher available energy densities, Predictable and Less volatile in comparison to some other RE sources.
- **Disadvantages:** High Initial Cost, Threat to Marine Life and Navigation, Location dependent and risk of damage from natural forces.

5.8.8. SPONGE BLEACHING

- This year, **New Zealand recorded the largest-ever sponge bleaching event** off its southern coastline.
- **About Sponges –** simple aquatic animals with dense, yet porous, skeletons
  - **Habitat** - reefs across the world.
  - **Key features**
    - ✓ Filter large quantities of water
    - ✓ Captures small food particles
    - ✓ Moves carbon from water column to seafloor where it can be eaten by bottom-dwelling invertebrates.
    - ✓ Provides habitat for species such as crabs, shrimps and starfish.
  - **Threats –** Like coral they are prone to bleaching due to heat stress.

5.8.9. WREN BABBLER

- Birdwatchers have discovered **a new songbird in Arunachal Pradesh** which they have named **Lisu wren babbler** after Lisu community of state.
  - Bird has a whitish belly and **songs were similar to that of Naga Wren Babb.**
- **About Wren Babbler**
  - About 20 species of small Asian birds belong to babbler family.
  - Examples include **Grey-bellied Wren Babbler and long-tailed wren-babbler.**
  - They are **10 to 15 centimetres (4 to 6 inches)** long, rather short tailed, and have a rather short and straight bill.
  - Occur chiefly in **southern Asia.**

5.8.10. OLDEST KNOWN DNA

- In **permafrost at northern edge of Greenland**, scientists discovered **oldest known fragments of DNA,** offering an extraordinary look at an extraordinary ancient ecosystem.
- DNA dates back **at least two million years** (nearly twice as old as mammoth DNA in Siberia that held previous record) and reveals that **high Arctic was a much warmer, greener place**—greener than many places on Earth are today.
- Paleontologists have found **evidence of lush forests home to bears, beavers, and camel-like creatures** in extreme northern latitudes.

5.8.11. BOMB CYCLONE

- A bomb cyclone, also known as an explosive cyclogenesis, is a **meteorological phenomenon** that occurs-
  - When a **low-pressure system experiences a rapid and drastic drop in atmospheric pressure.**
  - When this rapid pressure drop is **accompanied by strong winds** and can lead to severe weather, including heavy snowfall, strong winds, and thunderstorms.
- Bomb cyclones are **typically associated with the winter months**, but they can also occur during other seasons.
  - They are **most common in the mid-latitudes**, such as the eastern United States, Europe, and Asia.

5.8.12. CYCLONE MANDOUS

- Tamil Nadu and neighbouring areas are bracing for heavy rainfall with **cyclone Mandous expected to make landfall.**
  - It has been **named by UAE.**
- Tropical cyclones are **violent storms that originate over warm ocean waters near equator.**
- **Favourable conditions**
  - Large sea surface with **temperature higher than 27° C.**
  - Presence of the **Coriolis force.**
  - Small **variations in the vertical wind speed.**
  - A **pre-existing weak low-pressure area** or low-level-cyclonic circulation.
  - **Upper divergence** above the sea level system.

5.8.13. KALASA-BANDURI PROJECT

- Centre has given approval for implementation of **Kalasa-Banduri canal construction project.**
- **About Kalasa-Banduri project:**
  - Proposes to **divert water from two tributaries of the Mahadayi river** (also known as Mandovi): Kalasa and Banduri to the **Malaprabha river.**
  - Entire project aims to construct several **dams on the river Mandovi**.
  - **Aimed at facilitating drinking water** for towns in drought-hit northern Karnataka.

5.8.14. ERRATA

- Due to a typological error in Article 7.5 Flex Fuel of October 2022, it was incorrectly mentioned that "about 2.4 million tonnes was diverted to produce 302 liters of ethanol for blending".
    - Correct statement is "India suffers from a glut in sugar production of 6 million tonnes and in sugar season 2020-21, about 2.4 million tonnes was diverted to produce **302 crore liters of ethanol** for blending."
- In the Article 5.9. E-Waste (Management) Rules 2022 of November 2022, under the responsibilities table it was incorrectly mentioned that "Obtaining and implementing extended producer responsibility targets (at least 60% of their electronic waste is collected and recycled by 2023 with increasing them to 70 and 80 percent in 2024 and 2025, respectively)."
    - The correct statement is "Obtaining and implementing extended producer responsibility targets may be made stable for 2 years and starting from 60% for the year 2023-2024 and 2024-25; 70% for the year 2025-26 and 2026-27 and 80% for the year 2027-28 and 2028-29 and onwards." These rules will be applicable from 1st April, 2023.

QUIZ

SMART QUIZ

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.

6. SOCIAL ISSUES

6.1. SOCIAL INFRASTRUCTURE

Why in news?

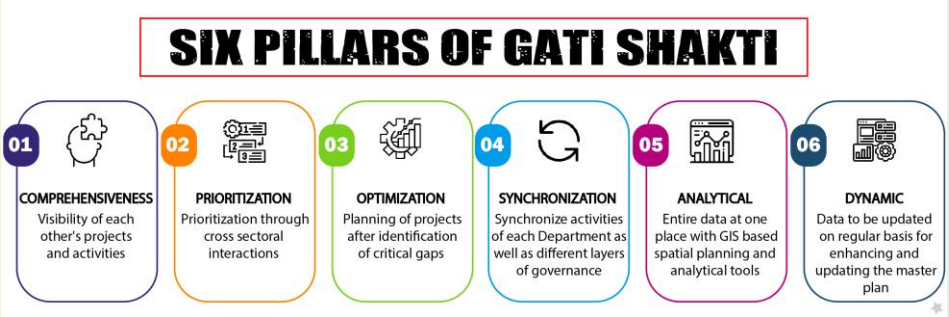
The Centre is planning to expand the scope of the Gati Shakti initiative to bring the social infrastructure within its ambit.

More on news

- As reported, the commerce and industry ministry is engaging with **five social sector departments- health, women and child development, rural development and panchayat raj, education, and housing and urban affairs** , to explore how PM Gati Shakti Scheme can be utilised to improve functioning in these sectors.
- This aims to **bring in synergies between different government programmes/schemes in terms of planning, process and implementation**.

PM Gati Shakti

- PM Gati Shakti – National Master Plan for Multi-Modal Connectivity is a **digital platform**, which will bring various Ministries together, **for integrated planning and coordinated implementation** of infrastructure connectivity projects in India.
- **The idea behind the initiative is to break departmental silos and institutionalise holistic planning** which will help in **bringing down the logistics cost** and translate into enormous **economic gains to stakeholders** across major infrastructure projects.
- The policy aims to **trim the country's logistics cost to about 8% of GDP** from the current 13-14% in about five years and propel the country into the league of top 25 nations in logistics performance by 2030.
- India was **ranked 44th in the latest World Bank's logistics performance index.**
- All logistics and connectivity infrastructure projects, entailing investment of over ₹500 crore, are routed through the **Network Planning Group (NPG**), constituted under the PM Gati Shakti initiative.



About Social Infrastructure

- There is **no universal definition** of social infrastructure.
- As per the United Nations Environment Programme (UNEP), the term social infrastructure is generally used to refer to those **systems that deliver services upon which the health and well-being of societies depend**.
- According to the Economic Survey of India (2020-21) 'social services' **broadly include education, sports, art and culture, medical and public health, family welfare, water supply and sanitation, housing, labour welfare, social security and welfare, and nutrition.**

Significance of investing in social infrastructure

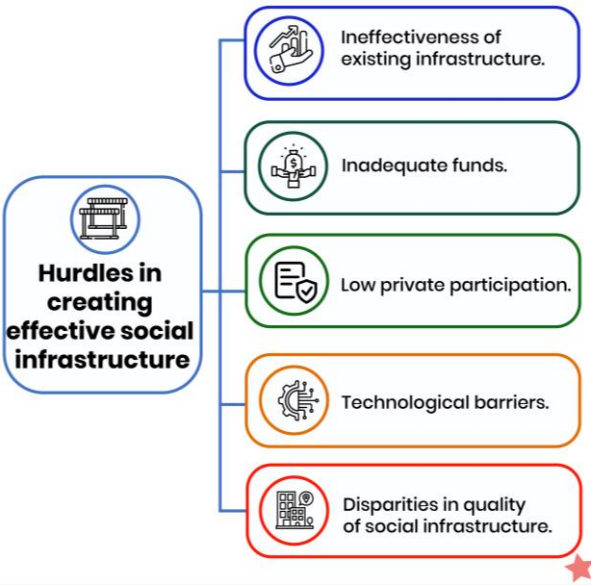
- **Inclusive Growth:** Better access to good quality social infrastructure affects the ability to participate in society and improve access to economic opportunities for all.
- **Poverty alleviation:** Poverty is the largely the result of factors related to lack of quality education and good health. Social infrastructure therefore is crucial for improving people's life and reducing poverty.
- **Environmental sustainability**: Clean water and sanitation, non-polluting sources of energy, safe disposal of solid waste, etc. provide environmental benefits for all sections of the people.
- **Sustainable growth:** Well-functioning social infrastructure is not only key to achieve Sustainable Development Goals but also to resolve the challenges created by rapid urbanization and to ensure the sustainable growth of cities.

- **Important for survival of economic and political structures:** Any crisis situation requires resilient social infrastructure so as to avoid social unrest. For example, during the recent COVID pandemic, crumbling down of the health facilities was the major reason for unrest and public protest against the system.
- **Increase in productivity and innovation:** Improved quality of life through better social service contributes to increasing labor productivity, encourages innovations, and creates the ability to take in new technologies.

Key differences between 'Economic' and 'Social' infrastructure

Parameter	Economic Infrastructure	Social Infrastructure
Economic change versus Social change	**Spur economic activity and stimulate demand**. For example, investment in power, transport, and communications act as growth enablers.	Investments in schools, hospitals, water and sanitation, etc., act as **agents of social change.**
Commercial aspect vs. social considerations	**Guided by a "user pay" principle** or demand-based revenue streams to **encourage private sector participation** which is guided by profit motives.	As financial returns from social infrastructure projects are poor, these are **largely supported and funded by the government's budgetary resources**.
Risk allocation	**Shared risk framework** with certain risks being transferred to the private sector.	Risks are **largely borne/retained by the public sector**.
Standard of living vs. quality of life	Focuses on aspects that contribute to providing a **better standard of living.**	Supports the delivery of social services which **improves the quality of life of citizens.**
Economic growth vs. human capital	Helps achieve growth objectives of nations and builds up the material capital.	Focuses on the economic development that encapsulates human resource development. It is vital for human capital formation.

Way Forward



- **Engaging the private sector:** To make social sector projects more lucrative, there is a **need to improve the risk-return framework**, **provide financial support and develop innovative financing models** to increase private partnership.
- **Use of instruments such as Social Impact Bonds:** A social impact bond (SIB) is a contract with the public sector or governing authority, whereby it pays for better social outcomes in certain areas and passes on part of the savings achieved to investors.
- **Encouraging technology adoption:** Bridging the digital divide by improving telecommunication networks in underserved and unserved areas to provide-
  - affordable and reliable broadband internet access,
  - driving the availability of internet enabled devices,
  - enhance digital literacy are the key to ensure universal,
  - affordable access to social services, and
  - enhance the efficiency and effectiveness of public service delivery.
- **Setting and monitoring standards** to ensure reliability, affordability, and accessibility of services.
- **Better convergence and coordination among ministries** for effective implementation of initiatives.
- **Learning from best practices:** Some states have devised innovative initiatives to strengthen the delivery of social services. Those can be replicated in other areas as well.

Other best practices to learn how investing in social infrastructure can be beneficial

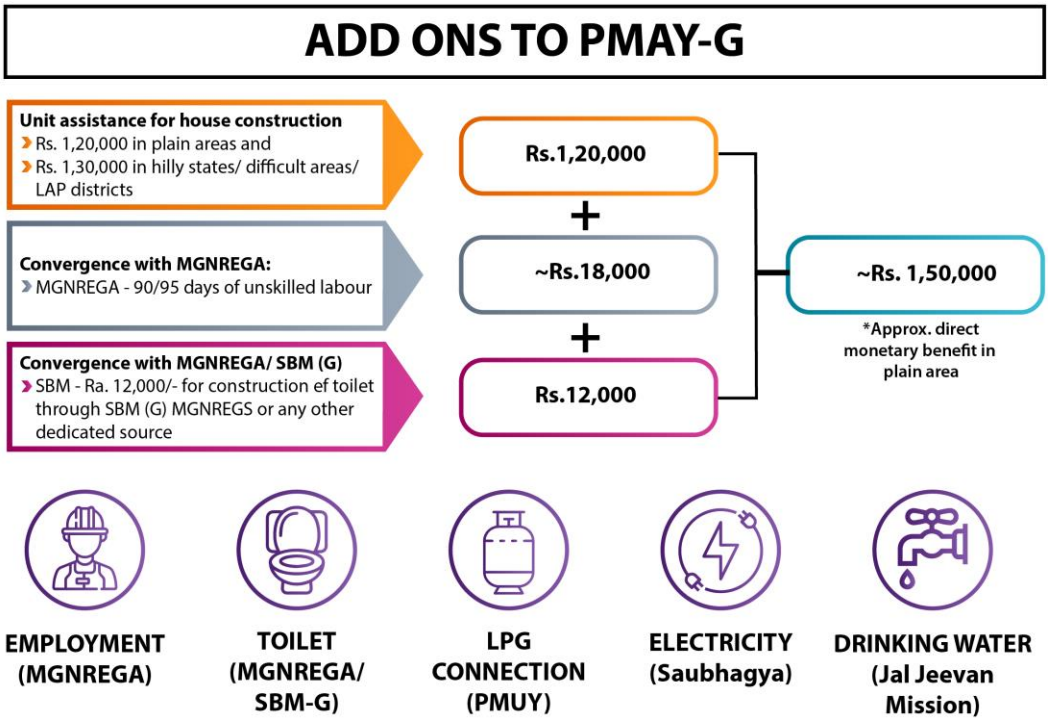
Initiative	Detail
Pota Cabins, Chattisgarh	It is an **innovative educational initiative** that has helped reduce the number of out-of-school children and improve enrolment and retention of children in Left Wing Extremism affected villages of Dantewada district. The schools are built with impermanent materials like bamboo and plywood.
Dhara Vikas, Sikkim	It is an **innovative programme to revive and maintain drying springs** in Sikkim. It is helping to alleviate the problem of rural water scarcity by reducing surface runoff of rainwater and allowing more water to percolate down to recharge underground aquifers, which, in turn, ensures increased discharge from springs.

Sustainable Plastic Waste Management Plan, Himachal Pradesh	The **ban on the use of plastic** in Himachal Pradesh has proven to be effective and successful in developing a systematic system of disposing off plastic and **using it in construction of roads** thus making state of Himachal Pradesh free from plastic.
Arogyakeralam project, Kerala	It emphasises a **community-based approach to palliative healthcare** and considers home-based medical care to be the cornerstone of palliative care services.

6.2. PRADHAN MANTRI AWAS YOJANA - GRAMIN (PMAY-G)

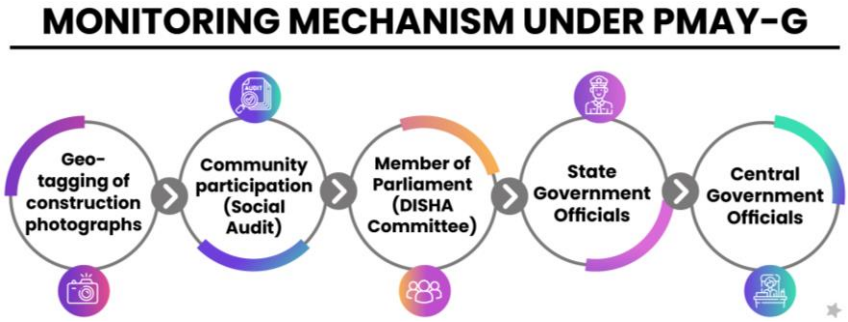
Why in news?

The central government in India has stated that it will withdraw its share of funding for states that fail to properly implement the Pradhan Mantri Awas Yojana Gramin (PMAY-G).



More on news

- States like Tamil Nadu, Maharashtra, Assam, Odisha and Bihar are unable to provide land to landless beneficiaries of the PMAY-G scheme.
- Centre government has mentioned that targets of such states for this financial year may be redistributed to other States.
- Earlier, Centre had also introduced **a penalty clause against State Governments** for tardy implementation of the scheme.



About PMAY-G

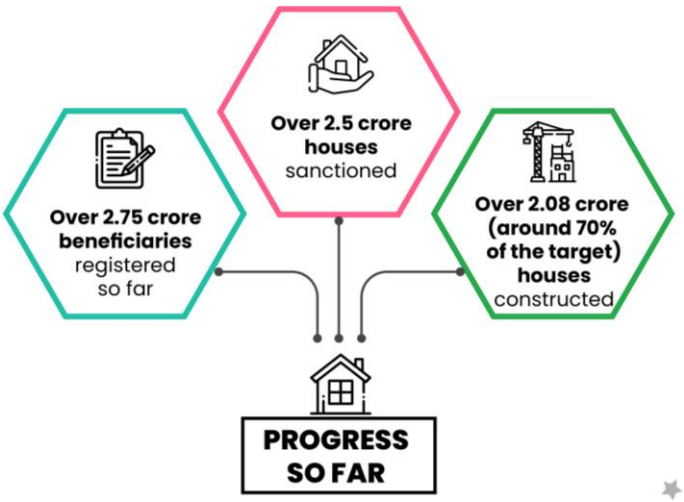
- The scheme was launched in **2016** by the **Ministry of Rural Development** as a **centrally sponsored scheme.**
- **Objective: Housing for all by 2022.**
  - To construct 2.95 crore houses with all basic amenities by the year 2022 (**now extended to 2024 after COVID pandemic**) to all rural houseless households and those living in kutcha and dilapidated houses by providing financial subsidy.

Features of the scheme

- **Beneficiaries:** All houseless and people living in the dilapidated and kutcha houses **as per SECC 2011.**
  - **Awaas+ survey** is conducted to identify those otherwise eligible households who got left out in the SECC 2011 based permanent wait List of PMAY-G.
- **Powers with Gram Sabha:** The list of beneficiaries is validated by the Gram Sabha.
- **Unit Size**: Minimum size of the unit is 25 sq. mt. which includes a dedicated area for hygienic cooking.
- **Financial assistance to the beneficiaries:** Each beneficiary is given **100% grant** of Rs.1.20 lakh (in plain areas) and Rs. 1.30 lakh (in Hilly States/North Eastern States/Difficult areas/UT of J&K and Ladakh/ and Integrated Action Plan districts in tribal and backward regions).

- Construction of houses should be carried out by the beneficiaries himself/herself or under his/her direct supervision.
- Beneficiaries can also avail **loan up to Rs. 70000** from financial institutions.

- **Fund sharing between centre and state:** 60:40 between Centre and State in plain areas, 90:10 for North- Eastern States, two Himalayan States and UT of Jammu and Kashmir, 100% centre share for other UTs.
- **Land for Landless Beneficiaries:** The beneficiaries under PMAY-G with no land to construct their houses are being given high priority under the scheme.
  - Providing **land to landless beneficiaries for construction of houses being the States' / UTs' responsibility**, they are advised/ encouraged to provide land to such beneficiaries urgently.
  - There is **no dedicated financial assistance to the landless beneficiaries from the Central government** for purchasing the land.
- **Convergence with other Government Schemes** to provide basic amenities and assistance for house construction.
- **PMAY-G encourages adoption of green designs and technologies**, appropriate to the local culture and geo-climatic conditions (including multi-hazards).
  - It also encourage use of local material.



- **Setting up of National Technical Support Agency (NTSA)** at national level to provide technical support in achieving the target set under the program.

Challenges in target completion and successful implementation of scheme

- **Improper execution in a few states:** This is due to delay on part of centre and states in releasing funds. In 2020, nine states had delayed the payments to the beneficiaries.
- **Access to finance:** Most of the beneficiaries under PMAY-G are unable to avail loan facility of Rs. 70,000/- as they belong to economically poor strata of the society and can't bear higher interest rates, higher administrative cost and collateral requirements.
- **Exclusion of landless farmers:** Owning a plot of land is one of the requirements to qualify as a beneficiary under PMAY-G. More than 50% of landless beneficiaries are yet to be provided with land**.**
- **Quality of Housing:** There is no proper supervision of the quality of houses constructed by the beneficiaries.
- **Issues in identification of beneficiaries**: Biased approach of the Gram Panchayats and anomalies in the SECC-2011 data.
- **Absence of data:** Real time data regarding benefits provided under various schemes is not available owing to their non-integration on Awaas App, and poor coordination among concerned ministries involved.

Major reforms taken in the recent time

- **Electronic Governance:** The end-to-end execution of the scheme from the selection of beneficiaries, disbursal of assistance to beneficiaries, verification of progress in construction, release of funds etc. is conducted through workflow enabled transaction-based **MIS – AwaasSoft.**
- **Mobile Governance:** 'AwaasApp' has been launched for inspection of houses. **Capturing of geo-referenced photographs** using AwaasApp and uploading of the same on AwaasSoft has been made mandatory under the scheme of PMAY-G for release of assistance to the beneficiaries.
- **Direct Benefit Transfer (DBT):** Under PMAY-G, the assistance to beneficiaries is to be transferred electronically through the AwaasSoft-PFMS platform.
- **Allotment of house:** Either jointly in the name of husband and wife except in the case of a widow/unmarried /separated person or solely in the name of the woman.
- **Skill development of mason: A pan-India training and certification programme of Masons** has been launched in the States/UTs.
- **Convergence with various other schemes**: Real time web link has been developed with NREGASoft to allow creation of a NREGA work against each PMAY-G house sanctioned.

Way forward

- **Providing Land:** There is need to gear up the existing machinery to get over impediments owing to the unavailability of Government land so that the landlessness among the poor can be dealt on priority.
- **Increasing the budget**: One way to improve the program would be to increase the budget available for it.
- **Easy Access to Credit:** Bring out an attractive loan product with minimum collateral, administrative costs and lower interest rates which should be widely circulated among PMAY-G beneficiaries in their vernacular language.
- **Awareness Generation:** For optimum utilization of the Awaas app among the rural populace, there is an imperative need to educate people about the operation through imparting training programmes at Panchayat levels and create help groups.
- **Effective convergence with other schemes:** Removing the gaps and shortcomings by establishing close coordination with the concerned Ministries and departments.
- **Ensuring timely release of funds from the Centre and State Government.**

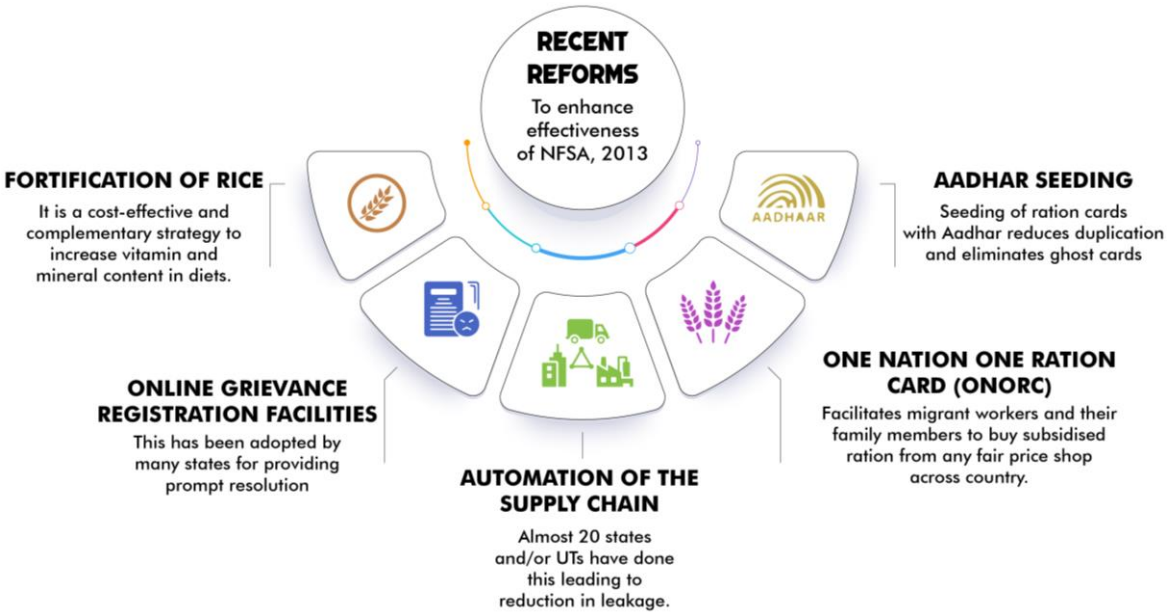
Conclusion

Reducing rural housing shortage and improving the quality of housing, especially for the poor, is important for poverty alleviation and inclusive development of the country. Currently, PMAY-G only provides for the construction of new houses. Government should explore the possibility of expanding the program to cover the repair or upgradation of existing houses. This could benefit for a greater number of households.

