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## Table of Contents

<b>1. POLITY AND GOVERNANCE</b>	<b>3</b>		
1.1. Inter-State Border Disputes in India	3		
1.2. Seventh Schedule	5		
1.3. Changing Role of Civil Society in Emerging India	6		
1.4. Panchayats (Extension to the Scheduled Areas) Act, 1996	9		
1.5. Role of Panchayats in Service Delivery	11		
1.6. Digital Sovereignty	13		
1.7. News in Shorts	15		
1.7.1. CBI and Enforcement Directorate (ED) Chiefs can now hold office up to 5 year	15		
1.7.2. Andhra Pradesh (AP) Assembly Passes Bill to Repeal Act Intending 3 Capitals for the State	15		
<b>2. INTERNATIONAL RELATIONS</b>	<b>17</b>		
2.1. India-Eurasia	17		
2.2. Bilateral Investment Treaties	18		
2.3. INDIA-RUSSIA MILITARY COOPERATION	20		
2.4. News in Shorts	22		
2.4.1. Over 87,000 UN Peacekeepers Face Greater Threats from Complex Conflicts	22		
2.4.2. India and USA Agree on a Transitional Approach on Equalisation Levy (EL)	22		
<b>3. ECONOMY</b>	<b>23</b>		
3.1. State Finances	23		
3.2. National Multidimensional Poverty Index	26		
3.3. Cash Economy	29		
3.4. Insolvency and Bankruptcy Code (IBC), 2016	31		
3.5. Prompt Corrective Action (PCA)	33		
3.6. Sustainable Business Practices	35		
3.7. Mineral Conservation and Development (Amendment) Rules, 2021	38		
3.8. Electronics Industry	40		
3.9. Fisheries Sector in India	41		
3.10. News in Short	44		
3.10.1. RBI wants Digital Currency included under Definition of 'bank note'	44		
3.10.2. Government Securities (G-Secs) to soon join Global Bond Indices	45		
3.10.3. RBI Retail Direct Scheme	45		
3.10.4. HARBINGER 2021 – Innovation for Transformation	45		
3.10.5. Special Credit Linked Capital Subsidy Scheme (SCLCSS)	45		
3.10.6. LEADS (Logistics Ease Across Different States) 2021 Report	45		
3.10.7. National Apprenticeship Training Scheme (NATS)	46		
3.10.8. SEBI Unveils Investor Charter	46		
3.10.9. Target to Halve Global Fuel Consumption by 2030 is Stalling: IEA Report	46		
3.10.10. Cabinet approves reservation norms for Jute Packaging Materials	47		
3.10.11. Centre Amended Legal Metrology (Packaged Commodities), Rules 2011	47		
<b>4. SECURITY</b>	<b>48</b>		
4.1. Personal Data Protection	48		
4.2. Role of Technology in Law Enforcement	51		
4.3. Self-Reliance in Defence Manufacturing	53		
4.4. Drugs Trade	56		
4.5. News in Shorts	59		
4.5.1. Indian Ocean Naval Symposium (IONS)	59		
4.5.2. INS Visakhapatnam	59		
4.5.3. Vela	59		
4.5.4. Defence Exercises	59		
4.5.5. Operation Sankalp	59		
<b>5. ENVIRONMENT</b>	<b>60</b>		
5.1. COP 26	60		
5.2. Air Pollution in National Capital Region	63		
5.3. Clydebank Declaration for Green Shipping Corridors	65		
5.4. National Interlinking of Rivers Authority (NIRA)	66		
5.5. National Coal Gasification Mission	69		
5.6. Flash Drought	71		
5.7. News in Shorts	73		
5.7.1. Pakke Tiger Reserve 2047 Declaration	73		
5.7.2. River Cities Alliance (RCA)	73		
5.7.3. E-Amrit Portal	73		
5.7.4. Earth's First Continents Formation	74		
<b>6. SOCIAL ISSUES</b>	<b>75</b>		
6.1. Quality of Education in Schools	75		
6.2. Hunger and Malnutrition	77		
6.2.1. Global Nutrition Report 2021	80		
6.3. Health Insurance for India's Missing Middle	82		
6.4. All India Survey on Domestic Workers (AISDWs)	84		
6.5. News in Shorts	85		
6.5.1. Union Health Ministry Releases National Family Health Survey (NFHS-5) Phase II Findings	85		
6.5.2. The National Health Accounts (NHA) Estimates for India for 2017-18 is Released	86		
6.5.3. Swachh Survekshan 2021 Report Released by Ministry of Housing and Urban Affairs (MoHUA)	86		
6.5.4. Initiative on Creating Lakhpati SHG Women	87		
<b>7. SCIENCE AND TECHNOLOGY</b>	<b>88</b>		
7.1. 5G Technology	88		
7.2. Satellite Internet Services	90		
7.3. Laser Interferometer Gravitational-Wave Observatory (LIGO) Project	91		
7.4. News in Shorts	93		
7.4.1. Internet Protocol Version 6 (IPv6)	93		
7.4.2. Geographical Information System (GIS) Plans for around 75% Gram Panchayats (GPs) Completed	93		

7.4.3. Draft Notification on Food Safety & Standards (Genetically Modified or Genetically Engineered Foods) Regulations, 2021 _____	93	<b>8.3. News in Shorts _____</b>	<b>99</b>
7.4.4. ISRO Prevents Collision of Chandrayaan-2 Orbiter and with NASA's Lunar Reconnaissance Orbiter (LRO)	94	8.3.1. Haryana: Along the lost Saraswati trail, a 1,600-yr-old site of 'continued habitation' _____	99
7.4.5. Double Asteroid Redirection Test (DART) Mission _____	94	8.3.2. Srinagar joins UNESCO Creative Cities Network (UCCN) under the Crafts and Folk Arts Category _____	99
7.4.6. New Exoplanet-TOI 1789b or HD 82139 _____	94	8.3.3. Padma Awards Presented by The President _____	100
7.4.7. WHO Designates New Coronavirus Strain as 'variant of concern', names it 'Omicron' _____	94	8.3.4. Darjeeling Toy Train _____	100
7.4.8. ZyCov-D, the World's First Needle-free Covid-19 Vaccine _____	95	8.3.5. Best Tourism Villages (BTV) by UNWTO _____	100
7.4.9. Wolbachia Bacteria _____	95	<b>9. ETHICS _____</b>	<b>101</b>
<b>8. CULTURE _____</b>	<b>96</b>	9.1. Ethics and Climate Change _____	101
8.1. Decolonisation of Minds _____	96	<b>10. SCHEMES IN NEWS _____</b>	<b>104</b>
8.2. Janjatiya Gaurav Divas _____	98	10.1. Pradhan Mantri Gram Sadak Yojana (PMGSY) _____	104
		10.2. Dairy Sahakar Scheme _____	104
		<b>11. APPENDIX I: TRIBAL REVOLTS _____</b>	<b>106</b>

## NOTE:

Dear Students,

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



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



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



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



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

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# 1. POLITY AND GOVERNANCE

## 1.1. INTER-STATE BORDER DISPUTES IN INDIA

### Why in News?

Recently, the Assam and Meghalaya government has agreed to settle the long pending **inter-state border disputes** in at least **six areas**.