6.3. NATIONAL FOOD SECURITY ACT (NFSA), 2013

Why in news?

The Centre has launched **'PM Garib Kalyan Anna Yojana (PMGKAY)'** to provide **free of cost food grains for a year** under the National Food Security Act (NFSA), 2013.



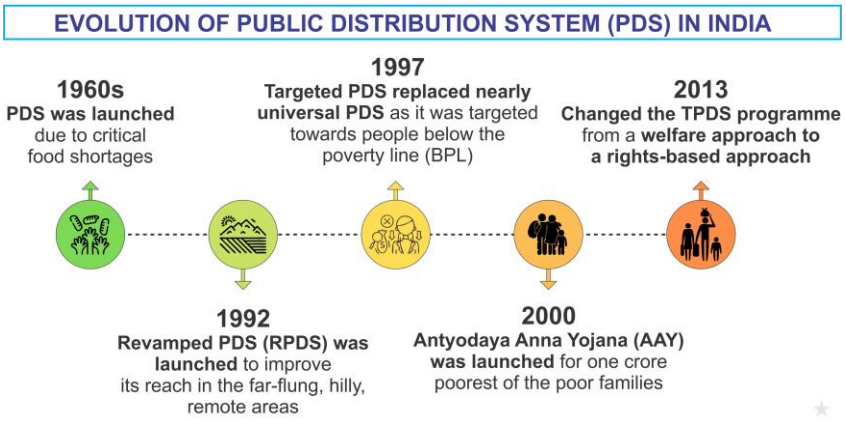
More on news

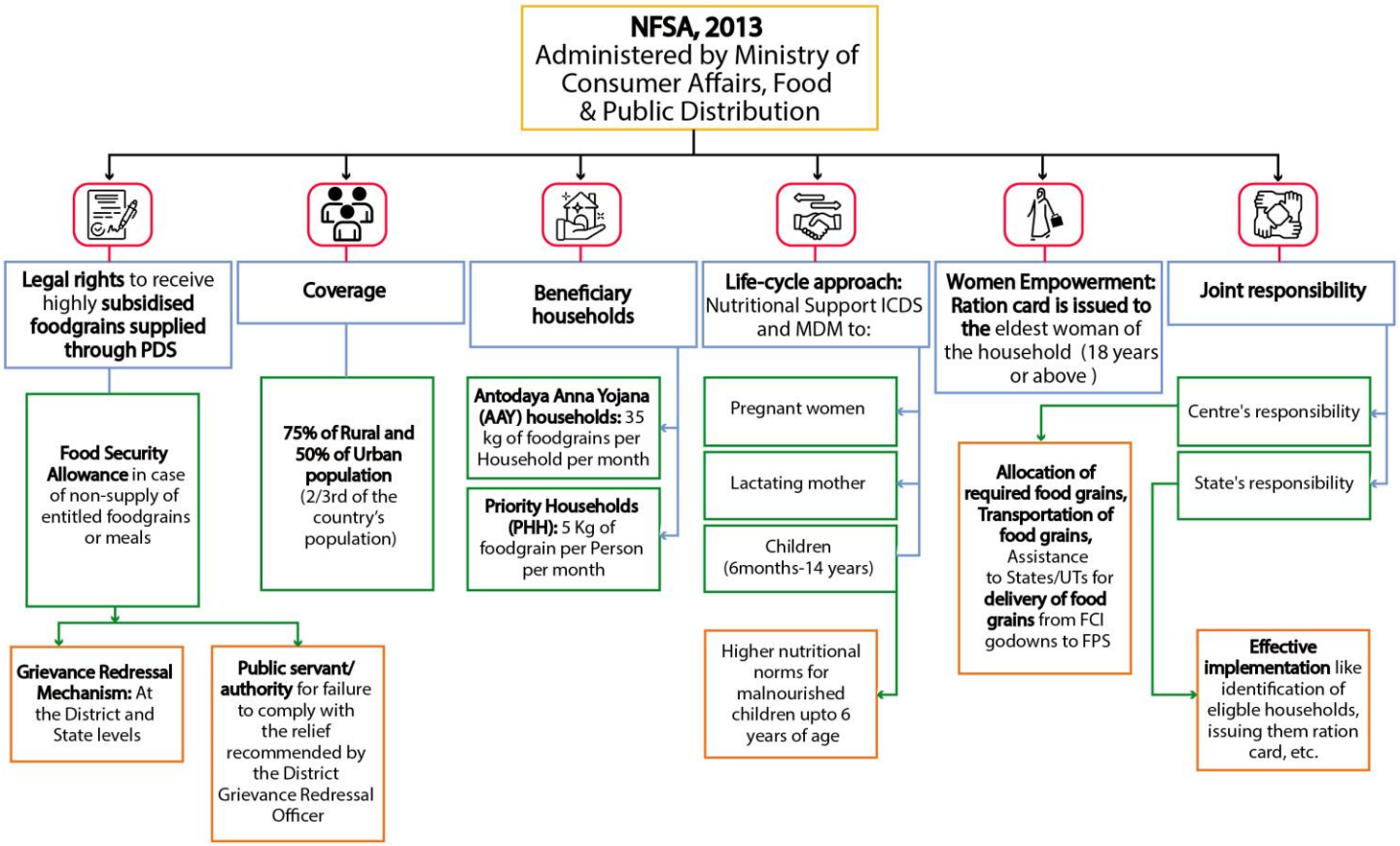
- Under the newly launched PMGKAY, **rice, wheat and coarse grains shall be provided free of cost** for **all eligible households** (both Primary HouseHolds and Antodaya Anna Yojana) under section 3 of the NFSA **from January 1, 2023 to December 31, 2023.**
  - Until now beneficiaries were paying the subsidised price called **Central Issue Price (CIP) worth Rs.1, Rs.2 and Rs.3 for Coarse-grains, wheat and rice respectively.**
  - The **subsidised prices** are specified in Schedule-1 of the NFSA 2013, which the **government can change by executive order.**
- The PMGKAY is **subsuming two subsidy schemes (refer box)**
  - Food **Subsidy to Food Corporation of India** (FCI).
  - Food **Subsidy for Decentralized Procurement** (DCP).

Mechanism for Procurement of food grain: Ministry of Consumer Affairs, Food & Public Distribution implemented two types of procurement policy

- **Centralised procurement:** Procurement of food grains is undertaken by FCI directly/indirectly for storage and subsequent issue.
  - Difference between **Economic Cost and Central Issue Price (CIP),** at which food grains are issued to States, is **reimbursed to FCI as food subsidy.**
- **Decentralized procurement (DCP):** Under this scheme, the **State Government itself undertakes direct purchase** of paddy/rice and wheat and also stores and **distributes** these food grains under NFSA and other welfare schemes.

- However, there will be **no changes in the issue prices of food grains supplied to States for other welfare** programmes like mid-day meals (MDMs).
- It should also be noted that this newly launched PMGKAY is **different form the PMGKAY** that was **launched** in 2020 as a **pandemic relief measure.**
    - In 2020 the PM GKAY was launched to provide **5 kg of free food grains to NFSA beneficiaries** in **addition to their monthly entitlement** (35 kg to a Antyodaya household and 5kg per person in a Priority Household) **of subsidized food grains** under the NFSA Act.
    - Now, **this scheme has been discontinued.**





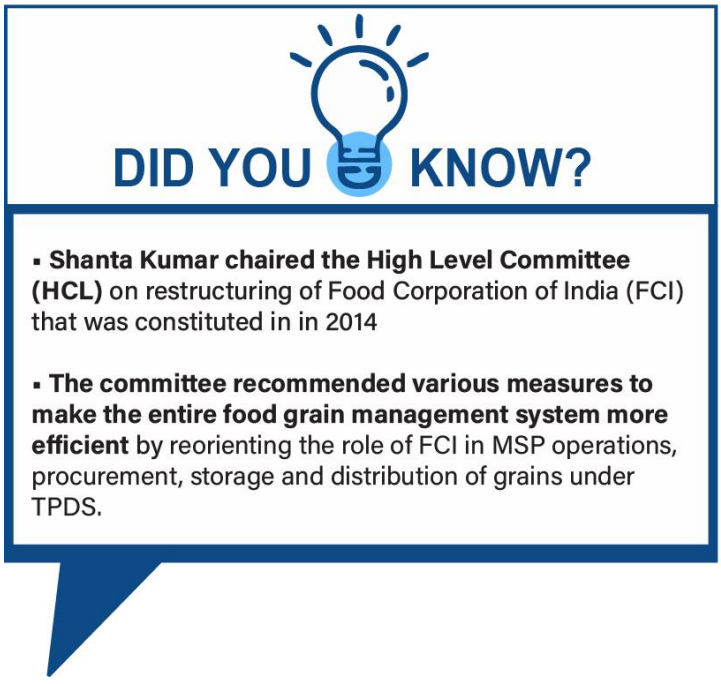
Challenges in NFSA

- **Marginalization of nutritional security:** India was ranked **107th out of 121 countries** in the 2022 Global Hunger Index (GHI). The report says there is high malnutrition in **India due to rice-wheat biased policies.**
- **Identification of beneficiaries:** Every State/UT is required to evolve criteria for identifying and selecting PHH within the determined number.
    - Usage of **different criteria by States** leads to errors.
    - For instance, **destitution being recognised as inclusion criteria is only followed by 16 states** and UTs.
- **Poor public grain management system:** To meet the distribution needs under NFSA, the Government is mandated to have a buffer stock norm of 21.4 million tonnes of grains.
    - **However, most of the time** actual buffer stocks are far higher. Procurement, and storage to this extent results in **waste of scarce resources**.

- **Massive leakages in the PDS:** As per the Shanta Kumar committee leakages in PDS ranged from 40%-50%, and in some states go as high as 60%-70%.
- **Unsustainable path towards poverty alleviation:** The current CIP were initially fixed for three years. However, although cost of production has increased in the last decades CIPs have remained unchanged.
  - **Food Subsidy Bill has almost doubled** during 2014-22.
  - Such a rising subsidy drains the **public exchequer, reduce public investments, and hamper potential job creation** and in turn poverty alleviation efforts.
- **Environmental sustainability:** Rice-Wheat biased procurement of cereals has led to **depleting the water table, depletion of soil nutrients** in many states while also preventing crop diversification.
- **Challenges in WTO:** India's subsidised food security system is considered as **'price distorting norms'** under the World Trade Organisation (WTO).

Way ahead to ensure food security for all

- **Diversify food basket:** Production and distribution of nutrient rich commodities such as millets, leafy vegetables, milk, and eggs need to be encouraged under the NFSA.
  - Many governments are incentivizing diversification of food systems, for example, **Haryana** is providing financial incentives of **₹7,000/acre to farmers for shifting from paddy** to pulses, oilseeds, and cotton.
  - This will also help **increase farmers income and ensuring sustainability of the environment.**
- **Awareness among consumers:** One of the other impediments for food basket diversification through the PDS is **lack of awareness** among the consumers about healthy foods.
  - Awareness camps can be targeted through **Panchayat Raj Institutions (PRIs), Self Help Groups (SHGs) and Farmers Producer Organisation (FPO) groups.**
- **Restructure the scheme: According to the Shanta Kumar Committee, the Government can save Rs 33,000 crores that could be utilised for other poverty alleviation measures like** rural infrastructure and innovations **and job creation. Following reforms are needed:**
  - **Ensure efficient markets:** Allow private players to procure and store food grains, stopping bonuses on minimum support price (MSP) paid by states to farmers**.**
    - ✓ **This will help reduce the leakages from post-harvest activities and also ensure efficient functioning of the pricing system.**
  - **Rationalise the coverage:** Reduce the number of beneficiaries from 67% to 40%. Similar recommendations were also made by NITI Aayog.



- **Adopt standardised criteria for identification**: Centre can propose guidelines for identification and selection of PHH to bring in **uniformity, rightful targeting** and evolving dynamic data base.
- **Digitalisation:** Digitalisation has further strengthened the supply chain and distribution operations under the PDS.
  - **However, issues related to denial of food due to lack of Aadhar seeding need to be addressed on an urgent basis.**

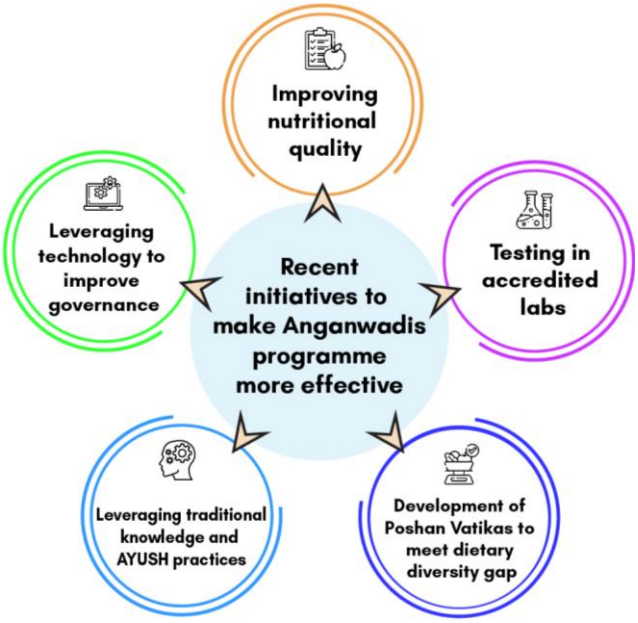
Conclusion

The nutritional requirement of the country is the driving factor of the NFSA, 2013. The Act steps in to ensure that no one is denied the right to food under any given circumstances considering the staggering rate at which poverty is prevalent in the country.

6.4. ANGANWADI SYSTEM

Why in news?

The Ministry of Women & Child Development (MoWCD) has recently informed the Parliament that it has spent over 18,000 crores in the last financial year to **strengthen the Anganwadi system.**



About Anganwadi system

- The Anganwadi system, launched under the **Anganwadi Services Scheme** (now renamed as Saksham Anganwadi and Poshan 2.0), is an integral part of the **Integrated Child Development Service (ICDS) scheme** (refer to the infographics).
  - The Anganwadi Services Scheme is a **Centrally Sponsored** Scheme under **MoWCD.**
  - It represents one of the **world's largest** and **unique programmes for early childhood care and development**.
  - The scheme aims to
    - ✓ **improve the nutritional and health status of children (0-6 years),** pregnant women and lactating mothers, and
    - ✓ **reduce the incidences of mortality, morbidity and malnutrition.**
- The system serves to 906.17 lakh **beneficiaries through**
  - **Anganwadi Centres (AWCs)**: There are around 13.89 lakh AWCs across the country that provide a **platform** for rendering all services under the scheme.
  - **Anganwadi Workers (AWWs) and Anganwadi Helpers (AWHs):** There are around 13.14 lakhs AWWs and 11.74 lakhs AWHs.
    - ✓ They are the **basic functionaries** of the ICDS who run the AWCs and implement the ICDS scheme.
    - ✓ **One village/ area** is managed by **a single Anganwadi worker (AWW),** who is chosen from the community and has been trained in areas such as **health, nutrition and childcare.**
- AWCs are also **digitally strengthened** with smartphones for POSHAN tracking systems, and monitoring devices.
  - The 'Poshan Tracker' is a **job-aid to the AWWs** for efficient delivery of services along with reflection of their efforts.
  - This mobile based application is being leveraged for dynamic **identification of stunting, wasting, under-weight prevalence** among children and last mile tracking of nutrition service delivery.
- **Compensation:**
  - The AWWs and AWHs are **paid fixed honorarium per month** as decided by the Government from time to time.
    - ✓ Honorarium of the AWWs by the Centre has been enhanced to **3500 rupees per month.**

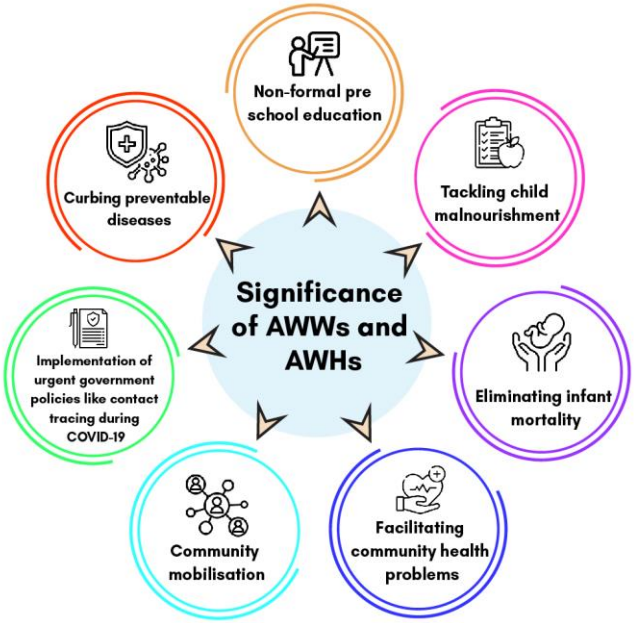
Integrated Child Development Services (ICDS) Scheme

Serving Children of 0-6 years and Pregnant & Lactating Mothers

Saksham Anganwadis

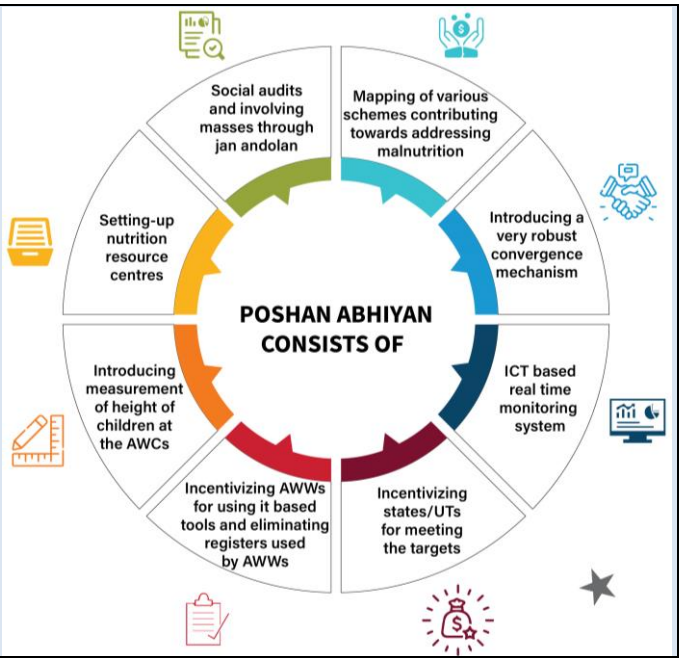
- **It is a targeted intervention for improving the** AWCs. They will be strengthened, upgraded and rejuvenated across the country for enhancing the overall efficiency and effectiveness.
- Apart from the given goals for Anganwadi**, Saksham Anganwadis would additionally focus on-**
  - **Adolescent Girls (14 to 18 years) in Aspirational Districts and North Eastern Region (NER).**
  - **Early Childhood Care and Education [3-6 years] and early stimulation for (0-3 years).**
- Under it, **two lakh AWCs, 40,000 each year will be strengthened to make requisite upgrades**.
  - It will undertake activities like **smart learning aids, audio-and-video tools,** water **purifiers** and devices such as **rain-water harvesters.**

- AWWs are also allowed a **performance linked incentive of Rs. 500/- per month** for using **ICDS-CAS under POSHAN Abhiyaan.**
  - ✓ ICDS-Common Application Software (CAS) facilitates the **capture of data by frontline functionaries**.
  - ✓ It's a six-tier **dashboard** that replaces registers with smartphones
- Also, most of the **States/UTs are paying additional honorarium** to these functionaries from their own resources.
- **Insurance coverage**: AWWs and AWHs been covered under:
  - ✓ Pradhan Mantri Jeevan Jyoti Bima yojana (PMJJBY)
  - ✓ Pradhan Mantri Suraksha Bima yojana (PMSBY)
  - ✓ Anganwadi Karyakartri Bima yojana (AKBY)
- **Other benefits:** Paid leave, reservation in promotions, uniforms and other incentives and awards for rendering exemplary services.



About National Nutrition Mission (NNM) or POSHAN Abhiyan

- It was launched in 2017 to **monitor, supervise, fix targets and guide the nutrition** related interventions across the Ministries.
- The objective of POSHAN Abhiyaan is to **reduce stunting** in identified Districts of India with the highest malnutrition burden **by improving utilization of key Anganwadi Services**.
- Its aim to ensure **holistic development and adequate nutrition** for pregnant women, mothers and children.



Community health workers at grassroots			
Specification	**Anganwadi workers (AWW)**	**Auxiliary Nurse Midwife (ANM)**	**Accredited Social Health Activist (ASHA)**
Scheme	• **ICDS under MWCD**	• **National Rural/Urban Health Mission** (Ministry of Health and Family Welfare (MoH&FW))	
Based at	• **Anganwadi center**	• **Health sub-center** and additionally visits villages also	• **Village level**
Key roles	• Providing **early childhood care and development** of the **beneficiaries**	• **Create awareness** on factors that determine health status • **Counsel women, families, and adolescents** on birth preparedness • **Curative care and supplies.**	• Focuses on **promotion of Maternal and Child Health,** including immunizations and institutional-based deliveries
Incentives	• **Honorarium** as decided by the Centre and **performance linked incentive**	• **Honorarium** as decided by the Centre	• Receive **performance-based incentives**

Challenges in Anganwadi system

- **Financial:** The scheme suffers from inconsistency in percentage increase in budget allocations over the years.
  - There are also issues of **improper planning and implementation and non-adherence of financial and physical targets.**
- **Inadequate number of AWCs:** There is a gap between sanctioned and operational number of AWCs across various states that ranges anywhere from 2% to 8.37%.
- **Inadequate basic amenities at AWCs:** Many operational AWCs lack access to basic amenities of drinking water and toilets.
  - For example, in Meghalaya only 30.85% AWCs have drinking water facilities.
- **Accessibility to technology:** Although availability of smartphones is a necessity for ICDS-CAS, many AWWs have not received smartphones affecting their functioning.
- **Inadequate human capital**: In many States/UTs, like Telangana, Bihar, Karnataka, a large number of posts of Supervisors, AWWs and AWHs have been lying vacant.
- **Remuneration:** The remuneration of the AWWs and AWHs is **still meagre in comparison to the services** being rendered by them especially in the remote and rural areas.

Way Ahead

- **Expand the Coverage:** Parliamentary Standing Committee has recommended to **remove the bottlenecks** hindering the operationalization of sanctioned AWCs/Mini AWCs in States.
  - Also, there is a need to assess whether to have more AWCs in urban areas.
- **Basic amenities:** All the sanctioned AWCs must be run with proper infrastructure if quality services are to be rendered to the beneficiaries.
  - Therefore, creating drinking water and toilet facilities in AWCs should be taken on priority basis.
- **Improve service condition:** It is imperative to provide **enhanced remunerations and better service conditions** to them.
  - States/UTs are paying nominal amounts to the AWWs/AWHs, and they should also increase remunerations of AWWs/AWHs adequately.
- **Effective deployment of technology:** Many AWCs suffer from lack of availability of a height and weight measuring instrument which needs immediate attention.

Related news

"Grassroot Soldiers: Role of ASHAs in the COVID-19 Pandemic Management in India" Report

- Report is a **collaborative endeavor by MoH&FW,** National Health Systems Resource Center, and Institute for Competitiveness. It encapsulates the **experience and key role of ASHAs in India's pandemic response strategy.**
- **Key highlights**
  - **Critical role played by ASHA during COVID-19 Pandemic**
    - ✓ **Conducting community-level surveillance, contact tracing,** encouraging behaviour change, monitoring of isolations and quarantine norms etc.
    - ✓ **Providing non-COVID-19 essential health services** by giving doorstep delivery of medicines for TB, HIV, etc.
    - ✓ Spreading **awareness about vaccine and getting eligible beneficiaries vaccinated.**
  - **Recommendations**
    - ✓ **Universalization of ASHAs** to all areas as presently ASHAs are centred in slum/slum-like areas, pockets of vulnerable population only.
    - ✓ **Leveraging technology** to ease job of ASHA.
    - ✓ **Enhance security of community health functionaries**
    - ✓ **Facilitate a whole of government approach** by improving community's literacy, physical infrastructure and access to basic services at the grassroots level.

Conclusion

Anganwadi system is a testament of the government's commitment to its children and nursing mothers to break the vicious cycle of malnutrition. However, to ensure the system achieves its goal, a holistic review of the system is needed.

6.5. INTERNAL DISPLACEMENT

United Nation Development Programme (UNDP)

- It is the leading **United Nations organization** fighting to end the injustice of poverty, inequality, and climate change in 170 countries and territories.
- Its work is **concentrated on 3 main focus areas:**
  - Sustainable development
  - Democratic governance and peacebuilding
  - Climate and disaster resilience
- It was established in 1965 by the **UNGA** and is **headquartered in New York City**.
- Important reports by UNDP
  - **Human Development Report**
  - **Global Multidimensional Poverty Index**

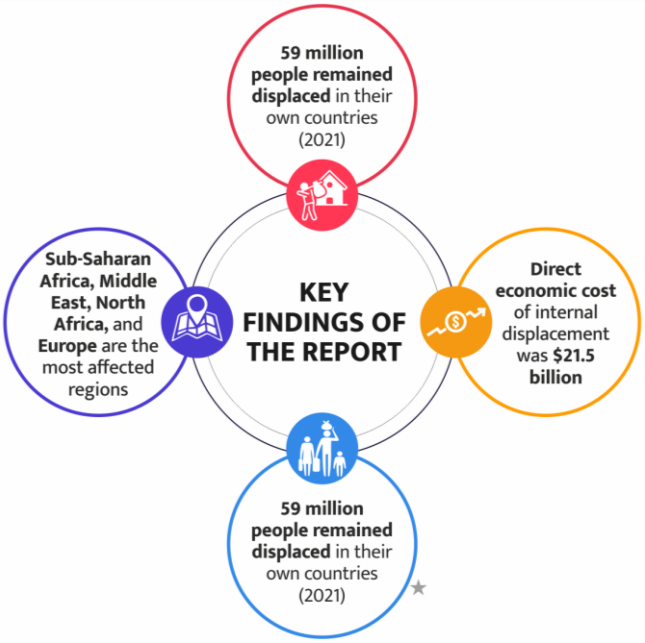
Why in news?

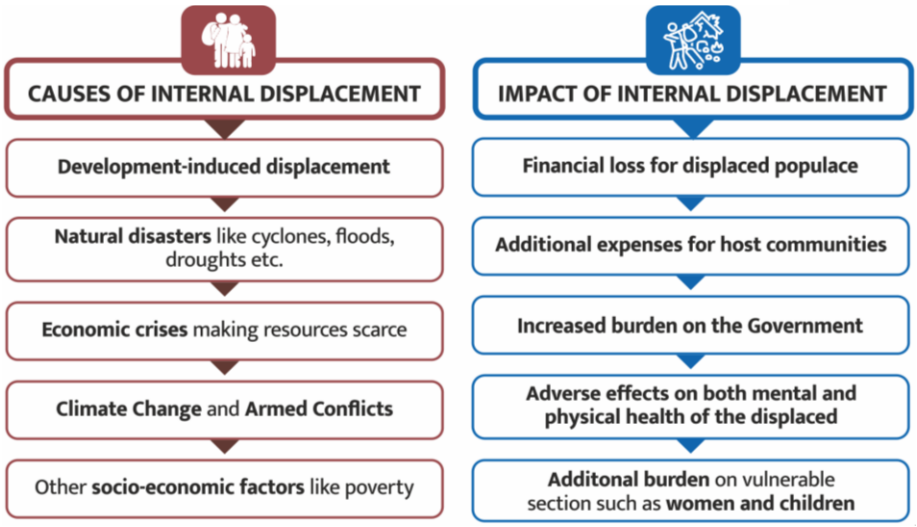
Recently, **UNDP** in collaboration with **Internal Displacement Monitoring Centre (IDMC)** has published a report titled "**Turning the tide on internal displacement: A Development Approach to Solutions**".

What is internal displacement and who are internally displaced persons (IDPs)?

As per UNFCCC, **displacement** is a particular **form of migration,** in which individuals are forced to move against their will.

- **Internal displacement:** It refers to the forced movement of people **within the country** they live in.
- **Internally displaced persons (IDPs):** According to Guiding Principles on Internal Displacement, 1998, **IDP's** are- Persons who have been forced to flee to leave their homes in order to avoid:
  - the effects of armed conflict
  - situations of generalized violence
  - violations of human rights or natural or human-made disasters.





Steps to mitigate the impacts of Displacement

- The **1998 Guiding Principles on Internal Displacement** stipulate that IDPs have the right to choose freely between three solutions to end their displacement:
  - return to their former homes or habitual places of residence
  - local integration in areas where they take refuge
  - settlement and integration elsewhere in the country

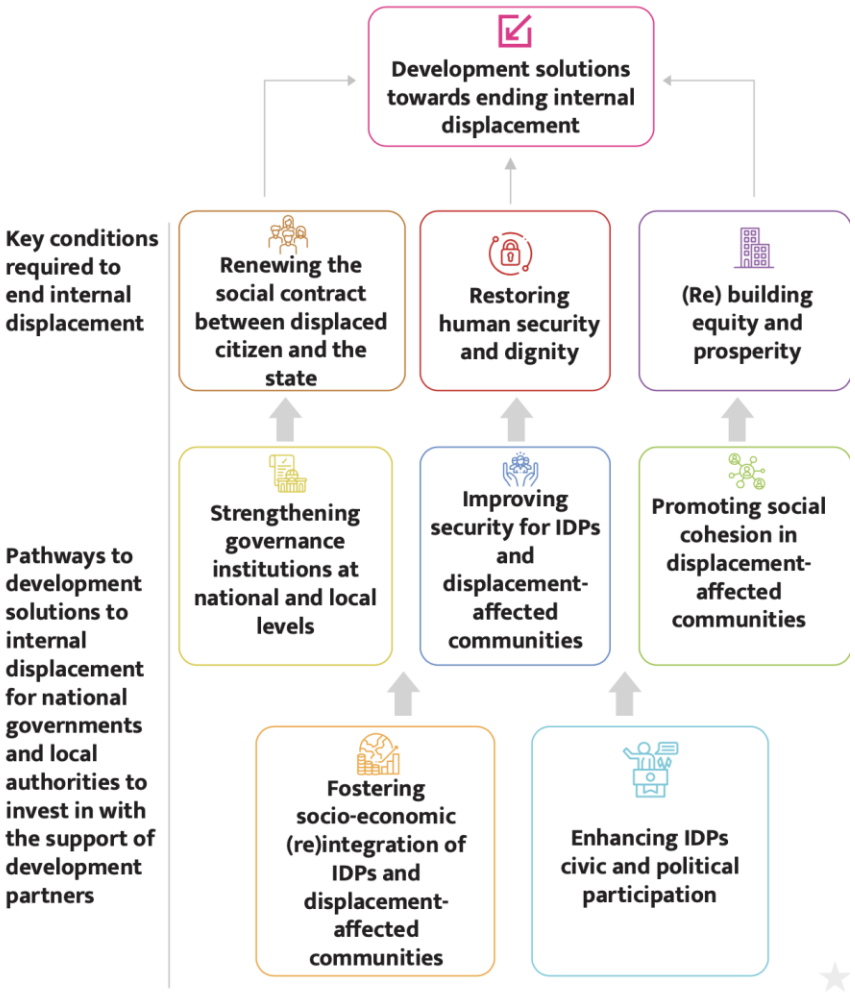
Successful mitigation examples to learn from

- **Creating accessibility:** Improved access to schools to displaced people. The sons of pastoralists displaced by drought in **rural Somalia** went to schools in Mogadishu.
- **Integration with Host communities and local economy:** Expansion of the city, increase in local business activity and improved health care through the expansion of hospital facilities. In **Gode, Ethiopia and north-east of Nigeria,** the arrival of people displaced by drought led to these outcomes.
- **Opportunity to improve gender relations**: **Pakistan** post displacement had encountered better gender relations. Reduced domestic violence and positive change as more girls went to school and more women were able to work.

- The **2010 Inter-Agency Standing Committee's (IASC) Framework on Durable Solutions for displacement** provides further guidance following a long process on how to determine a voluntary and informed choice on which settlement option they prefer, and this choice must be pursued with safety and dignity.
- **National policy for rehabilitation and resettlement 2007** to minimize large-scale displacement, as far as possible was made.
- Strict compliance with **Panchayat (Extension to the Scheduled Areas) Act (PESA), 1996; the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006;** and Land Transfer Regulations in Schedule V (Tribal) Areas to minimize development induced displacement.

Although mitigation measures are extremely important to reduce the impact of internal displacement, the report recommends that internal displacement should approached through the lens of developmental solutions.

Development solutions towards ending internal displacement



To know more about Internal Displacement, please refer to our following Weekly Focus Document.

Forced Displacement: A Humanitarian Crisis and a Development Challenge

Every year, millions of people are forced to leave their home due to conflict, violence, human rights violations, persecution and natural hazards. It speaks louder than ever to the need for solidarity and ensuring that the world's refugees, internally displaced and asylum-seekers are properly protected and cared for while solutions are pursued. This document offers an overview of international forced displacement trends, its widespread implications across the countries, efforts that have been taken to deal with the same and suggests ways to manage this increasingly protracted issue.

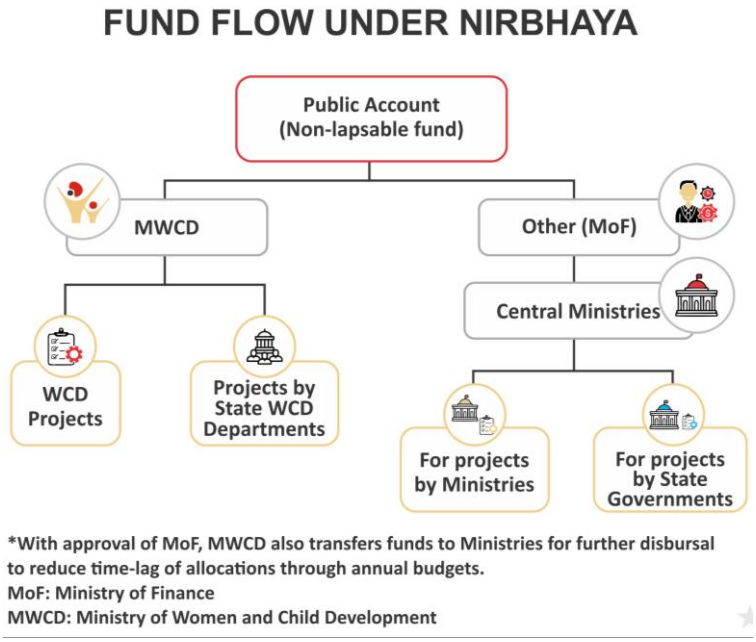
6.6. NIRBHAYA FUND

Why in news?

It has been reported that 70% of the 'Nirbhaya Fund' has been utilized since its inception in 2012.

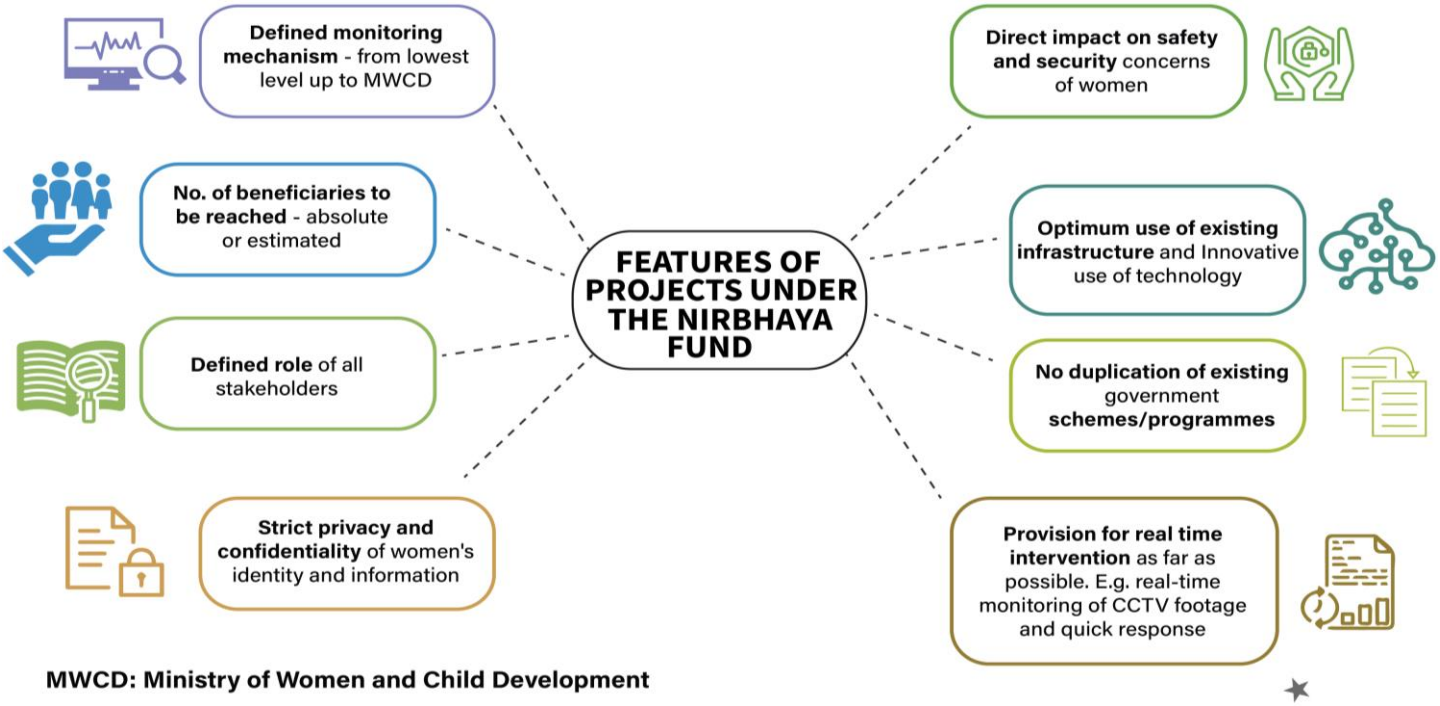
More on news

- From its inception till 2021-22, the **total allocation** under the Nirbhaya fund has been over **₹6,000 crore,** of which **₹4,200 crore has been utilized.**



About Nirbhaya Fund

- This fund was established in response to a gang rape in Delhi in **2012**.
- It is a dedicated **non-lapsable fund** for implementation of initiatives aimed at **enhancing the safety and security for women in the country**
- **Fund Management:** It is managed by the **Department of Economic Affairs, Ministry of Finance.**
  - The **Ministry of Women and Child Development (MWCD) is the nodal Ministry** to appraise/recommend proposals and schemes to be funded under Nirbhaya Fund.
- **Funding Pattern** of the Nirbhaya Fund:
  - 90:10 for States with difficult terrain.
  - 60:40 for other States.
  - 100% for UTs.
  - Few initiatives receive 100% funding.
- **Allocation of funds:** Empowered Committee (EC) of Officers chaired by the Secretary, MWCD appraises and recommends proposals to be funded under Nirbhaya Fund.
  - The money under the fund has been utilized for establishing **one stop centres, making safety devices, setting up fast-track courts and to procure forensic kits** for sexual assault cases among others.



Challenges in utilization of Nirbhaya Fund

- **Inter-ministerial cooperation:** The execution of Nirbhaya fund projects have been hampered by the time-consuming inter-ministerial cooperation required for project approval.
- **Absence of proposal:** There is a lack of proposals for projects on women's safety from important ministries and departments, like the Department of Health and Family Welfare, and Urban Development, where convergence for women's safety is expected (Oxfam, 2021).
- **Inadequate allocation:** Three Nirbhaya Fund schemes under the MWCD – One Stop Centre Scheme, women helpline and Mahila Police Volunteers – have been merged into a new umbrella scheme called **SAMBAL scheme** under Mission Shakti.
    - However, allocations for SAMBAL in 2021-22 are **10% less than the combined allocations for all these schemes in the previous year.**
- **Lack of transparency:** For example, allocations for fast track courts under the Ministry of Home Affairs were not reported in the Gender Budget Statement.
- **Limitations in design:** Emphasis on project features like optimum use of existing infrastructure and innovative use of technology, have **encouraged low-cost interventions** oriented towards surveillance, and reporting and investigation of crimes.
    - They also lead to an inordinate focus on urban crimes in public spaces.
    - Also, the Parliamentary standing committee on Education, Women, Children, Youth and Sports reiterated that Fund should **not be utilised to construct routine infrastructure.**
- **Inadequate fund: According to an Oxfam report,** there is an annual budgetary requirement of a minimum of INR 10,000 to 11,000 crores for programmes related to preventing violence against women. **However, Nirbhaya fund falls short of it.**
- **Unforeseen disruptions:** Disruptions due to unforeseen reasons such as one created by Covid-19 pandemic.

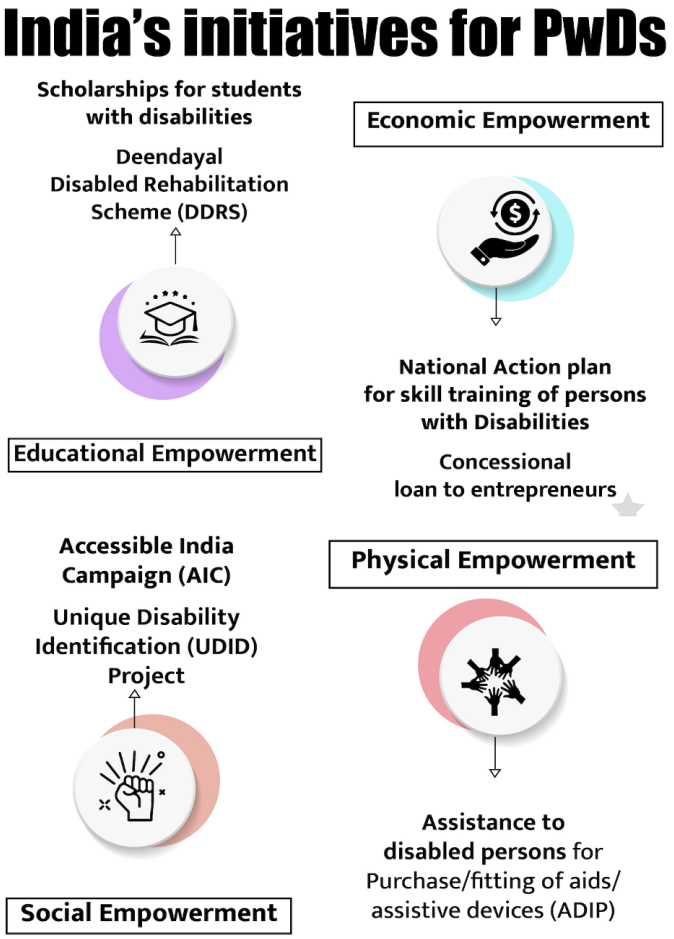
Way ahead

- **Improve the design:** The guidelines governing the use of the Nirbhaya Fund should be broadened to **incentivize** interventions in areas, such as **education, health, sanitation, behavior change etc.**
    - For instance, **Kerala, in its Gender Budget for 2021-'22,** has allocated resources for **medical care** for women victims of violence, **gender awareness in police stations**, etc.
- **Informed policy making:** The Empowered Committee should undertake feedback in all major cities by involving local communities, police, NCRB, psychologist etc. to assess the **overall scenario regarding women safety** and identify effective measures that can be taken.
    - This would help Centre formulate schemes/programmes proactively **to implement necessary interventions instead** of waiting for the proposals from States.
- **Transparency: The Parliamentary** Committee on Education, Women, Children, Youth and Sports recommends that the **concerned Ministries must develop** a **robust mechanism for constant monitoring** of Projects/Schemes being handled by them.
- **Enhance Centre's share:** It should be ensured that the **central government shares 90 to 100 % of these budgetary allocations** as against the current central state sharing mechanism of 60:40.
    - **Annual allocations** for the Nirbhaya Fund should be **increased progressively** so that existing projects can be strengthened and new projects in a wider range of domains can be financed.
- **Establishing benchmarks:** Benchmarks need to be created for universalization of all the Violence Against Women and Girl (VAWG) services, including numbers per population; and a consistent take for availability and quality, at the district and sub-district level.

6.7. NEWS IN SHORTS

6.7.1. GLOBAL REPORT ON HEALTH EQUITY FOR PERSONS WITH DISABILITIES (PWD): WORLD HEALTH ORGANISATION

- **Key highlights of the report**
  - Approximately **1.3 billion people or 16% of the population** has significant disability.
  - PwD are likely **to die 20 years earlier.**
  - PwD have **more than double the risk of developing conditions such as diabetes, stroke or depression.**
  - PwD have more limitations in functioning – for example inaccessible **health facilities are up to 6 times more hindering for them.**



- **Need for health equity for PwD:**
  - **Bringing high dividends to individuals and communities** ($1 invested gives a return of $10);
  - **Achieving SDG 3**(Good health and well-being for all).
- Report recommends **40 disability-targeted actions in areas like** Political commitment, governance, Health financing; etc.
- Report **recommends 3 principles** for all governments and health sector partners:
  - Include health equity for PwD **at the centre of any health sector action.**
  - **Ensure empowerment and meaningful participation of PwD** in implementing any health sector action.
  - Monitor and evaluate **extent to which health sector actions lead to health equity for PwD.**

6.7.2. 'INDIA INEQUALITY REPORT 2022: DIGITAL DIVIDE' RELEASED BY OXFAM INDIA

- It is an **annual report to highlight ongoing inequality** crises in the country. **2022 report highlights extent of digital divide in India** and **its impact on essential services** such as education, health and financial inclusion.
  - **Oxfam India is a non-profit organization** working to support child education, empowering women & fighting against inequality in India.
- **Key highlights of report**
  - **61% of men owned mobile phones** in 2021, compared to **just 31% women.**
  - **Only 31% of rural population uses Internet** compared to 67% of their urban counterparts.
  - **Use of computer devices has decreased** (post-COVID) **in rural areas.**
  - Likelihood of a **digital payment by richest 60% is four times more than poorest 40%**.
  - **Maharashtra has highest internet penetration**, while **Bihar has the lowest**.
- **Recommendations to bridge digital divide**
  - **Improve internet availability** in rural and hard-to-reach areas **through community networks and public Wi-Fi/** internet access points.
  - Government needs to **improve affordability by investing in digital infrastructure,** bringing a **strong regulatory framework** and **lowering taxes** on computers and phones.
  - **Conduct digital literacy camps**, especially in rural India, and digitize panchayats and schools.
  - **Grievance redressal mechanism** to handle **EdTech and Healthtech related complaints.**

- Digital divide refers to "**the gap between individuals, households, businesses and geographic areas** at different socio-economic levels **with regard to both their opportunities to access** information and communication technologies (ICTs) **and to their use of the internet** for a wide variety of activities.