### More on News

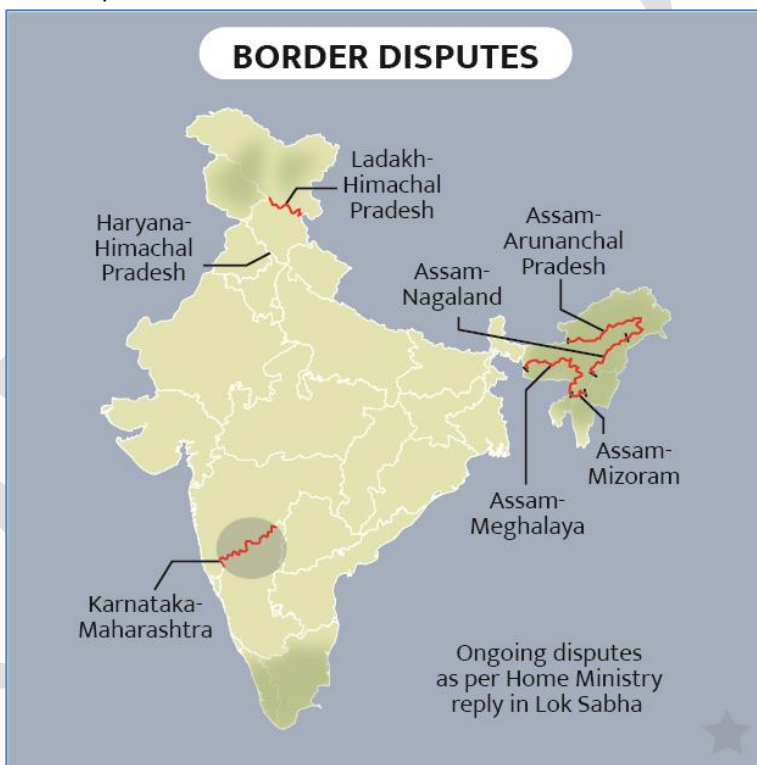
- Meghalaya was carved out of Assam, and it became a **full-fledged state in 1972**.
- With over **884 km** of border, there are **12** points of dispute between the two states including Langpih, Boko etc. in **Kamrup, Kamrup Metropolitan** and **Hailakandi** districts.
- These disputes stemmed from the Meghalaya government's refusal to accept the **Assam Reorganisation (Meghalaya) Act of 1969**.
- The recent decision came after the formation of **special regional committees** by both states to resolve the issue.

### Indian Administrative Divisions and its Inter-state border disputes

One of the oldest and greatest civilizations of the world, the present-day Indian Union was formed by joining **over 550 Princely States** and **British Territories**.

The **State Reorganization Commission (SRC)** of **1953** divided Indian Territory into **14 states** and **6 Union Territories (UTs)** on linguistic and other basis. Today, through subsequent reorganizations, the total number of administrative divisions in India is **28 states** and **8 UTs**. This division is not without cracks in certain borders-

- The reorganization of the State of Assam, starting from Nagaland in 1963 gave rise to **4 inter-state border disputes** in Northeastern region, including **Assam-Meghalaya dispute**-
  - **Assam-Nagaland dispute** over Naga Hills and all Naga-dominated area in North Cachar and Nagaon districts, which were part of Naga territory under 1866 notification from British.
  - **Assam-Mizoram dispute** over boundaries in southern Assam's Barak Valley and the Lushai Hills, based on two British-era notifications of 1875 and 1933 with Mizoram demand on boundary as decided in 1875.
  - **Assam-Arunachal Pradesh** dispute over forested tracts in the plain areas of border.
- Apart from it, some other inter-state border disputes also exist in India, either **active** or **dormant**, such as:



Active	Dormant
<ul style="list-style-type: none"> <li>• <b>Haryana-Himachal Pradesh</b> over Parwanoo region near Panchkula,</li> <li>• <b>Maharashtra-Karnataka</b> over Belgaum district with a large <b>Marathi-speaking population</b>. It was part of <b>Bombay presidency</b> before coming under <b>Karnataka</b> in <b>1956</b>, and</li> <li>• <b>Himachal Pradesh-Ladakh</b> over Sarchu, lying along Leh-Manali highway.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Odisha-West Bengal</b> had issues in the past along its mainland boundaries and over <b>Kanika Sands Island</b> in the Bay of Bengal,</li> <li>• <b>Haryana-Punjab</b> over Chandigarh,</li> <li>• <b>Karnataka-Kerala</b> over Kasaragod, part of Kerala with many Kannada-speaking people,</li> <li>• <b>Gujarat-Rajasthan</b> over Mangadh Hill.</li> </ul>

## What are the reasons which led to development and prevalence of Inter-state border disputes?

- **British Colonial policy** to create and recreate boundaries based on administrative convenience or commercial interests leading to present day claims and counter claims in regions like Northeast.
- **Lack of implementation of recommendation on border disputes.** E.g., Nagaland rejected Sundaram Commission report on its dispute with Assam. Similarly, Meghalaya rejected the Y.V. Chandrachud Committee report on its dispute with Assam.
- **Failure of constitutional mechanisms** to address the border disputes.
  - Under **Article 131 (c)**, the **Original Jurisdiction** of the Supreme Court extends to any dispute between two or more states involving legal rights (exclusively). But either the solutions come at a slow pace or states don't cooperate. E.g.
    - ✓ The **Assam-Arunachal Pradesh dispute** has been before the **Supreme Court since 1989.**
    - ✓ In the **Assam-Nagaland dispute**, the one or both states expressed reservation on the Supreme Court appointed commission report or **not accepted Supreme Court appointed mediators report respectively.**
  - Similarly, **Article 263** provides for **Inter-State Council**. Under **Article 263 (a)**, it is competent enough to **inquire and advice upon disputes between states.** But it was appointed only after Sarkaria Commission recommendations in 1990.
- **Disappointment from Zonal Councils** set up under the States Re-organisation Act, 1956 and North Eastern Council under the North Eastern Council Act, 1971. Like Inter-State Council, the **meetings of zonal councils are less frequent and mainly revolve around other issues.**
- **Limitations on Union Government interventions** as it can act as a facilitator for amicable settlement of the dispute only with willing cooperation of the State Governments concerned; keeping the spirit of **mutual accommodation and understanding alive.**
- **Political opportunism** of using inter-state disputes for vote bank politics.
- **Other Reasons:** Threat perception of indigenous people from outsiders migration; economic competition between states for resources/land, Complexities of terrain or geographical features like forests, rivers etc. to properly identify and mark boundaries.

## Consequences of Inter-state disputes

<b>Social</b>	<ul style="list-style-type: none"> <li>• Violence <b>between States.</b> E.g. recently, the <b>Assam-Mizoram</b> dispute turned into a <b>violent clash</b> with the death of at least 5 police personnel.</li> <li>• Threat to Social Harmony in the region <b>due to damage to the social fabric of society.</b></li> </ul>
<b>Economical</b>	<ul style="list-style-type: none"> <li>• <b>Lack of Growth and Development</b> in the disputed regions.</li> <li>• <b>Unwanted cost escalations</b> for people and businesses due to <b>additional security deployment at disputed borders.</b></li> </ul>
<b>Political</b>	<ul style="list-style-type: none"> <li>• <b>Domino effect</b> or chain reaction at other disputed borders or in other inter-state disputes such as river water, migration of people etc. due to <b>trust deficit between states.</b></li> <li>• <b>Rise of secessionist tendencies</b> and groups which pose a threat to internal security. For instance, it can lead to <b>confluence of groups with enemies</b> of India including hostile neighbors.</li> </ul>

## Way Forward

- **Set up State committees** to work with Survey of India and other neutral agencies for land surveys. The local communities can also be engaged in this demarcation of borders.
- **Maintain peace and tranquility along disputed areas** by limited presence of police personnel and use of technology like **UAV and satellite imagery** for vigilance.
- **Creating no-man's land** along the border and remove the encroachments from both sides. It curtails economic and social interests behind the dispute and help to devise a **"no lose" (non-zero sum)** solution to territory dispute.
- **Frequent meetings of Inter-State Councils** and **Zonal Councils** for **convergence of interests** between states and suggest **institutional solutions** to benefit both by dispute resolution.
- **Time-bound resolution of border dispute cases** and mechanism to implement its orders or recommendations of court-monitored commissions/mediators or tribunals.
  - For instance, **tribunals** can be established to hear inter-state border disputes and interpret the old legal documents (e.g. in Assam-Mizoram dispute) to reach a solution.