Note: This is different from **State of Inequality in India Report** released by **Economic Advisory Council to the Prime Minister (EAC-PM).**

6.7.3. PRADHAN MANTRI ADI ADARSH GRAM YOJNA (PMAAGY)

- Under PMAAGY, **Ministry of Tribal Affairs aims to develop 36,428 villages** with at least 50% tribal population and 500 Scheduled Tribes (STs) **into model tribal villages.**
  - PMAAGY is **modified version of 'Special Central Assistance to Tribal Sub-Scheme'** and will be implemented during 2021-22 to 2025-26.
- Objective of PMAAGY is **to achieve integrated socio-economic development of selected villages** through convergence approach.
- **Main Components of Scheme are:**
  - **Preparing Village Development Plan.**
  - **Maximizing coverage** of individual / family benefit schemes of Central / State Governments.
  - **Improving infrastructure** in vital sectors like health, education, connectivity etc.

6.7.4. SHREYAS SCHEME

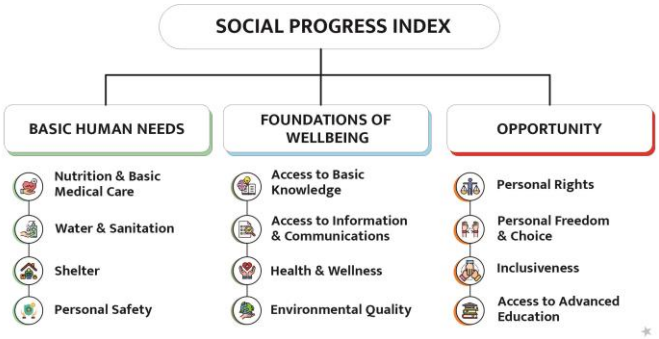
- Standing Committee on Social Justice and Empowerment highlighted underutilization of fund under SHREYAS in 2021-22.
- **Scholarship for Higher Education for Young Achievers Scheme (SHREYAS)** is a **Central Sector Scheme (CSS)** under Ministry of Social Justice and Empowerment (MoSJE).
  - It provides **financial assistance to students from Scheduled Caste (SC) and other communities for pursuing education.**
- SHREYAS was proposed to be implemented during **2021-22 to 2025-26 by** placing two ongoing CSS under it namely,
  - **National Fellowship for OBC**, and
  - Dr. Ambedkar CSS of **Interest Subsidy on Educational Loans** for Overseas Studies for OBC and EBCs.
- **Components of scheme**

Top Class Education for SCs (TCS)	• Financial support to SC students for pursuing studies beyond 12th class.
National Overseas scholarship for SC students (NOS)	• Financial assistance for **pursuing Masters level courses and Ph.D. courses abroad** to candidates belonging to SC, Denotified Nomadic and Semi-Nomadic Tribes, Landless Agricultural Labourers, Traditional Artisans.
National Fellowship for SCs (NFSC)	• Financial assistance to students belonging to SC category to pursue higher studies leading to **M. Phil/Ph. D in Indian Universities/Institutions/Colleges.**
Free Coaching for SC and OBC students	• To enable these students to appear in **competitive examinations** and succeed in obtaining an appropriate job in Public/Private Sector.

- **As per parliamentary committee, fund of scheme remained underutilized under 3 components i.e.,**
  - **TCS**, due to non-submission of documents by Institutes.
  - **NFSC,** due to a smaller number of candidates joining / continuing course.
  - **Free coaching**, due to non-submission of complete proposals by empanelled Institutes.

6.7.5. SOCIAL PROGRESS INDEX (SPI)

- SPI, **by Institute for Competitiveness and Social Progress Imperative**, was released by the Economic Advisory Council- Prime Minister.
- SPI assesses states and districts **based on 12 components across three critical dimensions** of social progress: **Basic Human Needs, Foundations of Wellbeing, and Opportunity.**
- **Key highlights of SPI**
  - **Best-performing States/UTs** are Puducherry, Lakshadweep, and Goa.
  - **Top three performing districts** are Shimla, Solan in Himachal Pradesh, and Aizawl in Mizoram.
- Globally, **India is ranked 110th on SPI in 2022.**



SMART QUIZ

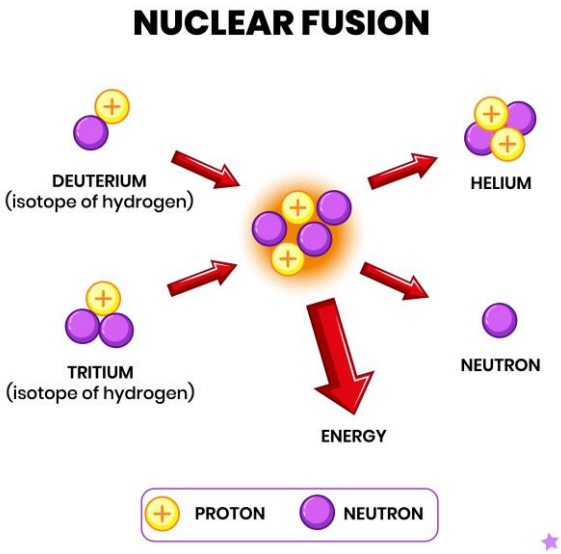
You can scan this QR code to practice the Smart Quiz of Environment at our open test online platform for testing your understanding and recalling of the concepts.

7. SCIENCE AND TECHNOLOGY

7.1. NUCLEAR FUSION

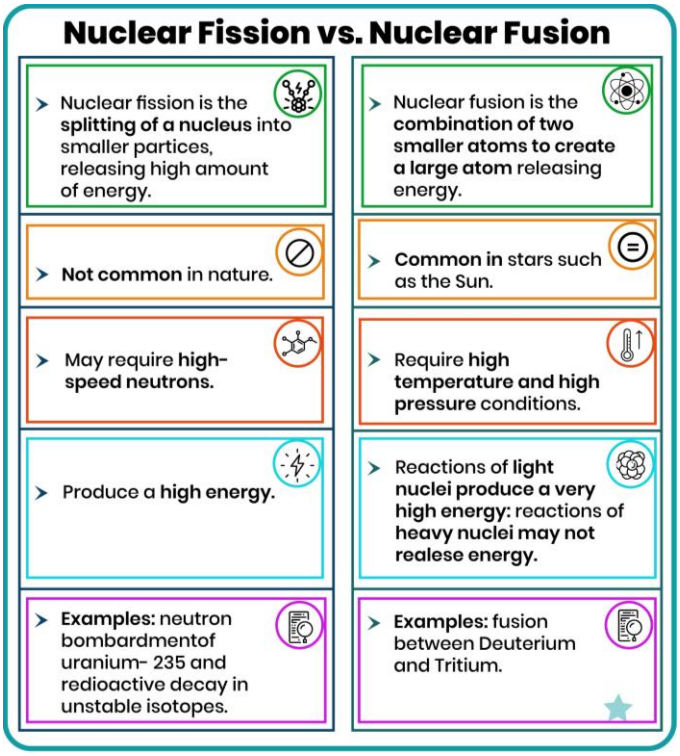
Why in news?

In a fusion experiment using lasers, the scientists at Lawrence Livermore National Laboratory in California achieved a net energy gain for the first time.



More about news

- **What happened?**
  - The scientists at the National Ignition Facility (NIF), USA, for the first time ever, were able to achieve ignition in **nuclear fusion i.e., creating a nuclear reaction that generates more energy than it consumes.**
- **How was it executed?**
  - NIF uses powerful lasers to heat and compress hydrogen nuclei. **When the nuclei fuse, they release heat.** When this heat is equal to or greater than the heat delivered to the container, the event is called ignition.
  - The **ratio of the output energy to the input** delivered to the container is the **gain**.
- **What did it achieve?**
  - The experiment reportedly achieved ignition with a **gain of 1.53** with a **yield (net energy from the reaction) of about 3 megajoules.**
- **Why is it significant?**
  - The experiment demonstrates that it is possible to create an system which produces energy through nuclear fusion.



What is Nuclear Fusion?

- Nuclear fusion is the process by **which two light atomic nuclei (for example tritium and deuterium)** combine to form a single heavier (**Helium)** one while releasing massive amounts of energy.
- Fusion reactions take place in a state **of matter called plasma** a hot, charged gas made of positive ions and free-moving electrons with unique properties distinct from solids, liquids, or gases.
- **Challenge to fusion:** Strong repulsive electrostatic forces between the positively charged nuclei prevent them from getting close enough together to collide and for fusion to occur.
- **When does it happen:** If the attractive nuclear force (which binds protons and neutrons together in atomic nuclei) between the nuclei outweighs the repulsive (electrostatic) force, then a fusion reaction can occur.
  - Such conditions can occur when **the temperature increases,** causing the ions to move faster and eventually reach speeds high enough to bring the ions close enough together.
- **Conditions required to achieve fusion**
  - **Temperature** of **more than 100 million degrees Celsius.**
  - **Maintaining a high enough density for a long enough time** so that the rate of fusion reactions will be large enough to generate the desired power.

Types of Nuclear Fusion: Inertial and Magnetic

- **In an inertial fusion (used in the experiment by NIF),** laser or ion beams are focused very precisely onto the surface of a target, which is a pellet of fuel, a few millimetres in diameter. This results in very high temperatures.
- **Another method is Magnetic fusion,** in which, hundreds of cubic meters of plasma at a density of less than a milligram per cubic meter are confined by a magnetic field at high pressure and heated to fusion temperature.
- It is relatively easier to attain **break-even energy levels through inertial fusion** compared to magnetic fusion.

Advantages of Nuclear fusion power generation

- **Abundant energy:** Fusing atoms together in a controlled way releases nearly four million times more energy than a chemical reaction such as the burning of coal, oil, or gas and four times as much as nuclear fission reactions (at equal mass).
- **Sustainability:** Fusion requires two elements i.e. deuterium and tritium. Deuterium can be distilled from all forms of water, while tritium will be produced during the fusion reaction as fusion neutrons interact with lithium.
- **Zero CO_2:** Fusion doesn't emit harmful substances like carbon dioxide or other greenhouse gases into the atmosphere. Its major by-product is helium: an inert, non-toxic gas.
- **Limited risk of proliferation**: Fusion doesn't employ fissile materials like uranium and plutonium. (Radioactive tritium is neither a fissile nor a fissionable material.)
- **No risk of meltdown**: The quantity of fuel present in the reactor at any one time is enough for a few seconds, and there is no risk of a chain reaction.
- **No long-lived radioactive waste**: Nuclear fusion reactors produce no high-activity, long-lived nuclear waste.

Why Indian Government Should Invest in Nuclear fusion?

Lack of fossil fuels: India is not endowed with the required resources either for hydrocarbon energy or nuclear fission-based energy. Recent advancements in the science and technology of nuclear fusion should accelerate our interest and investment in fusion.

Long-term plan: India's declared net-zero goal in 2070 allows us enough time for fusion to become a practical and preferred complement to renewables.

Rising Energy Demand: India is going to be the world's most populous country. Fusion with a high density of energy can help in meeting the increasing demand.

Global leadership: As this is a new field, India can take an early advantage in developing the technology and harnessing the benefits.

Major challenges

- **Time-taking process:** By all estimates, the use of the fusion process for generating electricity at a commercial scale is still two to three decades away.
  - For instance, for fusion to be truly gainful, the energy released by the reactions needs to be greater than the energy going into the lasers, about 300 megajoules. (The NIF experiment was above to achieve 3 megajoules)
- **Shorter time for the experiment**: The fusion reactions currently being run in labs last for barely a few seconds. Those based on laser beams run for even shorter times. It is difficult to sustain such extremely high temperatures for prolonged periods.
- **Devastation:** Technology can also be used to develop fusion-based nuclear weapons that would be far more powerful and devastating than the current nuclear weapons.
- **Requirement of huge energy**: Fusion reactions happen only at very high temperatures which is 10 times the temperature that exists at the core of the Sun and creating such an extreme environment in a laboratory requires huge amounts of energy.

Initiatives in the world

International Thermonuclear Experimental Reactor (ITER) Assembly: In southern France, 35 nations including India are collaborating to build the world's largest tokamak, a magnetic fusion device that has been designed to prove the feasibility of fusion.

China's Artificial Sun: The Experimental Advanced Superconducting Tokamak (EAST) device designed by China replicates the nuclear fusion process carried out by the sun.

SST-2 tokamak: India's own attempt at an **experimental fusion reactor continues with the SST-2 tokamak** at the Institute of Plasma Research in Gujarat.

The Joint European Torus (JET): It is a joint European project with the main purpose of opening the way to future nuclear fusion grid energy.

Way forward

The way forward for India's nuclear fusion policy will involve continued investment in research and development, as well as collaboration with international partners. India's participation in the ITER project is a major step towards this goal, as the project aims to demonstrate the feasibility of nuclear fusion as a source of energy.

In the immediate term, the future research will need to focus on reaching the **next major milestone – a target Gain > 100, which is required to run a power plant efficiently.** In the long-term, the goal should be to develop a practical and sustainable nuclear fusion power ecosystem that can provide a significant portion of the country's as well as world's energy needs.

7.2. NATIONAL GEOSPATIAL POLICY, 2022

Why in news?

The Ministry of Science and Technology has notified a citizen-centric **National Geospatial Policy (NGP) 2022**, to strengthen the Geospatial sector to support national development.

> **What is Geospatial Data?**
>
> Geospatial data are descriptions of **events or occurrences with a location on or near the surface of the earth.** This location can be static – relating to earthquakes, vegetation, etc., or dynamic – a person walking on the road, a package being tracked, etc.

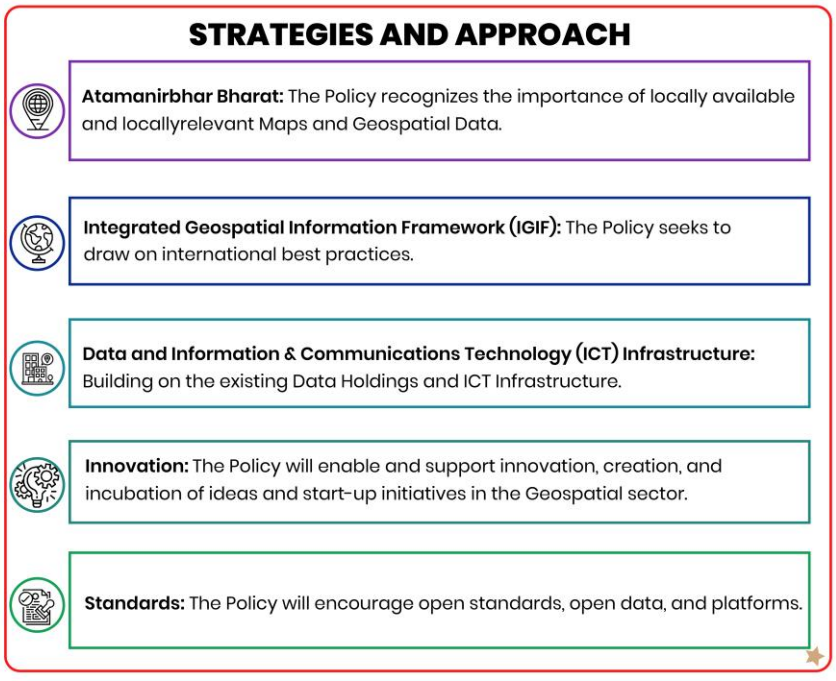
Vision and Goals

- **Global leader:** To make India a World Leader in Global Geospatial space with the best in the class ecosystem for innovation.
- **Integrated Policy:** To develop a coherent national framework in the country and leverage it to move towards a digital economy and improve services to citizens.
- **Better utilization of data:** To enable easy availability of valuable Geospatial data collected utilizing public funds, to businesses and the general public.
- **Encouraging participation of the private sector:** To have a thriving Geospatial industry in the country involving private enterprise.

The year 2025	The year 2030	The year 2035
• **Put in place an enabling policy and legal framework** that supports the liberalization of the Geospatial sector • **High accuracy** Geoid for the entire country.	• **High-resolution topographical survey & mapping**. • **High-accuracy Digital Elevation Model (DEM)** for the entire country. • Develop a **Geospatial Knowledge Infrastructure (GKI)** underpinned by Integrated Data and Information Framework.	• **High-resolution Bathymetric Geospatial** Data of inland waters and sea surface topography of shallow seas - to support Blue Economy. • **National Digital Twin** of major cities and towns ○ The **digital twin** is a virtual replica of a physical asset, process, or service.

Institutional framework

- **The Geospatial Data Promotion and Development Committee (GDPDC**) shall be constituted at the national level as the apex body for formulating and implementing appropriate guidelines, strategies, and programs.
  - The **GDPDC**, a **17-member body** to be **headed by a person of repute from industry, government, or academia.**
- **GDPDC would replace and subsume the functions and powers of** National Spatial Data Committee (NSDC) and Geospatial Data Promotion and Development Committee.
- **Role of Department of Science & Technology (DST):** It shall continue to be the nodal Department of the Government and GDPDC shall make suitable recommendations to DST.



Strengthening Geospatial Infrastructure

- **Geospatial Data Infrastructure**
  - GDPDC will adopt and **develop Data Themes related to 14 global geospatial data themes** recognized by United Nations Statistics Division. It will also develop Sectoral Geospatial Data Themes for various sectors like Environment, Forest, etc.
  - **National Geospatial Data Registry (NGDR):** It will act as a common set of registers of data sets and services accessible by all stakeholders.
  - **Unified Geospatial Interface (UGI):** It will operationalize to provide consumer-oriented products, applications, services, and solutions using the Geospatial data.
  - **Survey of India (SoI):** It shall be the agency responsible for developing and operating the NGDR and the UGI in collaboration with BISAG-N, other institutions, and the private sector, under the guidance and supervision of GDPDC.

Other facets of the policy

- **Geospatial Education and Skill Development:** National Institute for Geo-informatics Science and Technology (NIGST), Indian Institute of Remote Sensing (IIRS), and/or any suitable institute(s), public or private, will be developed into Centre(s) of Excellence for Geospatial Science & Technology.
- **Geospatial Enterprise**
  - **An enabling ecosystem** will be provided for industry, academia, and research with ease of doing business and proactively engaging them in various spheres of the Geospatial domain.
  - An advisory body named **as Geospatial Industrial Development Board (GIDB)** will be constituted under GDPDC for advancing the growth of the Indian Geospatial entities.

- **Mapping infrastructure:** This Policy shall replace the National Map Policy, 2005. Government to collaborate with private and other agencies for improving Geospatial information delivery.
- **Role of private infrastructure:** The Private Sector will play a key role in creating and maintaining Geospatial and mapping Infrastructures, with SoI and various nodal ministries/agencies in a facilitative role.
- **Geospatial Knowledge Infrastructure**: It will provide the critical Geospatial component to knowledge and automation.
  - GKI will be enabled by the integration of Geospatial data with Fourth Industrial Revolution technologies and the growing digital infrastructure.

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

Geospatial Data: Driving the new age of defence

With the modernization of military technologies, the manner in which the wars are being fought today has completely transformed over the years. Amid this, Geospatial data and tools play an increasingly important role from identifying the threat to improving the decision making to ultimately increasing national security. This document provides a description of geospatial technology in national security from an Indian perspective and sheds light on the prerequisites for strengthening India's capabilities in this field.

7.3. SPACE SUSTAINABILITY

Why in news?

United Nations Office of Outer **SPACE** Affairs and government of **AUSTRIA organized World Space Forum (WSF) 2022** under theme "**Sustainability in Space** for sustainability on Earth".

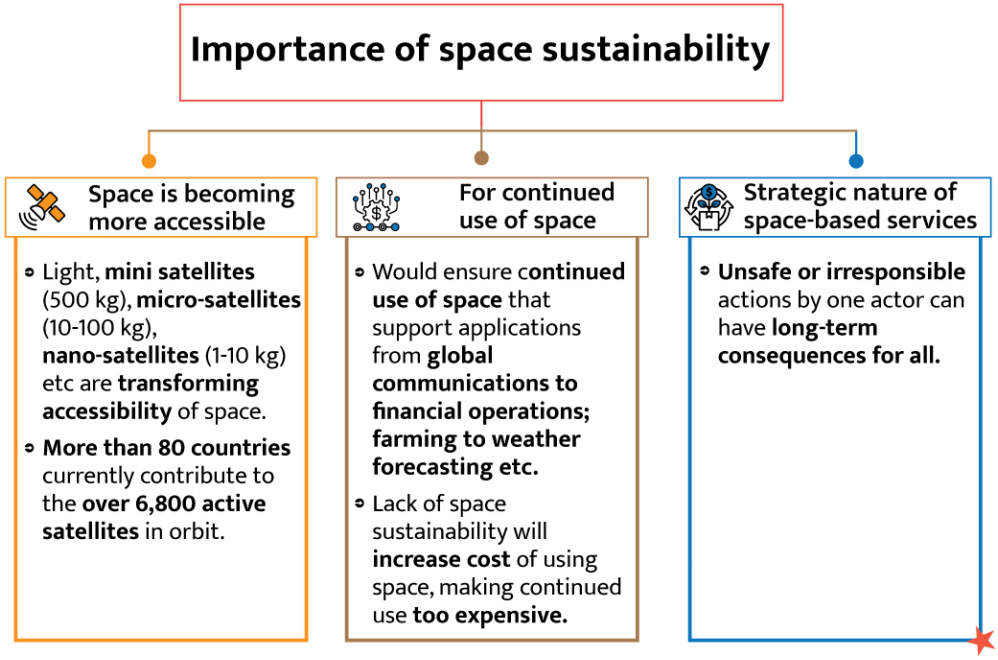
More about news

- **World Space Forum** is a platform to **promote discussions** on the role of **space science and technology** in global sustainable development.

- It brings **together stakeholders** from broader space community, including from **governmental institutions, international intergovernmental organizations, and NGOs, as well as industry, private sector and academia**.

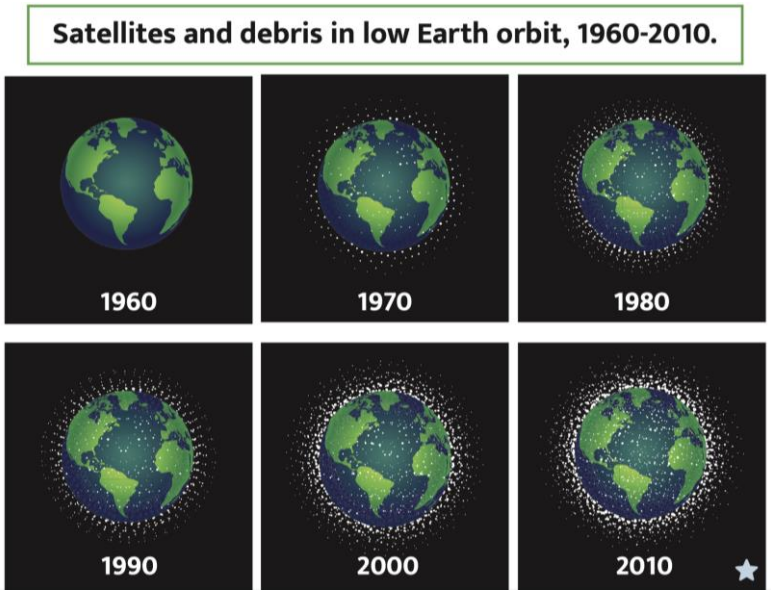
About Space sustainability

- Space sustainability refers to ensuring that all humanity **can continue to use outer space** for peaceful purposes and socioeconomic benefit **now and in the long term.**
- It will require in**ternational cooperation, discussion, and agreements** designed to ensure that outer space is **safe, secure, and peaceful**.



Threats to space sustainability

- **Orbital crowding and Space Debris:** It poses a direct threat to **operations and safety** of a mission and is likely to cause **legal and insurance-related** conflicts. For e.g., communication satellites in geosynchronous Earth orbit face **increased competition for orbital slots** due to **strong demand** for satellite TV and global communications.
  - Physical crowding of orbits can lead to a chain reaction called **Kessler syndrome**.
    - ✓ It is a scenario where **density of objects** in Low Earth Orbit is high enough that collisions between objects can create a **cascading effect where each collision generates debris increasing probability of further collisions.**
  - Also, after completion of a mission, an '**end-of-life protocol'** requires space objects to be moved to **graveyard orbit or to a low altitude**. Neither of options are **sustainable in long run**.
- **Conflict and tension in space:** Tensions in space is rising due to growing **militarisation and weaponisation** of the space.
  - With more nations **integrating space into their security measures**, there is an increased risk that **any interference with satellites** could spark or escalate tensions and conflict in space.
  - The **development and testing of destructive anti-satellite (ASAT) weapons** by US, Russia, China and India are a case in point.

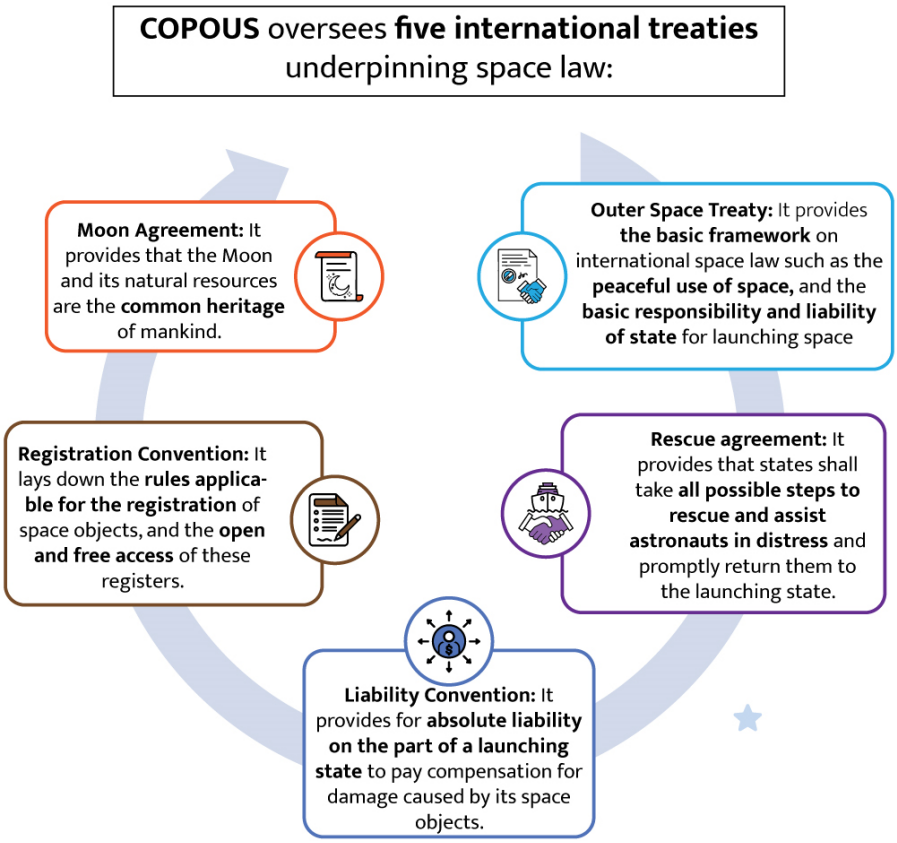


- **Rendezvous and proximity operations (RPO**): It involves **altering the trajectory** of one or more space objects to bring them **into close proximity** to each other. The proliferation of RPO capabilities presents **significant space sustainability challenges**.
  - Widespread and sophisticated RPO capabilities could result in accidents that **generate new space debris or misperceptions** that fuel increased tensions and possibly lead to conflict.
- **Space weather:** Space weather **can impact satellites** by damaging onboard electronics and disrupting communications or navigation signals, leading to **temporary service disruptions** and a **long-term degradation** of spacecraft reliability and lifetime.
  - Another concern is that natural events **might be confused with hostile action**.

Initiatives taken towards space sustainability

Global Initiatives

- **U.N. Office for Outer Space Affairs (UNOOSA):** It supports governments in building **legal, technical, and political infrastructure** to support global space activities.
- **Conference on Disarmament (CD):** It is the **international forum** for work on disarmament, and for matters related to **weapons in space and other space security** issues.
    - One of its core focus areas is the **prevention of an arms race in outer space (PAROS)**.
- **Guidelines on space sustainability: In 2019, U.N. Committee on the Peaceful Uses of Outer Space (COPUOS)** has adopted a set of 21 **voluntary, non-binding guidelines to ensure the long-term sustainability** of outer space activities.



- **Space Sustainability Rating (SSR):** World Economic Forum introduced a new standard called SSR which aims to **recognise, reward, and encourage** space actors to design and implement **sustainable and responsible** space missions.
- **ASAT test-ban resolution:** Recently, United Nations General Assembly (UNGA) passed a non-binding resolution calling for a **ban on kinetic anti-satellite (ASAT) tests**.
    - It was sponsored by United States along with a number of other countries concerned about consequences of ASAT tests on **sustainability of outer space.**
    - **India has abstained from voting on the resolution.**

Indian Initiatives

- **Project NETRA:** Indian Space Research Organisation (ISRO) has initiated 'Project NETRA' to **monitor space debris**.
    - It would provide **first-hand information** on the status of debris, which would aid **further planning** on protecting space assets.
- **Space Situational Awareness**: SSA is comprehensive knowledge and understanding of the space and terrestrial environment that enables timely, relevant, decision-quality and accurate assessments, in order to successfully protect space assets.
    - IIIT Delhi is currently working on a research project called '**Orbit Computation of Resident Space Objects for Space Situational Awareness'** to predict the **probability of collisions** in space.
    - Further, **India and the US have also signed a bilateral space situational awareness arrangement**.
- **SPADEX:** To provide **in-orbit servicing**, ISRO is developing a space docking experiment called 'SPADEX'.
    - It looks at docking a satellite on an existing satellite, **offering support** in re-fuelling and **other in-orbit services** while enhancing the capability of a satellite.
- **Others**
    - India is **party to all the major international treaties** relating to Outer Space.
    - India participates **actively in the discussions** on Long Term **Sustainability of Outer Space activities** at the UN COPOUS.

Measures to strengthen space sustainability

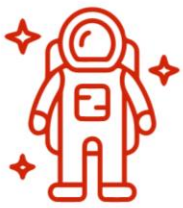
Policy measures

- **Space governance:** Effective governance system could be founded on global understanding of **Earth orbit as a global common**.
- **Bringing new law/treaties:** It should consider **evolving technologies and increasing number of participatory nations.**
- **Data Sharing:** To better manage and safeguard assets, mitigate risk, and improve reliability of operations.

Technical measures

- **Better space weather forecasting:** Global efforts are needed to **devise engineering standards** with space weather in mind, as well as **continued collaboration** on research and forecasting programs.
- **Space debris mitigation and removal: There is a need to invest in** research and development of technology to ensure **reuse and recycling** of satellites at every stage. Techniques that can **move debris from heavily trafficked** orbits include:
  - **Deorbiting** satellites at End of Life (EOL);
  - **Orbital lifetime reduction** at EOL;
  - Moving objects into **less populated "disposal" orbits** at the end of their functional lifetime; and
  - **Active removal** of debris from orbit**.**
- **Effective Space Traffic management:** STM is set of technical and regulatory provisions for **promoting safe access** into outer space, operations in outer space, and **return from outer space** to Earth.
- **Enhancing Space Situational awareness globally.**

To know more about Space Exploration, please refer to our following Weekly Focus Document.



Space Exploration: Changing dynamics & pathway to the future

Space exploration has played an important role for countries with regard to their economies and security. With the sector experiencing substantial growth, the need for collaboration in the sector has also increased. India being an emerging power in the sector can play a vital role in creating and enabling space collaboration.

7.4. ACHARYA JAGADISH CHANDRA BOSE (J.C. BOSE)

Why in News?

Ministry of Culture organized an international conference on the occasion of **164th birth anniversary** of **the Indian scientist Acharya Jagadish Chandra Bose (J.C. Bose**)

About J.C. Bose (1858-1937)

- **He was an Indian Physicist and plant physiologist.**
- Born in **Munshiganj, Bengal Presidency**, British India (currently, **in Bangladesh**). J.C. Bose did his **B.A in Natural Sciences** from **Cambridge University and on his return to India in 1885**, he was appointed **professor** at **Presidency College, Calcutta**.
- Inspired by **nationalist ideals, he** founded **the Bose Institute in 1917.**
  - It was **Asia's first modern research centre** which focussed on **interdisciplinary research**.

- He was **the first Asian** to be awarded **a US patent in in 1904** and **first Asian along with Srinivasa Ramanujan FRS,** to become **the fellows of the Royal Society (FRS) in 1920**.
- He was **the president of the 14th session** of the **Indian Science Congress in 1927.**

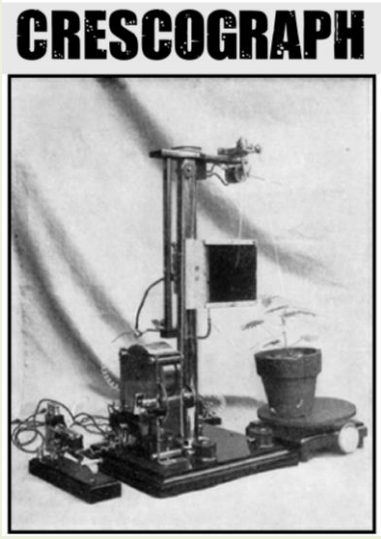
How Acharya J.C. Bose proved that plants have life?

J.C. Bose believed that plants had a sensitive nervous system and that their responses to external stimuli could be measured and recorded. He established the following through his experiments-

- **Plants live and die**: In one of his experiments, the plant was dipped in bromide (a poison). The **pulse bea**t of the plant (similar to pulse of an animal) measured by **Crescograph** became **unsteady** once the plant started taking in the poison, **proving that plants have life.**
- **Plants feel pleasure and pain:**
  - He wrote how plants grew **more quickly** when exposed **to nice music and gentle whispers**, and **poorly** when exposed **to harsh music and loud speech.**
  - He also mentioned **how plants became depressed** when exposed to **polluted air and darkening skies.**

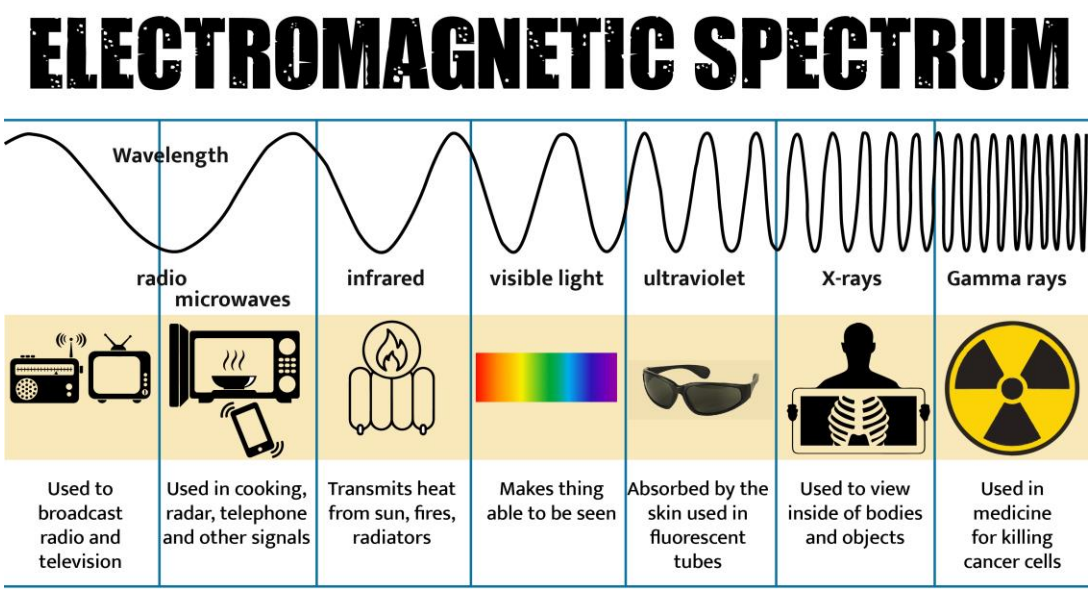
Crescograph

- Bose **invented** the instrument Crescograph which demonstrated **the minute movements of plants** subjected **to external stimuli** and **measure their rate of growth.**
- It can detect movement as small as **1/100,000 of an inch.**



Other contributions of Acharya J C Bose

- **Contributions in Physics:**
  - He was a pioneer in research **on millimeter waves** (it is the band of spectrum with wavelengths between 10 mm and 1 mm) and in the arena **of microwave devices.**
  - He developed **the World's first wireless communication link at 5-mm wavelength** using **a spark transmitter** (generates radio waves by means of electric spark) and **a spiral 'coherer' (**an instrument that detects radio waves) **as the receiver**.
    - ✓ **Bose's coherer** was used by **Guglielmo Marconi** to build an **operational two-way radio.**
  - Since the science behind radio technology was first explained by Bose **the Institute of Electrical and Electronics Engineers (IEEE**) called him the '**Father of Radio Science**'.
    - ✓ IEEE is the **world's largest technical professional society**. It promotes the development and application of electrotechnology and allied sciences.
- **Contribution in Biology:**
  - He researched the **seasonal effect on plants** and also **the effect of chemical inhibitors (substances which slow down chemical reactions) and temperature on plants.**



- He showed that **the living cells of the innermost layer of the cortex (**an outer layer of a stem or root in a vascular plant**)** were in a state of **pulsatory motion (**similar to rhythmic beating of the heart).
  - ✓ This pulsation caused **the pumping of water from cell to cell in an upward direction.**
- In this field, his two major works include **'Response in the Living and Non-Living'** and '**The Nervous Mechanism of Plants.'**

- **Literature**: J.C. Bose is also regarded as **the first science fiction writer in Bengali.**
  - He authored '**Niruddesher Kahani'**, **The Story of the Missing One (1896),** which was **one of first works in Bengali Science fiction.**
  - **Polatok Tufan:** This science fiction was published in a collection of mostly non-fictional writings Abyakto (1921).
    - ✓ In this short story, J.C. Bose, used the literary instrument called **Magic Realism** to challenge western knowledge that was the root to colonial powers and its institutions.

J C Bose's legacy and relevance of his work for the present times

- He taught great minds like **Satyendra Nath Bose** (Boson was named after him), **Meghnad Saha**, **P C Mahalanobis,** etc. who went to become famous scientists of India.
- **Pioneering work in Millimetre wave**: In telecommunications, **millimeter wave is used for a variety of services on mobile and wireless networks**, as it enables higher data rates.
- **Biophysics and cybernetics:** His measurements of the effect of **electromagnetic radiation on plant growth** is becoming an **important area of plant biophysics and cybernetics**.
  - **Biophysics**: This field applies the theories and methods of physics to understand how biological systems work.
  - **Cybernetics**: The science of control and communications between animals and machines.
  - The Bose Institute in 1971, became **an autonomous grant-in-aid institution** of the **Department of Science and Technology of the Government of India.**

J.C. Bose: A Satyagrahi Scientist—
- He used s**atyagraha** as a tool **against salary discrimination** by British administration.
- Bose revolted **against the strict compartmentalisation in discipline** and asserted that the **Eastern aim is to investigate the multiplicity of the phenomena.**

Alongside the scientific contributions of J C Bose**, Rabindranath Tagore** found in his works an essence **of Indian scientific spirit, a reflection of Indian national culture, its national pride and heritage.**

7.5. NEWS IN SHORTS

7.5.1. SPACETECH INNOVATION NETWORK (SPIN)

- **Indian Space Research Organisation (ISRO)** has signed an MoU with Social Alpha to **launch SpIN.**
- SpIN is India's **first dedicated platform** for **innovation, curation, and venture development** for the **space entrepreneurial ecosystem.**
  - It has **launched its first innovation challenge.**
  - Selected start-ups and innovators will be able to access both Social Alpha's and ISRO's infrastructure and resources.
- **It will primarily focus in three distinct innovation categories:**
  - Geospatial Technologies and Downstream Applications,
  - Enabling Technologies for Space & Mobility,
  - Aerospace Materials, Sensors, and Avionics.

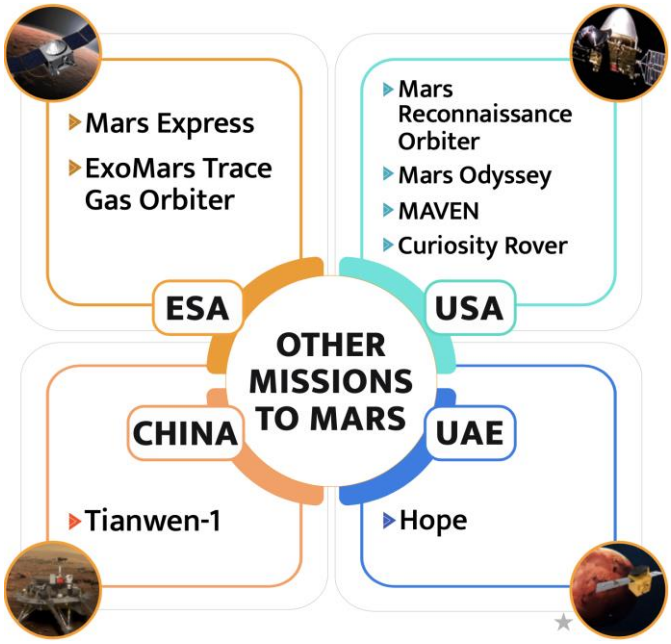
7.5.2. SURFACE WATER AND OCEAN TOPOGRAPHY (SWOT) MISSION

- The international **Surface Water and Ocean Topography (SWOT) Mission** is a collaborative effort between NASA and French space agency with contributions from Canadian and UK Space Agencies.
- SWOT is **first satellite mission** that will **measure height of water in freshwater bodies and ocean on more than 90% of Earth's surface.**
  - SWOT will cover the entire Earth's surface **between 78 degrees south** and **78 degrees north** latitude **at least once every 21 days**.
  - It uses **Ka-band radar interferometer (KaRIn)** which bounces radar pulses off the water's surface and receives return signal using two antennas on either side of spacecraft.
- **Significance of SWOT**
  - **Provide insights into how oceans absorb atmospheric heat and carbon dioxide** in a process

that naturally regulates global temperatures and has helped to **minimize climate change**.
    - **Improved understanding of tipping point** i.e. point at which oceans start releasing (rather than absorbing) heat, thus intensifying global warming.
    - Help policymakers to **better prepare and plan for disasters** including floods and droughts.
    - Helps to **better track sea level rise** which will directly impact communities and coastal ecosystems.

7.5.3. PERSEVERANCE MISSION

- Perseverance rover mission is **part of NASA's Mars Exploration Program,** a long-term effort of robotic exploration of Mars.
    - It aims to look for **signs of past microbial life**, **prepare for future human exploration and collect samples of rock** and regolith (broken rock and soil) **for possible return to Earth.**
- Recently, it placed a **titanium tube containing a rock sample** on the surface of Mars.
    - **Igneous rock** sample was **collected from Mars Jezero Crater** called **South Séítah.**
    - Samples are being **placed at a location called "Three Forks,"** first such **sample depot on another world**.
    - **Depot will serve as a backup** if Perseverance can't deliver its samples and **subsequent NASA missions would return these samples to Earth**.



- **Significance of Mars**
    - **Search for life:** Evidence suggests that Mars was once full of water, warmer and had a thicker atmosphere, offering a potentially habitable environment.
    - **Possible planet that humans can visit or inhabit in long term**: Venus and Mercury have extreme hot temperatures. All planets in outer solar system starting with Jupiter are made of gas and are very cold.

7.5.4. ARTEMIS 1 LUNAR MISSION

- Uncrewed Orion capsule **splashed down off the coast of Baja California**, bringing an end to NASA's Artemis 1 moon mission after 2.3 million kilometers flight.
    - Splashdown occurred on **50th anniversary of touchdown on moon of NASA's last lunar mission, Apollo 17**.
- Orion performed a **new landing technique called 'skip entry'**, designed to help spacecraft accurately splash down at landing site and **reduce the force of gravity.**
    - Orion entered the Earth's upper atmosphere and used the atmosphere and its lift to "skip" back outside the atmosphere only to re-enter once again.
- Artemis is **first integrated test of NASA's deep space exploration systems:** Orion spacecraft and Space Launch System (SLS) rocket.
    - It is first in a series of increasingly complex missions that will **enable human exploration to Moon and Mars.**
    - **Artemis 1** demonstrate that **Orion's heat shield can withstand high speed and high heat conditions** while returning through Earth's atmosphere.

Artemis 2	Planned for 2024. It'll be a **crewed flight** that will **orbit Moon but not land** on surface.
Artemis 3	Planned for 2026. It'll land a **crewed spacecraft** on Southern pole of moon.

Other moon exploration missions

- **Luna 2:** First spacecraft to land on moon, was launched by USSR
- **Apollo 11**: First humans to land on moon was launched by USA.
- **Chandrayaan 1:** Launched by ISRO.

7.5.5. GAMMA RAY BURST (GRB)

- In a first-of-its-kind detection, astronomers recorded **binary merger emitting long GRB twinned with a kilonova emissions.**
    - Traditionally associated with short GRB, Kilonovae occur when **two compact objects, like binary neutron stars or a neutron star and a black hole, collide**.
- GRBs are **flashes of high-energy radiation arising from energetic cosmic explosions.** GRBs are divided into two main categories i.e.,

- **Long GRBs (2 seconds or more)** originate from formation of dense objects like black holes in centers of massive collapsing stars.
- **Short GRBs (less than 2 seconds)** caused by mergers of dense objects like neutron stars.

7.5.6. GLASS REPORT 2022

- Recently, **WHO** released Global Antimicrobial Resistance and Use Surveillance System (GLASS) report.
  - **GLASS** was **launched in 2015.**
  - GLASS-AMR provides a standardized approach to the collection, analysis and sharing of AMR data by countries
- The 2022 GLASS Report also, for the first time, included data on antibiotic consumption at the national level.
- For the report, **countries collect and submit AMR data on select pathogens for four types of infection**:
  - **Bloodstream infections (BSIs)** caused by Acinetobacter spp., E coli, K pneumoniae, Salmonella spp., Staphylococcus aureus, and Staphylococcus pneumoniae.
  - **Urinary tract infections (UTIs)** caused by E coli and K pneumoniae.
  - **Gastrointestinal infections** caused by Salmonella spp. and Shigella spp.; and
  - **Genital infections** caused by Neisseria gonorrhoeae.

Antimicrobial Resistance (AMR)

- Antimicrobial Resistance (AMR) occurs when **bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread,** severe illness and death.
- As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become increasingly difficult or impossible to treat.

AWaRe

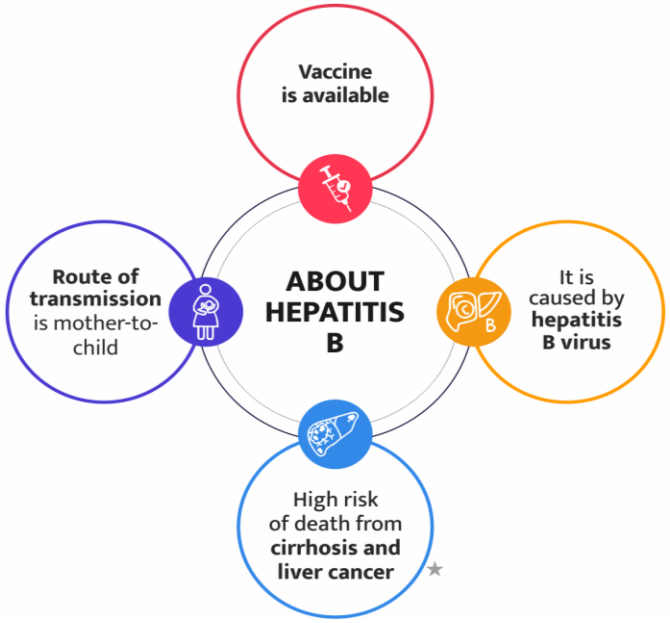
- The AWaRe Classification of antibiotics was **developed in 2017 by the WHO Expert Committee on Selection and Use of Essential Medicines.**
- It is a tool to support antibiotic stewardship efforts at local, national and global levels.
- Antibiotics are classified into three groups, **Access, Watch and Reserve**, considering the impact of different antibiotics and antibiotic classes on AMR in order to emphasize the importance of their appropriate use.