- **Creation of conducive environment by Union Government** to facilitate the coming together of states, based on the **spirit of cooperative federalism**, for agreement on mediation or implementing the existing recommendations from committees or **Joint Administration**.
- **Political efforts:** Though an ad hoc measure, but national parties could use their party machinery to reach a **political understanding**, helping to avoid its repercussions in social and economic sphere, keeping the boundaries only on land rather than to be drawn in people minds.

## 1.2. SEVENTH SCHEDULE

### Why in News?

Fifteenth Finance Commission chairman NK Singh has called for a thorough review of the Seventh Schedule of the Constitution in the wake of current challenges of climate change and the pandemic.

### About Seventh Schedule

- Article 246 confers legislative powers on the Parliament and the State Legislatures on the subjects enumerated in the Seventh Schedule.
- Broadly, entries that are related to **national importance were allocated to the Union and entries of local concern were allocated to the States**.
- As per Sarkaria Commission, **concurrent list subjects are neither exclusively of national concern nor of local concern** and hence occupy a constitutional 'grey' area.



### Rationale behind the list system contained in the Seventh Schedule

- **Unity and Integrity of India:** In light of the tragic circumstances surrounding partition, a consensus emerged that only a strong central government could survive the **communal frenzy and manage the increasingly complex administrative problems** faced by the new nation.
  - In addition to this, most of the princely states which had to be integrated did not have any effective governance systems in place and many were hostile to the idea of cooperating with the newly formed Government of India.
- **Enabling responsive governance:** small governments are seen as encouraging political participation, the shared accommodation of various views, political compromise, and communitarian values. Additionally, they are supposed to bolster the rights of minorities by protecting the rights of the individual against majoritarian impulses.
- **Balanced economic development:** The **unstable financial position of the new Indian state also favoured centralization**. Provincial autonomy was seen as a hindrance to equitable distribution of wealth and development.
- **Others:** As per Joint Committee Report of 1934 it was considered **necessary to ensure that the provinces remained truly autonomous** and could determine their jurisdiction independently.
  - This is **indicative of the spirit of cooperation between the Union and the States** that the founders wanted to inculcate.

### Need for Reforming the Seventh Schedule

- **State demands for greater autonomy**
  - **Division of functions** enshrined under Seventh Schedule **got increasingly eroded over a period of time:**
    - ✓ Beginning with the **constitution of the Planning Commission** in 1951,
    - ✓ **Shifting of the subjects like forest and education** from the state to the Concurrent List by the 42nd Amendment,
    - ✓ **Mahatma Gandhi National Rural Employment Guarantee Act of 2005** and National Food Security Act 2013.

- A few common grievances appear to be **regarding the allocation of residuary powers with the Centre**, and a general sentiment that the State List needed to be bolstered.
  - ✓ For ex: **Rajamannar Committee in Tamil Nadu, 1969 and the Anandpur Sahib Resolution in Punjab** in 1973 recommended transferring several entries to the State List, both from the Union and Concurrent Lists, and vesting residuary powers in the States.
- **Need for decentralization**
  - Despite the 73rd and 74th Constitutional amendments, except in a few states, **there has been little progress at decentralisation—to both rural and urban local bodies**.
    - ✓ The **functions assigned are unclear, funds uncertain and inadequate**, and decision-making functionaries are mostly drawn from the state bureaucracy.
- **Changing Governance need**
  - The **needs of governance are not static and are bound to change over time**. A subject that was vital for legislative allocation in 1950 may no longer be relevant in the present.
    - ✓ **Concerns such as climate change and emerging technologies** amongst others, while not conceivable at the time of constitutional drafting have now become imperatives of governance.
  - **Centrally sponsored schemes should be flexible** enough to allow states to adapt and innovate.
- **Recommendations of Commissions appointed by the Central Government**
  - In its 1988 report, **Sarkaria Commission dedicated an entire chapter on legislative relations**, recording the grievances raised by various State Governments and political parties.
  - Its **major recommendations were**:
    - ✓ **First, that residuary powers be transferred from the Union List to the Concurrent List**, except for the residuary power to impose taxes which should be retained in the Union List.
    - ✓ **Second, that the States should be consulted by the Centre** before the latter exercises its power over Concurrent List entries.
    - ✓ **Third, that the Centre should limit the field it occupies with respect to Concurrent List** entries to only as much as is necessary for ensuring uniformity in basic issues of national policy, with the details being left for State action.

#### Way Forward

- M.M Punchhi commission, in 2010 recommended that the Union should **only transfer those subjects into the Concurrent List, which are central to achieving demonstrable national interest**.
- Need of a **formal institutional structure that requires mandatory consultation** between the Union and the states in the area of legislation under the concurrent list.
- **Residuary powers should be used sparingly**, only as a last resort and not as the primary means for completing the exhaustiveness of lists.
- There is a **need to undertake a periodic review of the lists**, focusing on
  - **Removing entries that are now obsolete** due to their substantive content or obsolete due to the form of the entry (such as Entry 34, List I: Courts of Wards for the estates of Rulers of Indian States, Entry 37, List III: Boilers etc).
  - **Adding entries as per present day needs of governance** and also to reduce the legislative domain for residuary powers to a minimum (such as Disaster Management, Consumer protection, Terrorism, Emerging technologies etc.).
  - **Appropriate placement of existing entries** (framework suggested by Vidhi Centre for Legal Policy can be adopted)
    - ✓ It consists of two older principles (Ensuring the unity and integrity of India, Achieving balanced economic development) derived from the Constituent Assembly Debates, as well as two new principles (Promoting cultural autonomy and diversity, Enabling responsive governance) that have emerged from India's post-independence experience

### 1.3. CHANGING ROLE OF CIVIL SOCIETY IN EMERGING INDIA

#### Why in news?

Recently, National Security Adviser (NSA) Ajit Doval said that if civil society can be subverted, divided and manipulated it will "hurt the interest of the nation".



## More about the news

- NSA emphasised that the **civil society is the new frontiers of war** or the **fourth-generation warfare**, and it is the **responsibility of the police to protect** people from being subverted, divided and manipulated.
  - **Fourth-generation warfare** refers to **any conflict where the State loses its monopoly on war** and is fighting non-state actors, such as terror groups or insurgents.
  - **First-generation warfare** refers to a formal battlefield war, second-generation to artillery fire, and third generation to speed, surprise and infiltration of an enemy's military.
- In this regard, **India needs the effective role of civil society in the making of new India**. All the new initiatives of the government require the participation and awareness of people and there is no better organisation than the civil society to achieve this objective.