7.5.7. WORLD MALARIA REPORT 2022 RELEASED BY WHO

- **Key highlights**
  - Despite continued impact of COVID-19, **malaria cases and deaths remained stable** in 2021.
    - ✓ There were an **estimated 247 million cases and 619 000 malaria deaths globally** in 2021.
  - **India** accounted for **79% of cases and about 83% of all malaria deaths** in WHO **South-East Asia Region**.
- Malaria is **caused by parasites** that are **transmitted to people** through infected **female Anopheles mosquitoes.**
- **5 parasite species cause malaria in humans,** and 2 of this P. falciparum (most prevalent on African continent) and ***P. vivax*** (prevalent outside of sub-Saharan Africa)– **pose greatest threat.**

7.5.8. WINNING OVER MOTHERS WITH HEPATITIS B (WOMB)

- Launched by **Institute of Liver and Biliary Sciences and Delhi government.**
  - Objective is **to spread awareness about mother-to-child transmission of Hepatitis B b**y appointing 100 mothers with Hepatitis B as ambassadors and educators.
  - Program marks **25th year of the 'yellow ribbon' campaign** launched in 1998 to increase public awareness about viral hepatitis.



7.5.9. HIV INFECTION RATE DECLINES BY 46 PERCENT BETWEEN 2010 AND 2021: NACO

- On eve of World AIDS Day, the **National AIDS Control Organization (NACO)** has revealed that India's annual rate of HIV infection has declined by 46% between 2010 and 2021 against a global average of 32%.
  - Also, **AIDS-related mortalities have declined by 76%.**
  - **NACO**, under the Ministry of Health & Family Welfare (MoH&FW), acts as **nodal agency for**

activities of National AIDS Control Program (NACP)**.**

- MoH&FW also released several initiatives at the event. It includes
  - **National Digital Repository**, a **Digital hub where all resource materials** related to HIV and AIDS will be available for the common public.
  - **National Data Hub of NACO**, central digital repository for key reports, documents and all approved data of NACO for internal use.
  - **#AbNahiChalega campaign** to eliminate HIV-related Stigma and discrimination.
- World AIDS Day has been globally observed on 1st December since 1988.
  - **Theme of World AIDS Day, 2022 is "Equalize".**
  - Equalize slogan **call to take practical actions to address inequalities in HIV** (Human Immunodeficiency Viruses) infected and affected populations and help in ending AIDS.
- HIV is a **virus** that **weakens a person's immune system by destroying important cells** that fight disease and infection.
  - Currently, there is no **effective cure for HIV**. But with proper medical care, HIV can be controlled.
  - If **HIV is not treated, it can lead to AIDS**.
  - In 2021, **52% of children living with HIV** were **accessing antiretroviral treatment** (ART) globally.

7.5.10. TUBERCULOSIS (TB) RESEARCH FUNDING TRENDS, 2005–2021 REPORT

- Report was released by **Treatment Action Group (TAG) and Stop TB Partnership.**
  - Stop TB Partnership is a **United Nations-hosted entity that has a goal to end TB by 2030.**
- **Key Highlights**
  - First time, funding for TB research and development hit a billion dollars worldwide in 2021.
    - ✓ UN High-Level Meeting on TB in 2018 set the target **of $2 billion per annum for R&D**
- TB is caused by '**Mycobacterium tuberculosis'**, it is a communicable disease which spread from person to person through air.
  - **It is curable and preventable.**

7.5.11. 'PATHODETECT™ KIT'

- 'PathoDetect™ kit', by **Pune based Mylab**, India's **first indigenous TB Detection kit,** has received approval from the Central Drugs Standard Control Organisation, TB Expert Committee and the ICMR.
- **Advantages**
  - **Single test can detect tuberculosis and multidrug-resistantce** (against Isoniazid and Rifampacin).
  - Kit is more automated and **reduces the need for high expertise** to run the test.
  - kit can be **stored at Indian room temperature.**
  - Low cost and **do not require special infrastructure for operations.**

7.5.12. ETHYLENE GLYCOL

- Department of Chemicals and Petrochemicals issued a **gazette notification titled Ethylene Glycol (Quality Control) Order, 2022.**
- Ethylene glycol is a **colourless and odourless alcoholic compound** that **can be fatal** if consumed.
  - It is a syrupy or **viscous liquid at room temperature.**
- It is mostly **used as an automotive antifreeze** and **for manufacturing polyester fibres.**
- Also **found in hydraulic brake fluids, stamp pad inks, ballpoint pens**, solvents, paints, cosmetics and plastics etc.
- Diethylene glycol and ethylene glycol **are adulterants that are sometimes illegally used as solvents in liquid drugs** to cut costs.

7.5.13. SCIENTIFIC PUBLICATION IN INDIA

- India's global ranking in scientific publications jumped from **7th** to **3rd in National Science Foundation (NSF) Science and Engineering Indicators 2022** report.
  - India published **1,49,213 papers** in **2020** in comparison to **60,555 papers** in **2010**.
- Also, **National Science and Technology Management Information System** under Department of Science and Technology shows that
  - **IITs, CSIR, Central Universities and other institutions** under **Centre** contributed **67.5% of total research output**, between **2001-20**, despite **45.4% of total expenditure** from Centre.
  - In comparison, **other institutions** (including **private** and under **state governments**) contributed **one-third** of total output despite greater expenditure.

7.5.14. COMMUNITY INNOVATOR FELLOWSHIP (CIF)

- The Community Innovator Fellowship Program is an initiative of Atal Innovation Mission, NITI Aayog in collaboration with UNDP India.
  - This is a one-year-long intensive fellowship program.
- It aims to **facilitate knowledge building and provide infrastructure support to aspiring community innovators** essential for their entrepreneurship journey.

- The **Community Innovator Fellow is an individual** with an entrepreneurial mindset, with an idea to solve a community challenge through his/her enterprise.

7.5.15. SHE STEM

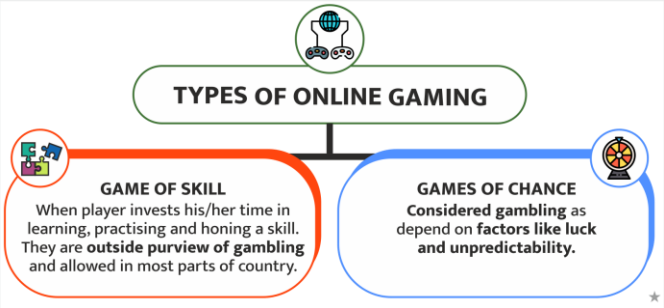
- As part of **Sweden India Nobel Memorial Week**, SHE STEM 2022 was successfully held **for third year in a row.**
- **About SHE STEM:**
  - Annual event **to celebrate women in the fields of science, technology, engineering, mathematics, and sustainability**.
  - Organised by **Embassy of Sweden** in India in partnership with **Atal Innovation Mission, NITI Aayog,** and **German Centre of Innovation and Research**.

7.5.16. DIGI YATRA

- Ministry of Civil Aviation launched Digi Yatra for Three Airports in country.
- Digi Yatra is conceived to achieve contactless, seamless processing of passengers at airports based on **Facial Recognition Technology (FRT).**
- It facilitates **paperless travel and avoid identity checks** at multiple points in an airport.
- One-time registration on Digi Yatra app is required using Aadhar based validation and a self-image capture.
- Each passenger would get a **unique Digi Yatra ID**.
- **Digi Yatra Foundation (DYF)** has been set up as a joint venture company with the objective of creating the Digi Yatra Central Ecosystem.

7.5.17. ONLINE GAMING

- **Ministry of Electronics and IT (MeitY) has become the nodal ministry for online gaming.**
- Appointment of **MeitY as central regulatory authority** will provide clarity and certainty to investors, industry and consumers.
  - In absence of a nodal ministry, **online gaming intersects with multiple ministries** including MeitY, Ministry of Information and Broadcasting, and Ministry of Sports.
- The **decision is in line with government's initiative to push for growth of animation, visual effects, gaming and comics (AVGC) sector** and making India a global hub for online gaming.
- Online games refer to **games that are played over some form of computer network**, most often the Internet.
  - As per All India Gaming Federation, **India's online gaming industry is expected to be worth ₹15,500 crore by 2023.**



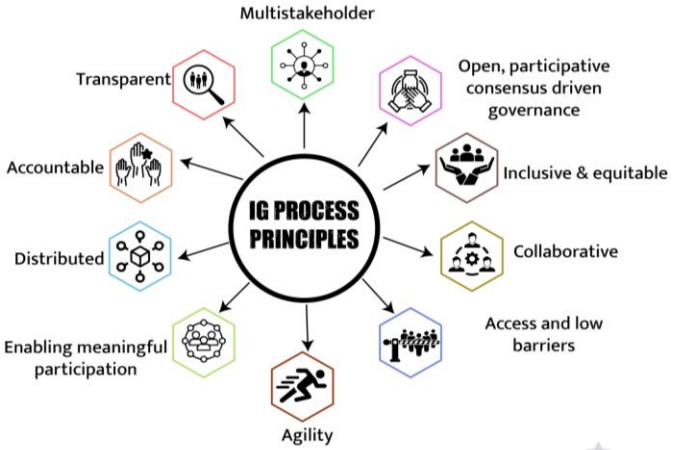
- **Reasons behind increasing online gamers**: Better accessibility to smartphones and cheap data prices; Prolonged closure of schools due to pandemic etc.
- **Issues with Online gaming**: No clear framework for taxation rates, causes physical, social and emotional damages, impairing sleep, appetites, careers etc.
- In addition, **Ministry of Youth Affairs and Sports (MYAS) has been appointed to regulate E- sports (Electronic sports)** as part of multiple sports events.
  - Centre identifies **e-Sports as a competitive sport involving participants contesting in terms of both physical and mental abilities,** albeit in a digital environment.

7.5.18. 'STAY SAFE ONLINE' CAMPAIGN AND 'G20 DIGITAL INNOVATION ALLIANCE (DIA)' LAUNCHED BY MEITY

- Ministry of Electronics and Information and Technology (MeitY) is the Nodal agency for the **G20 Digital Economy Working Group (DEWG).**
- During India's G20 presidency, the MeitY will focus on three priority areas, namely **Digital public infrastructure (DPI), cyber security, and digital skill development**.
  - **DPI comprises foundational population-scale technology systems** on which the digital economy operates, this can include identity systems, payment systems, data exchanges, and social registries. E.g., Aadhaar and UPI digital system.
- **About Stay Safe Online Campaign**
  - Its objective is to **raise awareness among citizens to stay safe** in the online world due to the widespread use of social media platforms and the rapid adoption of digital payments.
  - It involves the **dissemination of multilingual awareness** content in the form of infographics etc.
- **About G20-DIA**
  - Its objective is to **identify, recognize, and enable the adoption of innovative and impactful digital technologies** developed by start-ups, from G20 nations as well as the invited non-member nations.
  - It seeks digital solutions in the six themes viz. Agri-tech, Health-tech, Ed-tech, Fin-tech, Secured Digital Infrastructure, and Circular Economy.

7.5.19. INDIA INTERNET GOVERNANCE FORUM (IGF) 2022

- India IGF is an **initiative associated with UN Internet Governance Forum**, a multi-stakeholder platform to discuss public policy issues related to Internet.
- Internet Governance is **development and application** by Governments, private sector and civil society, in their respective roles, **of shared principles, norms, rules, decision-making procedures,** and programs **that shape evolution and use of Internet**.
  - It includes **Physical Infrastructure layer, Code or Logical layer, Content layer and Security**.
  - It **involves IP Addressing, Domain Name System (DNS), Routing,** Technical Innovations, Standardization, Security, Privacy etc.
- Internet governance is **significant because of Internet's potential to foster sustainable human development** and **building of inclusive knowledge societies**, and **enhancing free flow of information and ideas**.
  - Though, **there is no single organisation in charge of Internet,** major actors include **Internet Corporation for Assigned Names and Numbers (ICANN), IGF, Internet companies, NGOs etc.**
  - India also supports a multi-stakeholder approach in matters on Internet Governance.
- **Principles of Internet governance** (refer infographic).



- **Challenges to Internet governance:** Continuously evolving nature of internet, concentration of digital power in a few companies and countries, decision making skewed to supply side rather than to demand side etc.

7.5.21. PROJECT VANNI

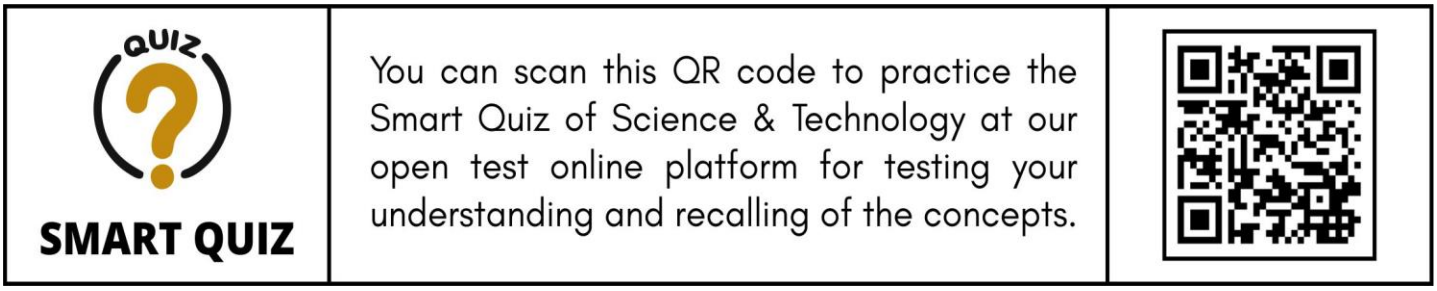
- **Google India** has teamed up with the **Indian Institute of Science (IISc)** for this initiative.
- It aims to build an **artificial intelligence/machine learning (AI/ML) model** to **collect language samples** from 773 districts across India.
  - It will be an **AI-based language model** that can understand diverse Indian languages and dialects.
  - Potential use of such datasets is in building apps in areas such as **health, agriculture, and financial inclusion**.

7.5.22. ASIA'S FIRST DRONE DELIVERY HUB

- It was unveiled by Meghalaya government in partnership with startup TechEagle.
- It aims to **deliver vital supplies like drugs, diagnostic samples, vaccines quickly and safely** to different regions of state using a dedicated drone delivery network.
- **Benefits**: Universal access to healthcare to 2.7 million people, overcome problem of lack of visibility, high delivery costs, etc.

7.5.23. 2AFRICA PEARLS

- Facebook parent Meta **will partner with Bharti Airtel to expand 2Africa Pearls to India**.
- 2Africa Pearls is **one of world's longest subsea cable systems** that will ultimately **interconnect countries in Africa, Asia, and Europe**.
  - Once completed, the system will **provide connectivity to total of 3 billion people.**
- 2Africa Pearls **will improve connectivity of fixed-line broadband** internet **in India.**



8. CULTURE

8.1. SRI AUROBINDO

Why in News?

India recently celebrated the 150th birth anniversary of Sri Aurobindo Ghosh.

About Sri Aurobindo

- Sri Aurobindo was a **20th century Bengali poet, philosopher, spiritual leader** and a **revolutionary freedom fighter.**
- Born in **Calcutta** on **15 August 1872** as **Aurobindo Ghose**, he received his early education from a convent school in **Darjeeling.**
- At the age of seven, he was taken to England along with his brothers. He **studied at St. Paul's School London (1884)** and **King's College in Cambridge** in **1890**. Also, he scored 11th rank in the **ICS examination** but didn't clear the probation.
- He was among the **first leaders to demand a mass-based movement for India's independence.**

Auroville
It is located on the **Coromandel Coast in Pondicherry**. It draws its inspiration from the **vision and work of Sri Aurobindo**. His spiritual collaborator, **The Mother, founded the township in 1968 and gave its Charter.**

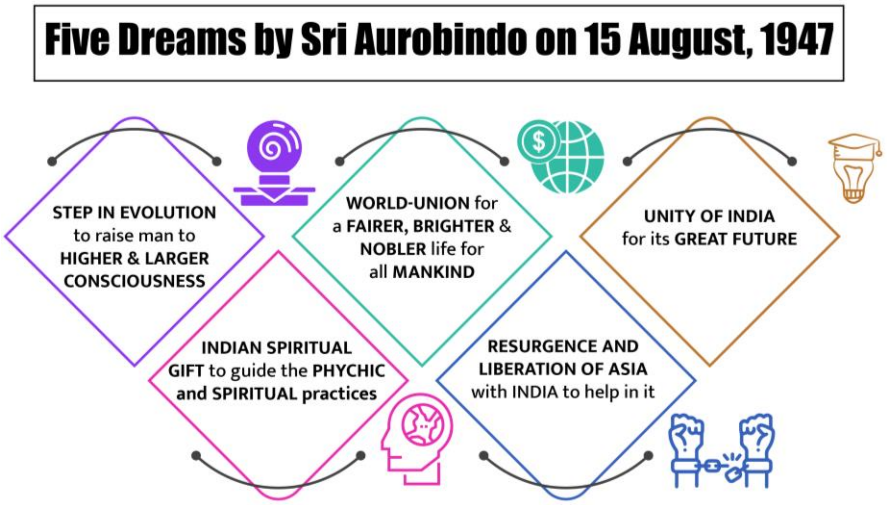
Sri Aurobindo's contributions

A **patriot, poet, educationist, philosopher, and yogi**, he made significant contributions to Indian independence and its spiritual awakening-

- **Political Contributions:**
  - He was a pioneer of the Indian extremist movement and helped in establishing **Anushilan Samiti in 1902.**
  - He was a part of the **Alipore Conspiracy case in 1908.**
  - During the **Surat session of INC in 1907,** known for the Surat Split, **he joined the extremist group led by Bal Gangadhar Tilak against the moderates.**
- **Spiritual Contributions**
  - In **1914,** he started a **magazine "Arya"** which led to the founding of **Sri Aurobindo Ashram in 1926** with **Mirra Alfassa.**
    - ✓ **Mirra Alfassa** founded the **Auroville**, i.e., the **city of dawn, a universal town for a peaceful, progressive, and harmonious existence.**
  - He developed the concept of "**Integral Yoga**" through which he believed human beings can achieve true self-realization. **Internal Yoga** aims at spiritual realization that not only liberates man's consciousness but also transforms his nature.
- **Literary contributions:**
  - **'New Lamps for Old',** articles written by him in **InduPrakash from 1893-94, criticizing moderate politics of Congress.**
  - **Started Bande Mataram** (English Daily), **Karmayogin** (English newspaper) **and Dharma** (Bengali Weekly).
  - Wrote articles in **Jugantar Patrika** (Bengali revolutionary newspaper) **to inspire revolutionaries and the Bhawani Mandir, a pamphlet published by the Anushilan Samiti.**
  - He had studied the scriptures and **translated texts ranging from the Ramayana, the Mahabharata, and the Upanishads to Kalidasa, Bhavabhuti and Bharatthari.**
  - **Other Books** include compilation as poems, letters and essays such as **Essays on the Gita** (1922), **Collected Poems and Plays** (1942), **The Synthesis of Yoga** (1948), **The Human Cycle** (1949), **The Ideal of Human Unity** (1949), **Savitri: A Legend and a Symbol** (1950), etc.

Views of Sri Aurobindo	
On Caste Discrimination	**On Hinduism**
• Sri Aurobindo **did not believe in any man-made divisions.** He used to consider **social inequalities as a major obstacle to raise national consciousness**. • He supported the **Vedantic notion of equality** and believed in **eternal oneness and fundamental unity of all living beings**. • He also raised his voice **against the politicization of caste** by the British in their divide and rule strategy. • He argued that **caste-based discrimination was external, and it furthered social degradation**.	• Sri Aurobindo was influenced by the teaching of **Sri Ramanujacharya** who argued for inclusion of outcastes into the fold of Hinduism. • He was also inspired by the **neo Vedantic philosophy of Swami Vivekananda** which argued for fundamental unity of all living beings. • He was a firm believer of **Sanatan Dharma**, which stands for equality of all before God.

Significance of Sri Aurobindo's ideology in today's era



- **His views on religion** can be an enabler in **arresting social polarization**.
- His **views on cultural nationalism** are of instrumental value **to deal with homogenization of cultures** and **enabling India to find its rightful place in comity of nations.**
- His **cosmopolitan world view** is crucial **to take forward the idea of *Vasudaiva Kutumbakam*** and enable the world to act collectively against common threats.
  - For example, **India's Vaccine Maitri** programme.
- His **concept of Integral yoga** can become an **effective tool for self realisation and dealing with complex emotions** like anxiety, restlessness, depression etc.

On 15 August 1947, Sri Aurobindo gave a message where he wished the partition as temporary expedient and to be reversed and shared **his dreams for India**, which still hold relevance (as given in image).

8.2. GEOGRAPHICAL INDICATIONS

Why in news?

Recently, the **Government** has granted the **Geographical Indication (GI) tag to 9 products** from across the country

More on news

- With this the total number of GI Tags of India comes to 432.
  - The top 5 states holding maximum number of GIs are **Karnataka, Tamil Nadu, Uttar Pradesh, Karnataka and Kerala.**

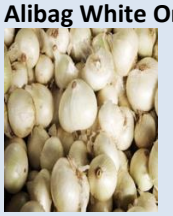
About Geographical Indication (GI)

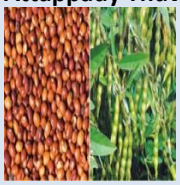
- A geographical indication (GI) is **defined in the TRIPS Agreement as an indication which identifies a good as originating in the territory of a member, or a regional locality in that territory**, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin.
  - A geographical indication **right enables those who have the right to use the indication to prevent its use by a third party whose product does not conform to the applicable standards.**
    - ✓ For example, in the jurisdictions in which the **Darjeeling geographical indication is protected, producers of Darjeeling tea can exclude use of the term "Darjeeling" for tea not grown in their tea gardens** or not produced according to the standards set out in the code of practice for the geographical indication.

- However, a **protected geographical indication does not enable the holder to prevent someone from making a product using the same techniques** as those set out in the standards for that indication. Protection

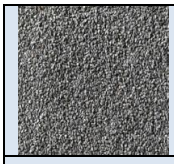
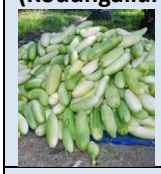
- India, in compliance with its obligation under TRIPS, has taken legislative measures by enacting the **Geographical Indications of Goods (Registration & Protection) Act, 1999** and the **Geographical Indication of Goods (Regulation and Protection) Rules, 2002.**
  - Under the Act, the **Controller-General of Patents, Designs and Trademarks under Department of Industrial Policy and Promotion (DIPP)**, Ministry of Commerce and Industry is the 'Registrar of Geographical indications' who supervises the functioning of the Geographical Indications Registry (GIR).
    - ✓ The GIR is in Chennai, and it has All-India jurisdiction.
- A GI is **registered for a period of 10 years and the registration may be renewed from time to time** for a period of 10 years at a time.

About recent GI tags

Product	State	Description
Gamosa	**Assam**	• The Assamese gamocha is **mostly woven out of white threads with colourful and intricate inlays in red**. • This is a **traditional textile having great significance for the people of Assam.** • Gamocha is also known as '**Bihuwaan**, as it is an essential part of Bihu festival of Assam.
Alibag White Onion 	**Maharashtra**	• It is a traditional variety of white onion in Alibag tehsil of Raigad district in Maharashtra. ○ The soil **of Alibaug taluka has low sulphur content & its geo-climatic conditions** make it unique compared to other white onion-producing areas. • This onion **does not have a strong odour** like the standard onion commonly available in the market. • It has a **sweet taste, different from other onions**.
Tandur Redgram	**Telangana**	• It is a **traditional crop in the rain-fed tract of the Telangana region.** • It contains about 22-24% protein, which is almost three times that of cereals. • As per the researchers, the **fertile deep black soil with clay minerals specifically in Tandur Region along with huge limestone deposits can be attributed to the specific quality** traits of Tandur Redgram.
Ladakh Raktsey Karpo Apricot	**Ladakh**	• Raktsey Karpo, from family of apricot, **packed with vitamins and low on calories is rich in sorbitol** – a natural glucose substitute that can be consumed by diabetics. • These apricots are **grown organically without using any chemical fertilisers**. • **Seeds of Raktsey Karpo fruit have white seed stones**. However, world over, apricot fruits have brown seed stones.