## What is civil society and their roles?

- Civil society is the **society driven by people themselves** has its origin in ancient times although the understanding and meaning have changed over a period.
  - The Roman word **societas civilis** was the root word of it having a synonymity with a good society.
  - The German philosopher, Hegel has coined the term civil society.
- According to World Bank, **civil society refers to the wide array of non-governmental and not for profit organizations** that have a presence in public life, express the interests and values of their members and others, based on ethical, cultural, political, scientific, religious or philanthropic considerations.
- In a civil society **people voluntarily come together to achieve the desired objective of welfare** of the society or to raise the problems of people before the state. Basically, the voids of the state can be rightly filled by civil society.
  - For instance, **Kudumbashree**, a community organization of Neighborhood Groups (NHGs) of women in Kerala, has been recognized as an effective strategy for the **empowerment of women in rural as well as urban areas**.



## How with the Emerging India the role of Indian Civil society is changing?

- **Governance:** The strength of civil society can have **positive influence on the state and the market**. Therefore, it is seen as an increasingly important agent for promoting good governance like transparency, effectiveness, openness, responsiveness, and accountability.
  - Civil society has gone beyond its traditional role of watchdog to **using the government's mechanisms like social auditing, monitoring outcomes of programmes to hold it accountable**.
  - Civil Society **ensures the right to access to information** that is a first step into the state accountability in a country where the official secrecy Act predominates. Example- Mazdoor Kisan Shakti Sangathan (MKSS) for RTI Act.
- **Social:** Civil Society has a role of **enabling the voiceless and unorganized communities' interests** to be represented. In other words, the sphere of civil society has a **goal of empowerment for local communities**.
  - For example, NGO's like Childline India Foundation, World Vision, Arambh India have played important role in raising awareness on child sexual abuse.
- **Economic:** They have played a crucial role in inspiring and pushing through a number of reforms that lastingly changed India legislative landscape.
  - The **National Rural Employment Guarantee Act, the Forest Rights Act, the Right to Education Act, the upcoming Right to Food Bill, and the Land Acquisition Act** are examples of such laws.
- **Environment:** Environment Movement in India is strong now and has led to cancellation of multiple projects in India after Civil Society agitation.

- **For instance**, at state level, the local activists are working to save Chilika Lake, Khandadhar Fall Protect, Olive Ridley Tortoise, Coastal Beach Protection Movement etc.
- **Political:** Civil Society has the **monitoring function of holding the law and order machinery accountable**, implying the control of political parties and electoral process, the control of local bodies etc.
  - NGO like **Association for Democratic Reforms** have decided to approach the Centre for expediting implementation of all electoral reforms, election management reforms, democratic reforms which are pending for more than two-and-half-decades.



### Challenges in front of Civil Society in realising their full potential

- **Technological:** Majority of Indian citizens **lack digital literacy** and online safety is an alien concept to many who may have digital literacy.
  - **Language, accessibility barriers**, limited data and infrastructural systems further compound the scenario.
- **Economical:** The dependency on donations tied to specific projects makes it difficult for many NGOs to have continuity and coherence in their actions.
- **Social:** They are the driving force in **slowing down the agenda of liberalisation and clearance of corporate projects**, designed to benefit the people in large.
  - **Lack of awareness** among the masses about existence and functioning of the civil society organisations.
- **Political:** In 2015, the centre increased e-filing requirements. NGOs had to make quarterly filings of foreign grants received.
  - For instance, Centre cancelled 10,069 FCRA (Foreign Contribution Regulation Act) registration in 2015 and another 4,943 in 2017.
- **Security:** Intelligence Bureau (IB) inputs have shown that foreign funds entering India were used to fund activities that destabilise national peace and security. The inputs even indicated that the money was used to train naxals.

### Way forward:

- **Accountability:** Civil Society Institutions (CSIs) need to be held accountable for their acts of omission and commission which have enormous social and environmental consequences, not just economic or financial.
- **Funding:** Evolve multiple sources of funding in order to reduce dependence on rich donors.
  - CSIs must accept and practice the highest standards of financial reporting and disclosure and hold themselves open to public audits, social audits.
- **Hiring best talent:** CSIs could work towards **attracting the best of talent**, but those who get employment in CSIs must first perform at least three years of voluntary service with just a living wage stipend, working with poor or disadvantaged communities in rural or urban low-income areas.
- **Technological:** Collaboration with the government, funders, and other civil society partners is vital to normalising the use of technology-based interventions at scale.
  - **For example**, the government and private sector service providers need to prioritise the availability of digital infrastructure and connectivity while civil society integrates programmatic responses into government priorities.

To know more about **Civil Society in India**, refer to our Weekly Focus document **“CIVIL SOCIETY IN INDIA: Necessary ingredient in development or a Contested Idea?”**

 <p><b>Civil Society in Indian: Necessary Ingredient in Development or a Contested Idea?</b></p>	<p>In the current model of economic growth, the voluntary/civil society sector has been recognized as a key player in in the process of nation building and achieving equitable, sustainable and inclusive development goals. Invariably, this has raised public debate about their legitimacy and role in the official policy space. Through this document we will understand the significance of civil society in a democracy and how civil societies can overcome the obstacles being faced by them and perform their desired in the emerging era.</p>	
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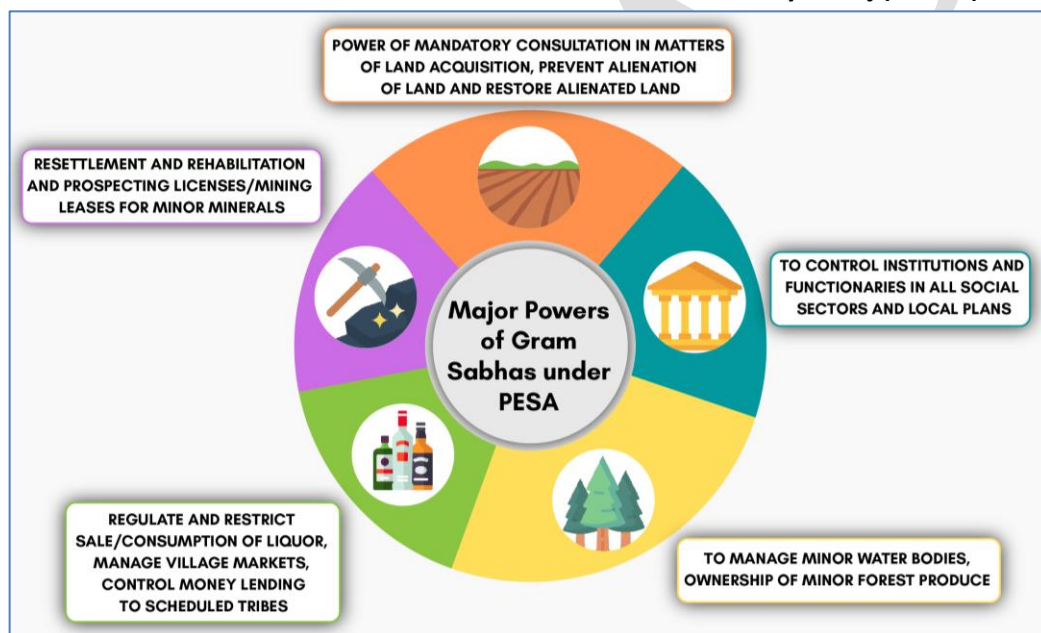
## 1.4. PANCHAYATS (EXTENSION TO THE SCHEDULED AREAS) ACT, 1996

### Why in News?

Recently, a one-day National Conference was organized to commemorate the 25th year of enactment of PESA, as part of Azadi Ka Amrit Mahotsav.