Attappady Thuvara 	**Kerala**	• The Attappady Thuvara is an **important traditional crop of the Attappady tribal area in Palakkad district, Kerala**.
		  ○ It is a woody shrub, generally grown as an annual crop.
		• Attappady Thuvara is **having seeds with white coat**.
		  ○ Compared to other red grams, Attappady Thuvara seeds are bigger and have higher seed weight.
		  ○ It is **rich in protein, carbohydrate, fibre, calcium and magnesium**.

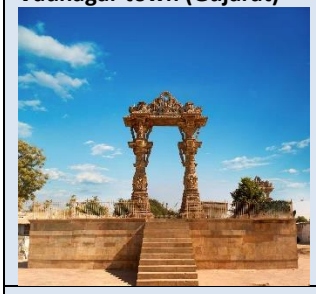
Onattukara Ellu	**Kerala**	• It is an ancient and traditional annual **oilseed crops**. • It has relatively higher antioxidant content. • It helps in **fighting the free radicals,** which destroy the body cells. • The high content of unsaturated fat makes it beneficial for heart patients.

		
Kodungallur Pottuvellari (Kodungallur snap melon) 	**Kerala**	• It is cultivated for it's fully **matured fruit which is used for making juice.** • In some States, it is also used as a **vegetable.** • It contains **high amount of Vitamin C**. • Compared to other cucurbits **(gourd family)**, **nutrients such as calcium, magnesium, fibre and fat content are also high in Kodungalloor Pottuvellari.**
Attappady Attukombu Avara	**Kerala**	• It is cultivated in the Attappady region of Palakkad. • It's **higher anthocyanin content compared to other dolichos beans imparts violet colour** in the stem and fruits. • Anthocyanin is helpful against cardiovascular diseases along with its antidiabetic properties. ○ Other than this, **calcium, protein, and fibre content are also high**. • The higher phenolic content of Attappady Attukombu Avara imparts resistance against pest and diseases, making the crop suitable for organic cultivation.
Kanthalloor-Vattavada Veluthulli (garlic)	**Kerala**	• **It contains hige amount of sulphides, flavonoids, and proteins.** • It is rich in allicin, which is effective against microbial infections, blood sugar, cancer, cholesterol, heart diseases, and damages to blood vessels.

8.3. NEWS IN SHORTS

8.3.1. UNESCO'S TENTATIVE LIST OF WORLD HERITAGE SITES

- Gujarat's **Vadnagar town, Sun Temple at Modhera**, and **rock cut sculptures of Unakoti** in Tripura have been added to the list.
  - UNESCO tentative list is **an inventory of those properties** which each **State Party intends to consider for nomination.**
  - **India now has 52 sites** on tentative list.
- **About three Sites**

Sites	About
Vadnagar town (Gujarat) 	• Vadnagar is a **municipality under Mehsana district** of Gujarat. • It is a **multi-layered and multi-cultural mercantile settlement** with its history stretching back to nearly 8th Century BCE. • It is an **L-shaped town** with **Sharmishtha Lake located on its north-eastern edge.** • At Vadnagar, **two major ancient trade routes crossed** each other. ○ One of them joined **central India with Sindh** and further northwest regions while another connected **port towns on Gujarat coast to northern India.** • It has **hinterland port, centre for industries of shells and beads,** religious centre/temple town etc. • It is the **hometown of PM Narendra Modi**.
Sun Temple at Modhera and its adjoining monuments (Gujarat)	• Located on **left bank of the river Pushpavati,** a tributary of river Rupan **in Mehsana district of Gujarat**. • **Built in Maru-gurjara architectural style of 11th century (**under patronage of Solanki dynasty). • It **consists of main temple shrine** (garbhagriha), **a hall** (gadhamandapa), **an outer hall or assembly hall** (Sabhamandapa or rangamandapa) **and a sacred pool** (Kunda), which is now called Ramakunda. • Built **with bright yellow sandstone.** • **Sculptures features** include life-sized figures belonging to **three groups of deities:** Adityas, Lokapalas, and Devis.

Rock cut sculptures and Reliefs of Unakoti, Unakoti Range
 	
	• It is located in **north- eastern region of Tripura.** Unakoti literally translates as "**one less than a crore**".
	• It provides evidence of **ancient Saiva worship in Tripura from 8th-9th centuries CE.**
	• Famous for its **colossal rock cut panels depicting Hindu deities.**
	  ○ **Images found at Unakoti** can be classified into **rock-cut images and loose sculptures.**
	  ○ **Famous figures and sculptures** include Unkotiswara Kala Bhairav, Gangadhara, depictions of Boddhisattavas, chaturmukhalinga and one Eka-mukalinga etc.
	• **Streamlet at Unakoti forms three kundas,** a big part of the annual Ashokashtomi Mela.

8.3.2. BHADRACHALAM AND RUDRESHWAR TEMPLE (RAMAPPA)

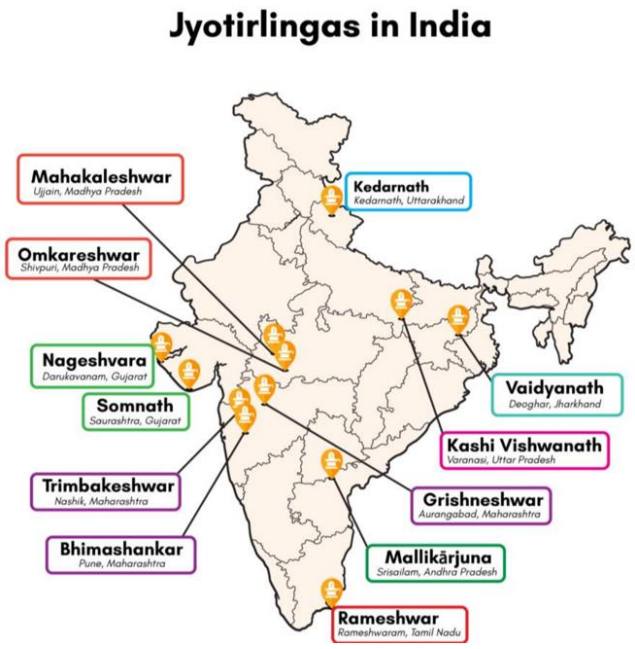
- President laid foundation stone for PRASHAD scheme project in Bhadrachalam and Rudreshwar Temple (Ramappa) in Telangana.
- PRASHAD, or **Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive**, launched in **2014-15**, aims 'to provide integrated infrastructure development to pilgrimage and heritage tourism destinations in the country.'

Sri Seetha Ramachandra Swamivari Devasthanam, Bhadrachalam 	• The temple, dedicated to Lord Rama, is situated on the left bank of the **river Godavari**. ○ The name derived from **Bhadragiri** (Mountain of Bhadra-a boon child of Meru and Menaka). • Built in the **17th century**, the significance of the place goes back to the **Ramayana Era**. • It is close to **Parnasala village** (of **Dandakaranya forest**) and the place of **Mata Sita abduction** by **Ravana**. • It is documented to be constructed or reconstructed by **Kancherla Gopanna**, also known as Bhadrachala Ramadasu revenue officer (Tehsildar) under the reign of **Abul Hasan Qutub Shah, the sultan of the Golconda (1626–1672 CE).**

Rudreshwara (Ramappa) Temple, Mulugu
 	
	• **Rudreshwara**, popularly known as **Thousand Pillar Temple** and **Ramappa temple**, is a **Shiva Temple** (dedicated to Ramalingeswara Swamy).
	• It was built by **Ramappa (sculptor)** during the **Kakatiya period** (**1123–1323 CE**) under rulers **Rudradeva** and **Recharla Rudra**.
	  ○ In 2021 it was included in the UNESCO World heritage List (Cultural).
	• This **sandstone temple** manifests the **distinct style, technology and decoration** of the **Kakatiyan** such as:
	  ○ Decorated beams and pillars of carved granite and dolerite.
	  ○ Pyramidal Vimana (horizontally shaped tower) made of lightweight porous bricks etc.

8.3.3. SRISAILAM TEMPLE

- President inaugurated the project "Development of Srisailam Temple in Andhra Pradesh" under PRASHAD scheme.
- **About Srisailam Temple (Kurnool, Andhra Pradesh)**
  - It is built on the top of the **Nallamala hills** situated on **the banks of river Krishna.**
  - It is dedicated to Lord Shiva **(Lord Mallikarjuna Swamy)** and **Goddess Parvati (Goddess Bhramaramba Devi).**
  - It is the **only temple in India significant to both Saivism and Shaktism**.
  - The presiding deity is **Brahmaramba Mallikarjuna Swamy** in the shape of Lingam.
  - It is considered one of the **12 Jyotirlingas of Lord Shiva** and one of the **18 Maha Shakti Peethas** Parvati.
  - It is also classified as one of the **Paadal Petra Sthalam (glorified in Tamil Tevaram hymns).**
  - It has **earliest reference in Pulumavi's Nasik Inscription** (**2nd Century**) of **Satavahana Dynasty**.
  - It has **Ikshavakus Patronage** (200-300 AD) with its golden age under the **Reddi Kings** (1325-1448).
    - ✓ **Chalukya**, **Kakatiyas** and **Vijayanagara empire** also contributed to its development.



8.3.4. PANINI CODE

- Panini taught a "**metarule**" in the event of a **conflict between two rules of equal strength**.
  - Traditionally, scholars interpreted it in terms of **using the rule that comes later in the grammar's serial order**; which often led to **grammatically incorrect results**.
  - New research argues that in such conflicts, Panini wanted us to **choose the rule applicable to the right side over the left side** of a word.
- **Significance:** It could **revolutionise Sanskrit study** and allow **Sanskrit grammar** to be taught to computers.
- **About Panini and Ashtadhyayi**
  - **Panini** was a **Sanskrit grammarian** who gave a **comprehensive and scientific theory** of **phonetics, phonology, and morphology**.
  - He is also referred to as an **Informatician as he used language to decode information.**
- Panini's grammar, known as the **Ashtadhyayi** (or **Astaka**, compiled in **6th or 5th century BCE**) contains **4000 sutras** to explain the **science behind Sanskrit**.
  - It relies on a system that **functions like an algorithm** to turn the base and suffix of a word into grammatically correct words and sentences.
  - It is compared to the **Turing Machine** of **Alan M Turing** due to its complex set of rules for creating words.
- **Astadhyayi** is further augmented by ancillary texts such as **Sivasutras** (special order of phonemes); **Dhatupatha** (list of verbal roots); **Ganapatha** (various sets of nouns) and **Linganusaasana** (system for deciding the gender).

8.3.5. ERRA MATTI DIBBALU

- Scientists urged Andhra Pradesh government to protect coastal red sand dunes, popularly known as 'Erra Matti Dibbalu'.
- Erra Matti Dibbalu also called as Red Sand Hills is **situated at the outskirts of Visakhapatnam City**.
  - It has light yellow sand dunes at the top followed by a brick red sand unit, a reddish-brown concretion bearing sand unit with yellow sand at the bottom.
  - They are **fragile** and **vulnerable** to **natural degradation**.
- It was declared a **geo-heritage site** by the **Geological Survey of India (GSI)** in **2014.**
  - Geo-heritage sites, also referred to as **National Geological Monuments**, are geological areas of scientific, cultural and educational value.
- **Significance of Erra Matti Dibbalu**
  - Help in **studying climate change impact** as it has seen both the glacial and warm periods.
    - ✓ Site is about 18,500 to 20,000 years old and can be related to **last glacial period.**
  - **Rare occurrence**, as such sand deposits do not occur in equatorial regions or temperate regions.
    - ✓ **Only three places** in the **tropical regions** in **South Asia** have such deposits with **Teri Sands** of Tamil Nadu and a site in Sri Lanka.
  - Home to **prehistoric man** with **three distinctive periods** of stone implements and **pottery** of the **Neolithic man**.

Other Geological heritage site / National geological monument of Andhra Pradesh

- **Volcanogenic bedded Barytes**, Mangampeta, Cuddapah
- **Eparchaean Unconformity**, Chittor and
- **Natural Geological Arch**, Tirumala Hills, Chittor

8.3.6. SANGAI FESTIVAL

- Named after **State animal, Sangai**, brow-antlered deer found **only in Manipur**.
  - Sangai is **found in Keibul Lamjao National Park** and is seen **over floating biomass**, called **phumdi**.
- Biggest **annual cultural festival** of Manipur, organized every year in **November.**
- **Locals exhibit their skills in native sports** like:
  - Famous **martial art** of Manipur: **Thang Ta** (a combination of Spear & Sword skills).
  - **Sagol Kangjei,** an indigenous form of polo etc.

8.3.7. HORNBILL FESTIVAL

- It is celebrations of the **indigenous warrior tribes of Nagaland** with an aim to revive and protect the culture of Nagaland.
- It is named after Hornbill – **a tropical bird reflected** in tribal cultural expressions, songs and dances.
- **Conceptualised in 2000,** the Hornbill Festival is annually celebrated.

8.3.8. VEER BAL DIWAS (26 DECEMBER)

- Nation observed the first Veer Bal Diwas by paying tributes to **Guru Gobind Singh's** martyred sons - **Sahibzada Baba Zorawar Singh** and **Sahibzada Baba Fateh Singh**.
- Last week of December is observed as **Shaheedi Saptah** - starting with the martyrdom of **Guru Gobind Singh's** elder sons **Sahibzada Ajit Singh** and **Sahibzada Jujhar Singh**.
- **Guru Gobind Singh** (1671 -1708) was the 10th Sikh Guru born at Patna Sahib, Bihar.
  - He created the **Khalsa Panth** and fought the **battles of Anandpur** (1700) and **Chamkaur** (1704) against Mughals.
  - He wrote **Zafarnamah** in **1705**.

8.3.9. ASSAM MOVEMENT

- Assam observed **Swahid Diwas** on **10 December** - paying tribute to **Khargeshwar Talukdar** - the first martyr of **Assam Movement**.
- Assam movement (1779-1985) was **started** under **leadership** of **All Assam Students Union (AASU)** and **All Assam Gana Sangram Parishad (AAGSP)**.
  - It was triggered by **fears of illegal immigration** into state, threatening **local identity** and **heritage.**
  - It ended with **Assam Accord** between Government of India and Leaders of Movement.
  - It aimed to **detect and deport foreigners**; all round economic development; and **provide Constitutional, Legislative & Administrative safeguards**.

8.3.10. SAHITYA AKADEMI AWARDS (SAA)

- **Sahitya Akademi announced SAA for 2022**.
- It is a **literary honour, conferred annually on writers** of most outstanding books of literary merit published in any of the major Indian languages.
  - **Besides 22 languages** enumerated in 8th Schedule of Constitution, **English and Rajasthani are also recognised.**
  - Award includes a casket containing an engraved copper-plaque, a shawl and an amount of Rs. 1,00,000/-.
- **Sahitya Akademi functions as an autonomous organisation**. It is registered as a society under Societies Registration Act, 1860.

8.3.11. NATIONAL SPORTS AWARDS

- **National Sports Awards** are a collection of 6 awards given out to sportspersons, coaches or organisations for contribution towards the growth of Indian sports.
  - **6 core awards are:** Major Dhyan Chand Khel Ratna Award, Arjuna Award, Dronacharya Award, Major Dhyan Chand Award for lifetime achievement, Maulana Abul Kalam Azad Trophy, and the Rashtriya Khel Protsahan Puruskar.
- Awards **are given annually by Ministry of Youth Affairs** and Sports **to commemorate the birth anniversary** of hockey legend Major Dhyan Chand.

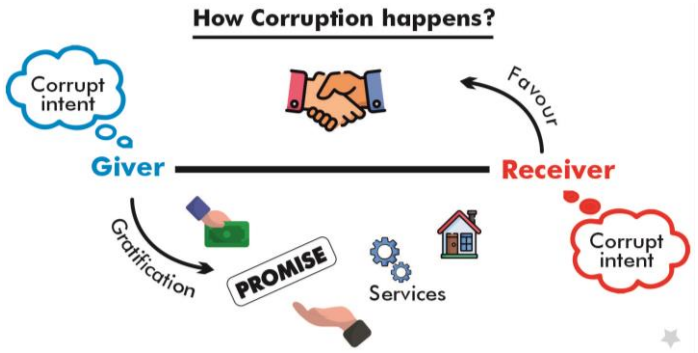
SMART QUIZ

You can scan this QR code to practice the Smart Quiz of Culture at our open test online platform for testing your understanding and recalling of the concepts.

9. ETHICS

9.1. CORRUPTION AND CIVIL SERVICES IN INDIA

Introduction



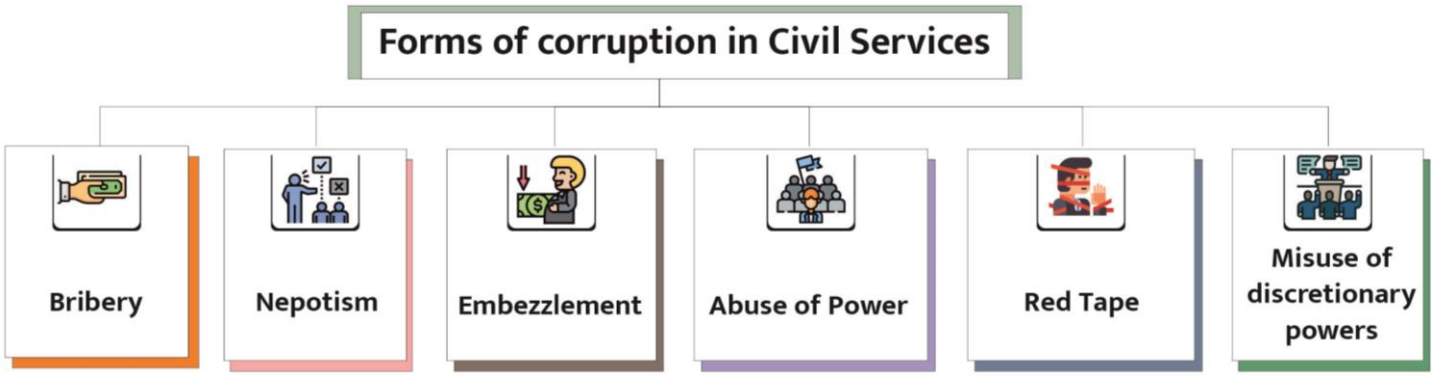
"FCI corruption case: CBI searches 19 more locations", "CBI arrests 7, in Rs 50 lakh bribery case" and many other corruption instances with involvement of public servants have been found.

In this context, the Supreme court of India recently ruled that a public servant can be convicted for illegal gratification in a corruption case on the basis of circumstantial evidence when there is no direct oral or documentary evidence against them.

What is Corruption?

One of the simplest definitions of corruption (also used by World Bank), it is the abuse of the public power for private benefit.

Alternatively, it can also be defined as receiving, asking for or giving any gratification to induce a person to do a favour with a corrupt intent.



Causes of corruption among civil servants

- **Remuneration issues:** The problem of lower pay in the civil service (compared to private sector) is accompanied by inadequate differentials between the highest and lowest grades.
  - In the face of perceived parity with their private sector counterparts, higher-level civil servants in the civil service may be tempted to augment their pay by illicit means.
- **Cultural acceptability of corruption:** Across the board acceptability for corruption in some form or the other among businesspeople, politicians, and citizens indirectly pushes their conformation to the system.
- **Insufficiency of All India Services (Conduct) Rules, 1968:** The rules mention the idea of integrity, merit, impartiality among others. But their limited elaboration, lack of enforceability and overall absence of a dedicated Code of Ethics underscores the importance of ethical conduct.
- **Opaque Regulations and high discretion:** The existence of numerous regulations which are opaque and discretionary in nature, provide an opening to engage in corrupt practices. Exploitation of these powers is further encouraged by external elements.
- **Colonial Legacy of Unchallenged Authority**: In a society that has had a subservient equation with power, it is easy for public officials to deviate from ethical conduct.
- **Politicization of the Civil Service:** Politicization of the civil services compromises the value of neutrality in the civil services. Further, it may lead to biased decision making, exchange of favours among others.

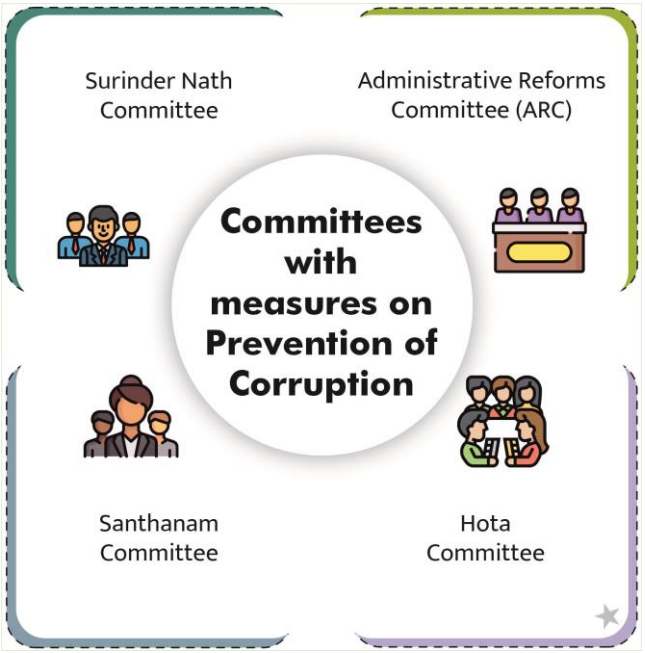
Consequences of Corruption	
Impact on governance	**Impact on the society**
• **Misutilization of resources**: Corruption leads to the misutilization of public resources by a public authority which directly impacts service delivery and leads to the squandering of public money. • **Abuse of power:** Corruption leads to diminishing of the Constitution and democratic institutions amounting to a wilful violation of the oath of office and abuse of authority. • **Unholy nexus of corrupt officials and criminals**: It leads to violation of laws, poor quality of service, lack of protection from lawbreakers on political, group, class, communal, or caste grounds, partisan interference in the investigations of crimes, etc. • **Compromises the capacity of the State:** Corruption puts pressure on the financial resources of the State, which adversely affects the welfare projects/programs of the government. • **Violation of trust:** Civil servants are entrusted with serving the public and managing public resources. When they engage in corruption, they violate the trust of citizens and undermine the integrity of the government and civil servants.	• **Exacerbates inequality**: Corruption leads to growing inequality. This deprivation leads to a sense of injustice amongst the deprived, thereby leading to resentment, anger, and hatred among different strata of society. • **Reverses role models:** Corruption creates an enormous asymmetry of power which reduces societal pressure to conform to ethical behaviour and makes it easy to indulge in further corruption. • **"Chalta-hai" attitude:** Corruption is viewed as a means to get the bureaucratic machinery to move forward and enrich oneself at public expense. • **Impacts political discourse:** Corruption acts as an irresistible magnet that draws criminals to politics, thus influencing political discourse, which in turn, impacts the social fabric and incentivizes more people to adopt the route of corruption. • **Obstruction of Justice:** Rich and well-connected people do not face justice or penalties for serious infractions by circumventing the law.

Recent government measures for checking corruption

- **Transparent citizen-friendly services:**
  - Direct Benefit Transfer initiative.
  - E-tendering in public procurements
  - Government procurement through the Government e-Marketplace (GeM)
  - Focusing on e-Governance
- **Discontinuation of interviews** in the recruitment of Group 'B' (Non-Gazetted) and Group 'C' posts in the Government of India.
- **Invocation All India services (DCRB) Rules, 1958** for retiring officials from service in public interest whose performance has been reviewed and found unsatisfactory.
- **Central Vigilance Commission (CVC)** recommended the adoption of **the Integrity Pact** to organizations in major procurement activities.
  - An **Integrity Pact** is both a signed document and approach to public contracting which commits a contracting authority and bidders to comply with best practice and maximum transparency.
- **The Lokpal and Lokayuktas Act, 2013: The institution of Lokpal** has been operationalized by the appointment of Chairperson and Members.
- **The Prevention of Corruption Act, 1988** has been amended to criminalize the act of giving bribes.
- '**Mission Karmayogi'** with the aim to build a citizen-centric and future-ready civil service for the nation.