### About Panchayats (Extension to the Scheduled Areas) Act or PESA Act, 1996

- **Article 243M** of the Constitution **exempts the Fifth Schedule areas from Part IX** of the Constitution but the Parliament is empowered to extend its provisions to the Scheduled and Tribal Areas by law without it being considered as an amendment to the Constitution.
- Based on the recommendations of **Dileep Singh Bhuria Committee**, **PESA Act** was enacted in **1996** for tribal empowerment and to bring them into the mainstream.
- PESA Act is called a 'Constitution within the Constitution' as it extends the **Provision of Panchayati Raj (Part IX)** of the Constitution to the **Fifth Schedule areas of 10 States** under **clause (1)** of the **Article 244** with certain modifications and exceptions.
  - The 10 states: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Telangana.
- It recognizes the role of the Gram Sabha and the community in these areas and directs the state government to devolve **power and authority directly to Gram Sabha and Panchayats**.
- The **Ministry of Panchayati Raj** is the **nodal Ministry** for implementation of the provisions of PESA Act.



### Provisions of PESA Act

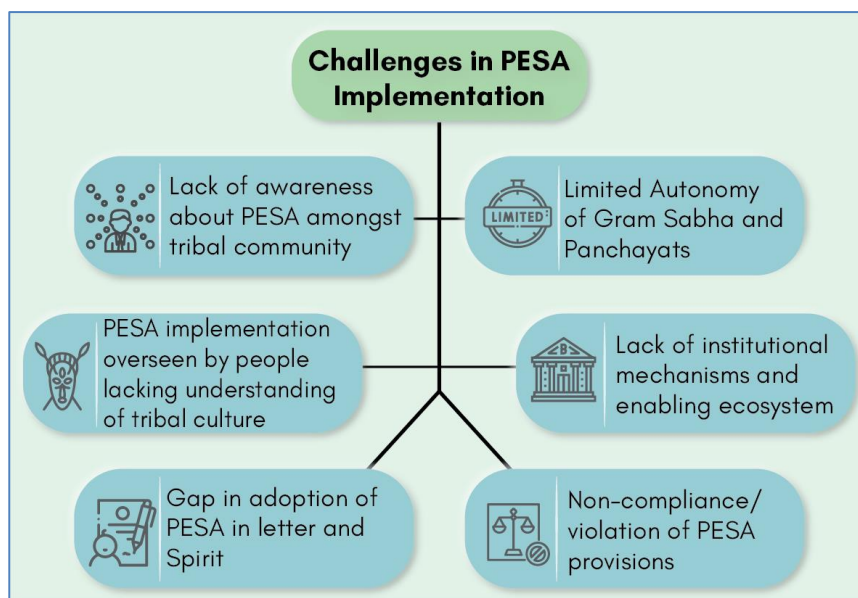
Promoting **institutions of Local Self Governance** and **participatory democracy**, all the **State Panchayati Raj Acts** for Fifth Schedule areas have following salient features:

- All State Legislation on Panchayats shall be in conformity with the **customary law, social and religious practices** and **traditional management practices** of community resources;
- Every village to have a **separate Gram Sabha** consisting of persons whose names are included in the **electoral rolls for the Panchayat** at the village level;
- Every Gram Sabha to **safeguard and preserve the traditions** and **customs** of people, their **cultural identity, community resources** and the **customary mode of dispute resolution**;
- Every panchayat to have **reservation of seats** in proportion to the community population (**minimum of 50%**) with **Chairperson of Panchayats** at all level to be **reserved for STs**;
- **Roles and Responsibilities of Gram Sabhas**: To approve all development works in the village, identify beneficiaries, issue certificates of utilization of funds.

### Significance of PESA

- **Empowered Gram Sabhas**: They play a key role in approving development plans and controlling all major developments in the social sectors.

- **Tribal Integration:** Decentralized governance helps in reducing the grievances of tribal people, building trust towards integration with mainstream.
- **Protect Ecosystem:** PESA empowers tribes through Gram Sabhas to preserve their connection with ecosystem. E.g. In 2013, the Supreme Court of India ordered the Odisha Government to seek gram sabha permission for bauxite mining in **Kalahandi and Rayagada district of Odisha**, leading to cancellation of mining on **Niyamgiri hills**.
- **Safeguard tribal interests and rights:** The control over institutions and functionaries help in protecting their traditional culture, religion and identity as well as the rights provided by the Constitution.



### Limitations of PESA Act

PESA has made significant contributions towards **advancement in tribal community's livelihoods**. But it suffers from number of challenges in its implementation (as **given in image**) and lackluster response from certain state government amplifies it, such as-

- **PESA Rules:** Four major tribal States namely **Jharkhand, Chhattisgarh, Madhya Pradesh, and Odisha** are yet to frame PESA Rules.
- **Use of unfair means for bypassing the law:** Acquisition of land happens under other acts, violating the spirit behind PESA, i.e. safeguard tribal land and consent of gram sabhas.
  - E.g., in the Korba district of Chhattisgarh, the authorities decided to acquire land using the Coal Bearing Act of 1957.
- **Poor Implementation of law:** A 2010 study on “Status of Panchayat Extension to Schedule Area Act (PESA)” in **Andhra Pradesh, Gujarat, Chhattisgarh, Jharkhand, and Orissa** by Indian Institute of Public Administration (IIPA) highlighted **poor implementation** of the Act.
  - E.g., In Khunti district of Jharkhand, 65% of people whose land was acquired were not even asked about it. Its share in Gumla district of Jharkhand was around 26%.

### Way Forward

To keep the spirit of saving Jal, Jungle and Jameen (Water, Forest and Land) of tribes through PESA, reformations can be discussed on following lines-

- **Implement Municipalities Extension to the Scheduled Areas (MESA):** Bhuria Committee recommended **PESA and MESA** for extending the provisions of **73<sup>rd</sup> and 74<sup>th</sup> amendments to V (Fifth) schedule areas**. But **urban tribal areas** are yet to have MESA.
- **Framing of PESA Rules:** The remaining states must frame the PESA rules expeditiously and implement based on the **Ministry of Panchayati Raj model rules of 2009**.
- **Convergence of PESA with other regulations:** The provisions of PESA shall be converged with Forest Rights Act (2006), Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (2013) etc. **to protect tribal rights/culture**.
- **New Tribal Community Development Model:** The **Ministry of Panchayati Raj** and the **Ministry of Tribal Affairs** should create a new development model for the **tribal community** while preparing the **Gram Panchayat Development Plan (GDP)**, keeping in mind the traditions of the tribal community and convergence of efforts.
- **Other Steps:** Reduce Land alienation among tribes and focus on greater social development (health and education) for capacity building of tribal communities.

## 1.5. ROLE OF PANCHAYATS IN SERVICE DELIVERY

### Why in news?

Recently, in a workshop organised by Ministry of Panchayat Raj, **Mysuru Declaration on Service Delivery by Panchayats** was signed.

### More on news

- **Mysuru Declaration** was signed by participants from 16 States and resolved to **roll out the Common Minimum Service delivery by Panchayats** across the country from April 1, 2022.
- The declaration **recognises Citizen Centric Services** that could be provided by the Panchayats as **the Heart of Governance**.
  - It **aims to foster institution-building at the grassroots level** that empowers and delivers services for citizens thereby improving quality of life specifically for the vulnerable and marginalized sections of society.

### What make Panchayats suitable for effective delivery of public services?

Panchayats have been mandated for economic development, strengthening social justice and implementation of Central and State Government Schemes including those **29 subjects listed in the Eleventh Schedule** of the Constitution. In this context, Panchayati Raj Institutions (PRIs) are responsible for delivery of basic services as enshrined under **Article 243G** specifically in the areas of Health & Sanitation, Education, Nutrition, Drinking Water.

The PRIs by design has **many positive features** for the effective delivery of essential services. This includes:

- **Participatory Governance:** Gram Sabhas have been empowered to prepare and implement plans at the local level that can facilitate direct participation of people based on local socio traditional knowledge.
- **Social Inclusion:** Constitutionally mandated reservation for women (1/3<sup>rd</sup> seats) and other marginalised communities such as SCs and STs in Panchayats ensure their participation in the village level governance and inclusion of their developmental aspirations.
  - For instance, in the context of health and family welfare, women PRI members take an active role in polio eradication, health camps, mobilize women for services etc.
- **Accountability:** Regular elections to Panchayats makes it easier for the electorates to hold elected bodies accountable for their performance. Moreover, Gram Sabha is empowered to undertake Social Audit under certain programs such as MGNREGA.
- **Responsiveness:** Due to its proximity to voters, locally elected representatives know their small constituency better and are in advantageous position to provide better services according to their electorate's preferences.
  - As per NITI Aayog, **Localising of SDGs** i.e. their implementation at the sub national or grassroots level is essential for achieving the SDG targets for provisioning of basic services.
- **Bottom-up approach:** The Gram Panchayats are constitutionally mandated for preparation of Gram Panchayat Development Plans (GPDP) that are in convergence with schemes of all related Central Ministries / Line Departments related to 29 subjects. This convergence assumes greater significance for effective implementation of flagship schemes.
- **Functional Transparency:** Public disclosure to the Gram Panchayats (GP) regarding funds made available under various schemes of the line departments and activities to be taken up in each GP area is mandated under the Gram Swaraj Abhiyan.

#### Major Initiatives taken by the government to enhance capacities of PRIs

- **Rajiv Gandhi Panchayat Sashaktikaran Abhiyan (RGPSA)** to enhance the capacities and effectiveness of GPs and Gram Sabhas, promote people's participation in panchayats, strengthen the institutional structure for capacity building of panchayats etc.
- **Model Citizen's Charter:** It details different categories of services rendered to the citizen by the Panchayat, the conditions for such service and the time limit for such service and aligning actions with localised Sustainable Development Goals (SDGs).
- **Sabki Yojna Sabka Vikas:** An intensive and structured exercise for planning at Gram Sabha through convergence between Panchayati Raj Institutions (PRIs) and concerned departments of the State.
- **Mission Antyodaya:** It seeks to converge government interventions with Gram Panchayats by pooling human and financial resources.
- **eGramSwaraj:** A web-based portal which unifies the planning, accounting and monitoring functions of Gram Panchayats.

## Roadblocks for PRIs in effective delivery of services

- **Elite Capture:** Powers and resources devolved to local bodies are frequently captured by the powerful upper caste people, resulting in inequities in access to services.
- **Lack of fiscal decentralisation:** In most states, panchayats get wide responsibilities without fiscal and administrative resources. Over 90 per cent of the funds that PRIs handle are tied to some schemes (mostly central schemes). Absence of untied funds inhibits efforts and demotivates local bodies from engaging in meaningful planning processes.
  - Also, with little of own revenue funds, PRIs in many states have been reduced to simple agents of higher-level governments.
- **Structural deficiencies:** Absence of any secretarial support and lower levels of technical knowledge restricted the aggregation of bottom up planning .
- **Adhocism:** Non-availability of information at the local level leads to adhocism in prioritisation of schemes/ programmes, poor decision-making, and narrow participation of people in the process.
- **Proxy Representation:** There is a presence of Panch-Pati and Proxy representation in case of women and SC/STs representatives respectively.
- **Accountability arrangements remain weak** due to manual auditing.
- **Lack of clarity in devolved functions:** and paucity of adequate qualified functionaries has allowed concentration of powers with the states and thereby restraining the elective representatives who are more aware and sensitive to the ground level.

## Best Practices in service delivery by Panchayats

### Kerala : Flattening the curve during COVID

Robust system of effective devolution helped the Kudumbashree programme to function in association with the panchayats.

### Bearhatty Gram Panchayat, Tamil Nadu : Social Security Benefits

Special initiatives to enlist all eligible beneficiaries and help them access their social security entitlements.

### Dakshina Kannada Zilla Panchayat, Karnataka: Total Sanitation Campaign

High Involvement of the Anganwadi Coordination Committee and the Locals, Strong monitoring system, Active SHGs.

### Dibrugarh Zilla Parishad, Assam : Vision Document Initiative

Document gives proper perspective of development of the district and includes good administrative practices such as, ensuring transparency of functioning and priority to schemes that address urgent needs of people in the local area.

### Gerethang - Labing Gram Panchayat, Sikkim: Service Delivery under Participatory Democracy

Innovative Administrative Practices such as Composite Village Administrative Centre, Single Window System, Motivation of Youth and Multi-Purpose Cooperative Societies (MPCS)

## Measures needed to make the local governments really effective in service delivery

- **Ensuring participatory local level planning** by the PRIs to identify needs, levels of delivery and the enhancements desired by the people in each sector.
- **Assigning clearly demarcated roles** to the PRIs through activity mapping.
- **Confining centrally sponsored and State schemes to a small number of important programmes** to achieve declared national and State goals and also providing adequate space for the PRIs to participate in these schemes.

- **Undertaking a well-structured process of administrative and fiscal devolution** that matches the resource availability at each level of the panchayats with functions assigned to it.
- **Providing capacity to the PRIs** in the widest sense of the term to perform their responsibilities efficiently;
- **Leveraging technology:** Digitalisation and Information and communication technology (ICT) intervention such as Geographical Information System (GIS) and satellite imagery to track project implementation has vast potential to ensure more accountable, responsive and citizen- friendly PRIs.
  - **Fifteenth Finance Commission has also recommended to enable online auditing** of accounts and their consolidation at the State and all-India level.

## Conclusion

The bottom-up pressure from the people demanding efficient delivery of public goods is increasing on the State executive. It can be effectively met only with deeper decentralization. The digital penetration and connectivity in rural areas is reducing the rural-urban information gap and pushing the administration at the local level to function in an effective way.

## 1.6. DIGITAL SOVEREIGNTY

### Why in News?

At Sydney dialogue, prime minister said that digital age is raising new questions on sovereignty, governance, ethics, law, rights, and security.

### About digital sovereignty

- Digital sovereignty is the **right of a state to govern its network to serve its national interests**, the most important of which are security, privacy and commerce.
  - It is the ability to have control over one's own digital destiny—the data, hardware and software that one relies on and creates.
- Today, digital technologies are an integral part of the everyday life of individuals, companies, and institutions, but the **market for digital products and services is dominated by American and Chinese multinational corporations.**
- It has become a **concern for many policymakers** who feel there is too much control ceded to too few places, too little choice in the tech market, and too much power in the hands of a small number of large tech companies.