Other Acts to deal with corruption

- Indian Penal Code, 1860
- **The Prevention of Corruption Act, 1988**
- The Benami Transactions (Prohibition) Act, 1988
- The Prevention of Money Laundering Act, 2002
- The Foreign Contribution (Regulation) Act, 2010
- **The Right to Information Act, 2005**



Way forward

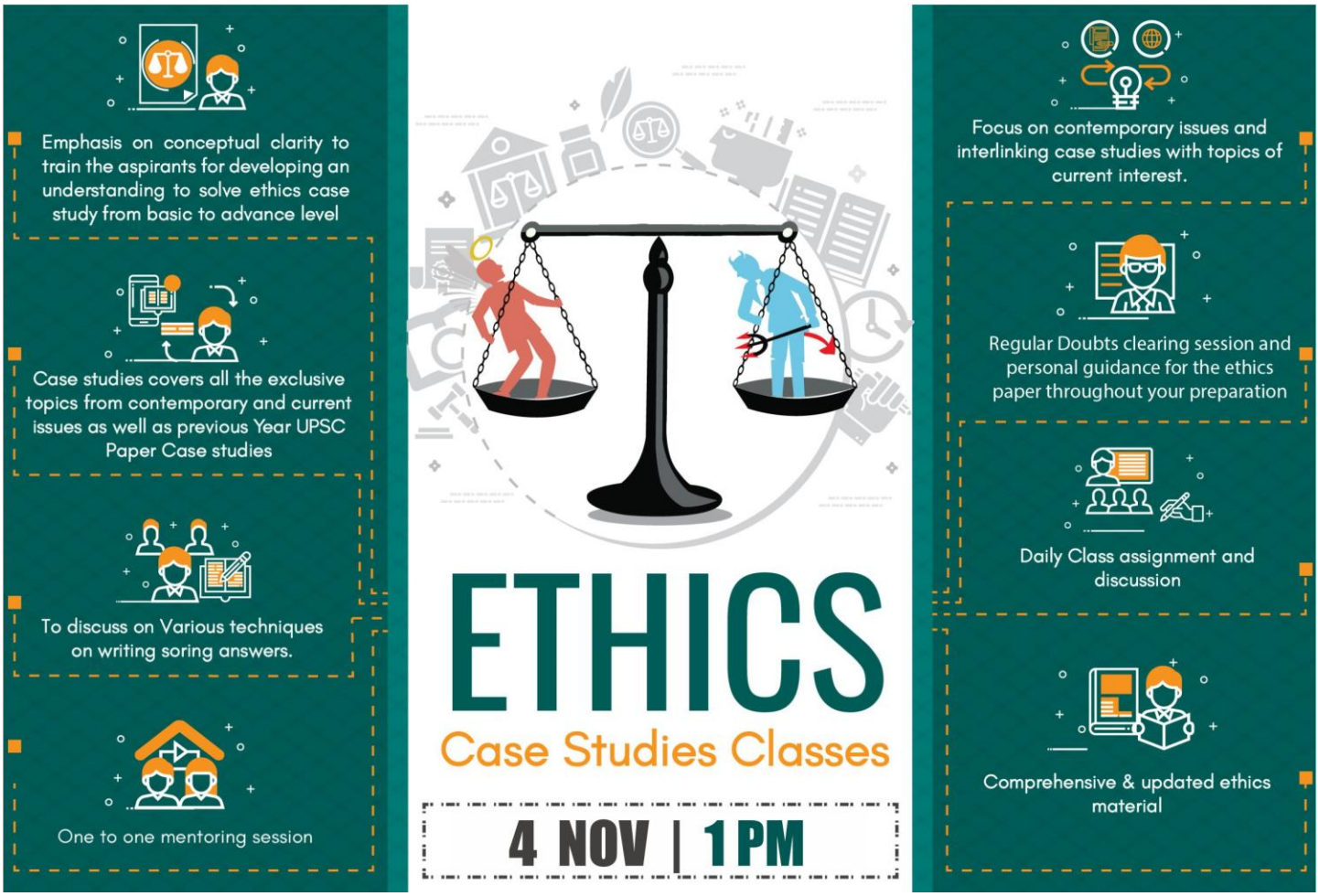
- **Emphasize Value-based Training:** It is important to emphasize value-based training to all civil servants to ensure probity and integrity in public life. For instance, the techniques such as **integrity testing** or code of conduct and training programs can be used here.

- It is a technique to detect individuals who are prepared to accept a bribe, or another inducement, to act corruptly by doing something that they are required to do in their position.

- **Legal and Regulatory reforms:** Legal and administrative reformation to ensure that discretionary powers are minimized and there are clear accountability systems for civil servants.
  - This includes development of governance systems and regulations which are **citizen centric** in nature.
- **Institutional reforms**: Strengthening the law enforcement agencies such as the CBI, CVC, Courts, and Lokpal among others. This includes removing external pressures of these institutions such as political pressure, financial dependencies etc.
- **Enhancing the use of technology:** The use of technology such as blockchain, AI, and e-governance can help to reduce opportunities for corruption by increasing transparency and accountability in government operations.
- **Performance evaluation and management**: Regularly evaluating and managing the performance of civil servants can help to identify corrupt practices. This will create active deterrence for corruption among civil servants.
- **Responsibilities of Citizens:** Corruption is not an act in isolation but is executed as part of a system which involves citizens and businesses along with civil servants. In this light, it is important that they are sensitized regarding the ill effects of corruption and actively discouraged from partaking it.

Conclusion

In the long run, Prevention of corruption can only be eliminated if corruption can be made culturally unacceptable. For reformation of the culture, it is important to uphold, imbibe and nurture the right values among Civil Servants.



10. SCHEMES IN NEWS

10.1. REMISSION OF DUTIES AND TAXES ON EXPORTED PRODUCTS (RODTEP) SCHEME

Why in news?

Recently, Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme has been extended to include Chemicals, Pharmaceuticals and Articles of Iron and Steel.

<table>
<tr><th>Objectives</th><th>Salient features</th></tr>
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To support domestic industry and make it more competitive in the international markets.
The Scheme's objective is to refund, currently un-refunded:

Duties/ taxes/ levies, at the Central, State & local level, borne on the exported product, including prior stage cumulative indirect taxes on goods & services used in production of the exported product, and
Such indirect Duties/ taxes/ levies in respect of distribution of exported products.

</td>
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It is a flagship export promotion scheme of the Ministry of Commerce and being implemented by Department of Revenue.

RoDTEP was announced in September 2019 to replace the export incentive scheme Merchandise Exports from India (MEIS) scheme.

The Scheme covers all indirect Central & State taxes that are not reimbursed in any existing scheme.
The RoDTEP Scheme aims to refund all the hidden taxes and levies paid by exporters, For example:

Central & state taxes on the fuel (Petrol, Diesel, CNG, PNG, and coal cess etc.) used for transportation of export products.
The duty levied by the state on electricity used for manufacturing.
Mandi tax levied by APMCs.
Toll tax & stamp duty on the import-export documentation. etc.

All exporters of goods are eligible to take benefit under this scheme.

Such exporter may either be the merchant or manufacturer exporter. However, such goods should have been directly exported by such person.

Under RoDTEP, all sectors, including the textiles products which are not covered under the RoSCTL, are covered, to ensure uniformity across all areas.

Rebate of State and Central Taxes and Levies (RoSCTL) Scheme was introduced by the Ministry of Textiles.
It aims to rebate all embedded State and Central Taxes and Levies on garments and made ups to enhance competitiveness of these sectors.

RoDTEP support will be available to eligible exporters at a notified rate as a percentage of Freight on Board (FOB) value.

FOB stands for “free on board” or “freight on board” and is a designation that is used to indicate when liability and ownership of goods is transferred from a seller to a buyer.

Rebate on certain export products is subject to value cap per unit of the exported product.
Rebates will be issued in the form of a transferable duty credit/electronic scrip (e-scrip) which will be maintained in an electronic ledger by the Central Board of Indirect Taxes and Customs (CBIC).
It is a World Trade Organisation (WTO) compliant Scheme and follows the global principle that the taxes/duties should not be exported.

They should be either exempted or remitted to exporters, to make the goods competitive in the global market.

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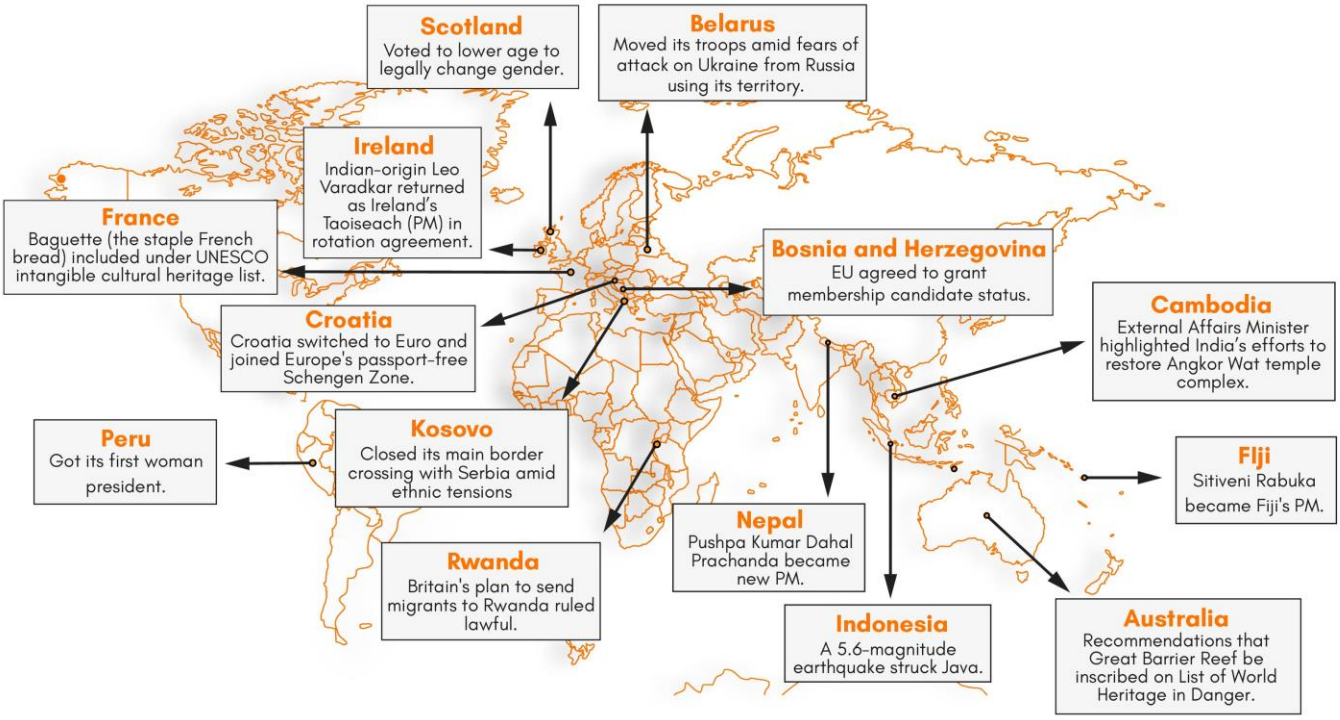
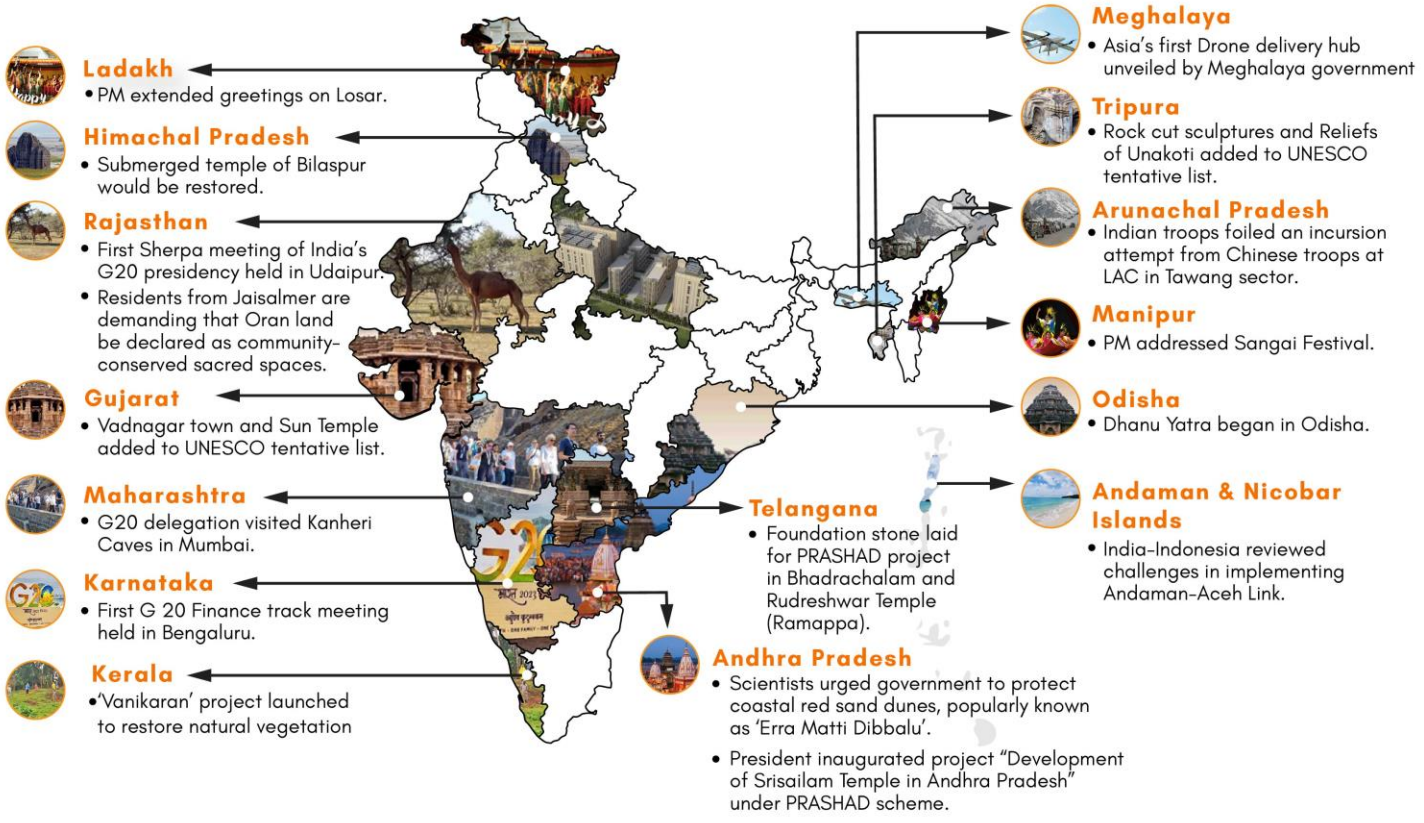
Places in News: World



Places in News: India



Personalities in News

Personality	About	Ethical Values Exhibited by the personality
 Chaolung Sukapha	• On the occasion of Assam Day, or Asom Diwas (December 2), tributes poured in for Swargadeo Chaolung Sukapha. • **About Chaolung Sukapha:** ▫ Hailed **as "architect of Assam",** miner of Greater Assam and unifier of the greater Assamese. ▫ A **13th-century ruler** who founded **Ahom kingdom** that ruled Assam for six centuries. ▫ Built his capital at **Charaideo** (near present-day Sibsagar town). ▫ **Contributions** ✓ Made successful efforts towards **assimilation of different communities and tribes.** ✓ Laid foundation for a robust and vibrant Assam through his **policy of amity, unity and harmony.**	• **Courage and selflessness** ▸ Founder of Ahom Kingdom, he was the first ahom king of medieval Assam. ▸ The kingdom he established existed for nearly six hundred years and in the process unified various communities.
 Ahilyabai Holkar	• There is a **proposal to rename Maharashtra city of Ahmednagar** as 'Punyashlok Ahilyadevi Nagar'. • She was a **18th century Malwa queen.** She **took control of Malwa in 1754 after her husband's** (Khande Rao) **death in Battle of Kumbher** against king of Bharatpur. • **Highlights/achievements of her rule** ▫ She **excelled at administrative and military strategies** and during her rule perfect order and good government prevailed. ▫ **City of Maheshwar became a literary, musical, artistic and industrial centre,** and she helped establish a textile industry there, which is now home to famous Maheshwari saris. ▫ **Restoration/revamp of various temples** including Kashi Vishwanath, Badrinath, Dwarka, Omkareshwari etc.	• **Valour and administrator** ▸ The Queen of Malwa, apart from being a brave queen and proficient ruler, was also an erudite politician. She observed the bigger picture when the Maratha Peshwa couldn't pin down the agenda of the British.
 Madan Mohan Malviya	• Born at **Prayagraj** (earlier **Allahabad**), he was a **freedom fighter** and **educationist,** popularly known as **Mahamana.** • In **1906,** he **founded Hindu Mahasabha** and **Banaras Hindu University** in **1916.** • He served as a **member of Imperial Legislative Council** and **Indian Industrial Commission.** • He joined **Indian National Congress (INC)** in **1886** and became its President 4 times: **1909 (Lahore), 1918 (Delhi), 1932 (Delhi)** and **1933 (Calcutta).** • **Media:** Served as **Editor** of **Hindustan.** He started **Abhyudaya** (Hindi weekly, 1907), **Maryada** (Hindi monthly, 1910) and **The Leader** (English Daily, 1909).	• **Commitment and Patriotism** ▸ As a lawyer, he defended most of the accused in the 1922 Chauri Chaura riots in Gorakhpur in UP and is said to have saved 153 accused from getting death penalty. ▸ He left his high-earning job for the sake of nation and started working for political cause of national awakening and independence.
 Subramaniya Bharathiyar	• **Famously known as Mahakavi Bharathiyar,** he was a **poet, freedom fighter and social reformer** from Tamil Nadu (TN). • **Key contributions:** ▫ **As a poet and a Nationalist:** He penned down **patriotic poems.** His famous works include **"Sudesa Geethangal", "Kannan Pattu"** etc. ▫ **As a journalist: Sub-editor of "Swadesamitran"** and started a **paper "India" in Tamil language** (first paper in TN to publish political cartoons). • He was **against child marriage, stood for reforming Brahminism and religion.** He was also in solidarity with Dalits and Muslims. • **Raja of Ettayapuram impressed with his poetry had given him title of** 'Bharati' which means the one blessed by Goddess Saraswati.	• **Genius and Egalitarian** ▸ He was a literary genius and wrote about every complex social, political, or philosophical issue that existed then. ▸ His writings reveal a visionary poet deeply preoccupied with the realisation of a just and joyful human society. He rejected British colonialism as an affront to human dignity; but he was equally critical of the oppressive conventions of his own society.
 Dr. Rajendra prasad	• He is the **first President of India** (1950-62). • **From 1946 to 1949 he presided over the Indian Constituent Assembly** and helped to shape the constitution. • He also was a comrade of Mahatma Gandhi early in the non-cooperation movement for independence and was **president of the Indian National Congress (1934, 1939, and 1947).** • **Literary work:** Satyagraha in Champaran, India Divided, Searchlight (English) etc. ▫ **Founded and edited the Hindi weekly Desh.**	• **Dedication and Public service** ▸ He was one of those dedicated people who gave up a lucrative career to work for greater goal-achieving independence for the Motherland. ▸ He took an active role in helping people affected by the 1914 floods that struck Bihar and Bengal. Further, he encouraged the development of education in India

Satyendra Nath Bose
	• **His 129th birth anniversary** was celebrated on 1st January.
	• **Key achievements**
	  ▫ **His work involves theoretical physics** and he has made some fundamental conceptual contributions in **development of Quantum Mechanics and Quantum Statistics.**
	  ▫ **He went on to work with Einstein** and together they developed **Bose-Einstein statistics.**
	  ▫ **Derived Planck's law for black body radiation** (which refers to spectrum of light emitted by any hot object) without any reference to classical electrodynamics.
	  ▫ **Joined laboratory of Maurice de Broglie** where he learnt techniques of **X-ray spectroscopy and crystallography.**
	  ▫ Was awarded **Padma Vibhushan in 1954.**
		• **Scientific aptitude and Knowledge**
		  ▸ He consistently contributed through his research to the field of Quantum mechanics.
		  ▸ His research, later led to establishment of the S.N. Bose National Centre for Basic Sciences by an act of Parliament in Calcutta in 1986.

Chaudhary Charan Singh
	• Born in Noorpur village in Meerut District (Uttar Pradesh), Ch. Charan Singh was a **freedom fighter** and a **socialist leader.**
	  ▫ In 1979, he became the **Prime Minister of India.**
	• He is remembered for his contribution to **safeguard the farmers interest.** E.g. In 1938, he introduced the Agriculture Produce Market Bill in the Uttar Pradesh (erstwhile United Provinces) assembly.
	  ▫ It was adopted by most states in India.
	• Every year, the National Farmers' Day (Kisan Diwas) is observed on his birth anniversary.
	• **Literary Contributions: Cooperative Farming X-rayed; Abolition of Zamindari etc.**
		• **Simplicity and Compassion**
		  ▸ He led a simple life and liked reading and writing.
		  ▸ He took a leading part in the formulation and finalization of the Department Redemption Bill 1939. It brought great relief to rural debtors

Kamaladevi Chattopadhyay
	• Born in Mangalore, Karnataka, and was **first woman to run for Legislative office.**
	• She proposes that **women's rights, religious freedom, environmental justice, political independence, and civil rights** were all interrelated movements.
	• She joined **Indian National Congress (INC) in 1927.**
	• She **promoted art & crafts** that resulted in setting up of **National School of drama, Sangeet Natak Akademi (SNA), and Crafts Council of India.**
	• She was felicitated with **SNA Fellowship, Ramon Magsaysay, padma Bhushan, Padma Vibhushan.**
		• **Social Justice and activist**
		  ▸ As a social reformer, she played a crucial role in bringing back handicrafts, theatre and handlooms to help in uplifting the socio-economic status of the Indian women.
		  ▸ During the Salt March to Dandi, she convinced Gandhi to give women equal opportunity to be in the forefront of the March.

Benoy Bose
	• He was born in the village **Rohitbhog in the Munshiganj District, now in Bangladesh.**
	• He joined the **'Mukti Sangha',** a secret society connected to the revolutionary Jugantar party.
	• **Benoy Bose along with Dinesh Gupta and Badal Gupta** entered the Writer's Building on 8th December,1930 and **opened fire on Col N S Simpson, IG Prison-Kolkata.**
	• They were a part of the **Bengal Volunteers on their quest to liquidate infamous British officers.**
	  ▫ Bengal volunteers was **formed by Subhash Chandra Bose** in 1928
		• **Bravery and Sacrifice**
		  ▸ Benoy, who was influenced by revolutionary activities and had decided to take matters into his own hands. He launched an attack on the Secretariat Building along with Badal Gupta and Dinesh Chandra Gupta.

Yoginder K Alagh
	• Birth: At Chakwal in Punjab (Pakistan)
	Contribution:
	  ▫ Taught economics at Indian and foreign universities and also served as the **vice-chancellor of JNU**
	  ▫ Served as a member of Rajya Sabha
	  ▫ Headed a task force, also known as **Alagh Committee,** in 1979 which devised the first ever poverty estimates based on calorie requirements
	  ▫ Chairman of **Institute of Rural Management Anand (IRMA)** from 2006 to 2012.
		• **Dedicated to public service**
		  ▸ He started the process of establishing a system of agricultural planning based on ecosystems rather than specific crops

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8 IN TOP 10 SELECTIONS IN CSE 2021

from various programs of VisionIAS

CIVIL SERVICES EXAMINATION 2020

1 AIR

SHUBHAM KUMAR

2 AIR

ANKITA AGARWAL

3 AIR

GAMINI SINGLA

4 AIR

AISHWARYA VERMA

5 AIR

UTKARSH DWIVEDI

6 AIR

YAKSH CHAUDHARY

7 AIR

SAMYAK S JAIN

8 AIR

ISHITA RATHI

9 AIR

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