### Significance of Digital Sovereignty

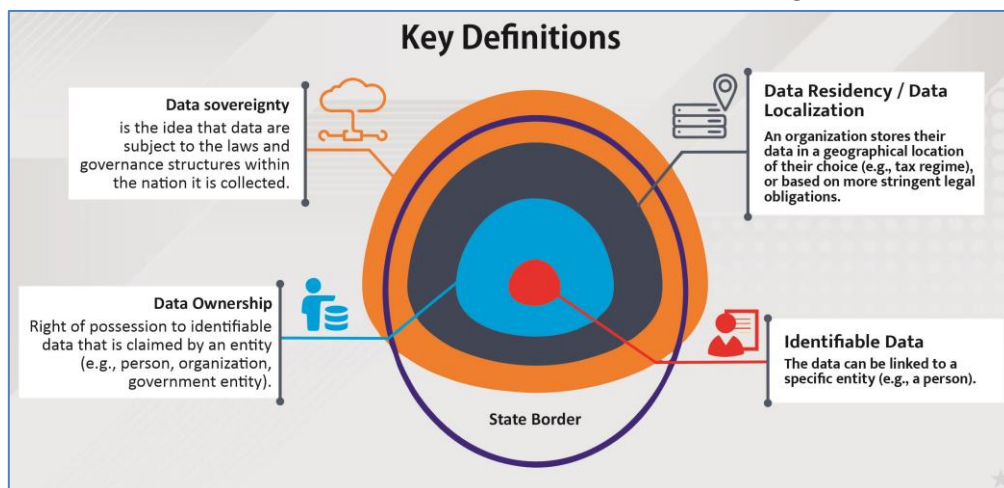
- **To check the economic dependence:** Perceived market dominance of technology companies from US and China may lead to new forms of hegemony and exploitation (described as digital imperialism or digital colonialism).
  - GAFAs (Google, Apple, Facebook and Amazon) and NATUs (Netflix, AirBnb, Tesla and Uber) as they possess data of billions of users around the world.
- **Reduce technological dependence:** To identify and reduce dependencies on foreign data infrastructure, tackle unfair competition in digital markets, and address vulnerabilities w.r.t emerging technologies, 5G and artificial Intelligence.

#### Sydney Dialogue

- **Sydney Dialogue** is an initiative of the Australian Strategic Policy Institute (a think-tank) that brings together political, business and government, to assess the opportunities and challenges posed by emerging and critical technologies.
- **At the meeting, PM highlighted 5 important transitions taking place in India**
  - **World's most extensive public information infrastructure** being built in India having a unique digital identity, efficient payment infrastructure.
  - **Use of digital technology for governance**, inclusion, empowerment, connectivity, delivery of benefits and welfare in India.
  - India has the **world's third largest and fastest growing Start-up-Ecosystem.**
  - **Massive digital transformation in industry and services sectors**, even agriculture.
  - Efforts for developing **indigenous capabilities in telecom technology** such as 5G and 6G.
- Giving a roadmap for democracies to work together, **emphasis was put on creating standards and norms for data governance** and for cross-border flow that protect and secure data.
  - In a democracy, **data is considered a national resource** and is important for transparent policy making and problem solving.
  - Also, **access to data should be democratised** to prevent data monopolisation and check unfair practices.

- **Guaranteed access to data:** Digital Sovereignty is also needed for the political autonomy of nations, the innovativeness of businesses, and the freedom of research institutions so that relevant technologies and data must be available through guaranteed access, even in times of crisis.

- **Internal security and unity of countries** – One prime concern about the storage of personal data and its future trade, is that it could be used to create threats to the internal security of any country, since the selling of such data to an enemy country could lead to the possibility of accentuating ethnic conflicts in the country. Non-state actors can also misuse data for achieving their objectives.
- **Citizens' behaviour** – The aspersion around storage of personal data is that it could be used for altering the behaviours and opinions of citizens.
  - Altering of behaviours and opinions during elections would reinforce the idea of elite democracy.
  - Altering the behaviour of young and children, through mapping of their likes and dislikes, could be used to predict their decisions in the future.



#### Global experiences

- **EU's General Data Protection Regulation (GDPR)**
  - Under the terms of the GDPR, any organization no matter where it is based, must abide by a set of **data management rules if it wants to trade with customers in EU countries.**
  - Those rules make it possible for individual citizens to take more control of how their data might be used.
- **European cloud service Gaia-X**, which was announced jointly by France and Germany in 2019.
  - It plans to **connect small and medium-sized cloud providers in Europe** that allows them to offer an alternative to the world's biggest (often US-based) cloud service providers (e.g., Amazon, Google, Microsoft).

#### Challenges to Digital Sovereignty

- **Lack of global rules:** WTO's legal architecture was inked in the pre-internet era and not designed to sufficiently regulate the nature of present-day data flows.
  - Current domestic and international legal architecture forbids countries from adopting policies that favour the production and purchase of goods and services produced domestically, with the threat of legal proceedings in international courts for adopting anti-competitive measures.

- **Multi-stakeholder internet governance:** It continues to explicitly reject established government-dominated international institutions and seeks to replace them with the principle of transnationalism.
- **Against liberal democracy:** Data localization measures support surveillance and social and political control.

#### India and digital sovereignty

- **India's digital sovereignty vision has three pillars:**
  - A push to **leverage data as a key tool of economic growth and development** by asserting regulatory oversight over the practices of multinational private actors;
  - A domestic push backed by a global diplomatic gambit to **prevent the inequitable construction of digital trade rules;**
  - Leveraging of **data security in bilateral security disputes.**

#### Steps taken in India

- **Personal Data Protection Bill, 2019** that seeks to provide for protection of personal data of individuals and establishes a Data Protection Authority for the same.
- **RBI directions to all system providers** to ensure that entire data relating to payment systems operated by them is stored in a system only in India.

- **Act as trade barrier:** Competing in a connected world without traditional borders has rapidly become the new norm, and the pervasiveness of the Internet and all its subsequent off-shoots (e-commerce, Smart Homes, connected devices and the IoT), now impact and influence the way we work, live and play.



- Some of the provisions of the new generation trade agreements consider tighter privacy laws and policies in a country as a barrier for trade, disregarding the superiority of human rights laws over any other law.
- **Rise of transnational networks:** Complexity of nested responsibilities and the global reach of networks cannot be addressed properly within national jurisdictions.
  - Legislative procedures are too slow to keep up with the pace of innovation of digital technologies and the associated business models.

### Way Forward

- **Identifying dependencies and weaknesses** on foreign technologies and digital services is the first step towards defining the capacities that will be needed to develop to enhance digital sovereignty.
  - The following five areas are key in this respect: cloud and data infrastructure; business-to-government data (B2G); business-to-consumer data (B2C); 5G connectivity; and AI
- **Empower:** with a view to harnessing untapped potential and to remove barriers in the digital single market, pursue an ambitious strategy on data, and boost investment in research and development and in digital skills for the workforce.
- **Engage internationally** to boost partnerships and cooperation for the global governance of data, digital markets, emerging technologies, and international data flows.
- **Data localisation**—government measures that compel companies to store digital data locally within their jurisdiction—as the sovereign response to transborder connectivity.

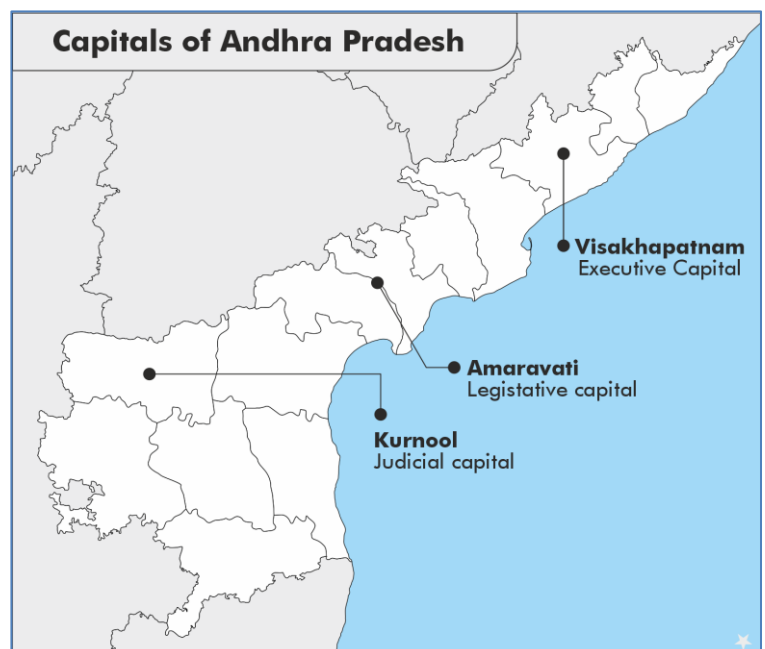
## 1.7. NEWS IN SHORTS

### 1.7.1. CBI AND ENFORCEMENT DIRECTORATE (ED) CHIEFS CAN NOW HOLD OFFICE UP TO 5 YEAR



- President promulgated two ordinances that **would allow Centre to extend the tenures** of the directors of Central Bureau of Investigation (CBI) and ED **from two years to up to five years.**
  - Government **amended the Delhi Special Police Establishment Act, 1946** (For CBI Director) and **Central Vigilance Commission Act, 2003** (For ED director).
- Both have fixed two-year tenure, but **ordinance allows for three annual extensions.**


### 1.7.2. ANDHRA PRADESH (AP) ASSEMBLY PASSES BILL TO REPEAL ACT INTENDING 3 CAPITALS FOR THE STATE

- The **AP Decentralisation and Inclusive Development of All Regions Repeal Bill, 2021**, repeals the 2020 Act that paved the way for the 'three capitals' plan for the state.
- Now, the state will undertake **further consultations with all the stakeholders once again** and to present suitable legislation in the future addressing all the concerns of all the regions of the State favoring decentralization.
  - The **farmers of Amaravati region** had been **fighting the three capitals decision** for more than 700 days now.
  - They fear that the government will not build all the infrastructure it promised them, **undermining the value of their land.**
- **Arguments in favor of 3 capitals**
  - **Distributed development**
  - **Financially efficient** due to utilization of existing infrastructure (of Kurnool and Visakhapatnam).



- No need of acquiring large agricultural land that could impinge upon food security.
- Planned urbanisation of mid-sized cities with decent economies.
- Arguments against 3 capitals
  - Might hamper coordination among Governmental arms
  - Lack of a well-developed infrastructural network linking the growth centers.
  - Visakhapatnam region is prone to cyclones.

 <p><b>SMART QUIZ</b></p>	<p>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.</p>	
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## 2. INTERNATIONAL RELATIONS

### 2.1. INDIA-EURASIA

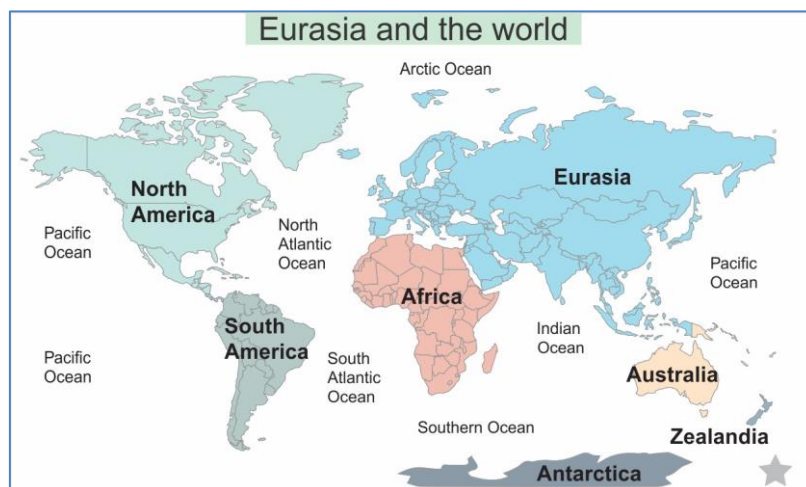
#### Why in news?

The changing dynamics in international relations and growing significance of Eurasia necessitates India to have a new, integrated approach to Eurasia as per foreign policy experts.

#### About Eurasia

Eurasia refers to the **largest continental area** on Earth, comprising 93 countries of Europe, Middle East and Asia and is home to over 5 billion people.

- There is however **no shared international understanding** of what constitutes the region.



#### What is leading to the growing significance of Eurasia in the present world order?

- **Dramatic rise of China and its growing strategic assertiveness:** China, in its quest to create a China-centric Asian order is striving hard to create a new economic order and security initiatives sans the US. The strategic magnitude of (projects like) the BRI, RCEP, Sino-EU trade deal have added to Beijing's powerful leverages in Eurasia.
- **Changing Geostrategic Alignments:** Growing animosity between China and US has led China and Russia to cement their relationship to counter the USA. There is growing cooperation between them on the Belt and Road Initiative (BRI), tie-up with the Eurasian Economic Union (EEU), cooperation in the Arctic region, energy, trade, and in the military domain through joint production and military exercises.
  - EEU is a customs union which would impose tariffs on imports from non-EEU members.
- **Regional geostrategic alliances:** China and Russia are increasingly drawing in Iran, another adversary of the US. All three have recently **deepened their ties with a joint military exercise** in the Gulf of Oman and Iran is also a vital component of the Chinese Belt and Road Initiative.
  - Concurrently, the **China-Iran-Russia-Turkey-Pakistan strategic pentagonal** is taking shape that will impact the geopolitics of Eurasia and West Asia and will have profound implications on the regional balance of power.
- **Strong prospects for economic growth:** Eurasia has been one of the most dynamic regions of the world in terms of economic growth with an average annual per capita income growth rate of about 4-5% over the past few years.
- **Region being developed as a countermeasure to Indo-Pacific Region:** Middle powers like Japan and Australia along with USA are confining themselves to the Indo Pacific region. China and Russia as a countermeasure are developing Eurasia as a power block.

#### Need for India to have integrated approach towards Eurasia

- **Energy Security:** Eurasian states are prospective long-term partners of India in energy (oil, natural gas) and natural resources (uranium and iron ore). Economic cooperation with these countries is important for safeguarding India's interests.
- **Economic Objectives:**
  - **The strategic peninsular location of Eurasia** connecting various sub-regions of Asia and West Asia makes it important for India's objective of becoming an Economic Hub. This could well be facilitated by recent initiatives such as the Make in India, Skill India and Digital India.
  - **Tourism potential:** India is an emerging tourist nation and Eurasia is important to garner tourists from the region.
  - **Medical and Pharmaceutical industry:** India is working on setting up a Central Asian e-network with its hub in India, to deliver, tele-education and tele-medicine connectivity, linking all the five Central Asian States.

- **Strategic objectives:**
  - **Eurasian Region is interested in decreasing their dependence on China and Russia** and is prepared to support India in its bid to strengthen its position in the region.
  - **Stability in Central Asia:** Central Asia, the centroid of the new Eurasia, is a part of India's "extended neighborhood" and of great geo-strategic value to India. With the emerging threat of ISIL/ISIS, the region's porous borders and the problem of drugs and arms, achieving stability in the region is in India's interest.
  - **Complementing Indo-Pacific strategy:** If the Indo-Pacific is about Delhi's new maritime geopolitics, Eurasia involves the reorientation of India's continental strategy needed to address the continental issues such as border disputes.
- **Strengthening Cultural relations:** India's ancient civilisational links exist with Eurasia; the collaboration between the Sangha and the Shreni in the Buddhist era produced lasting interaction between the two regions.
  - The peoples of Siberia have distinctive historico-cultural similarities with the Indian Himalayas due to common traditions and Buddhist culture.

#### Challenges for expanding India's footprint in Eurasia

- **Geographical Limitations:** India lacks direct geographical access to Central Asia.
- **China's dominance:** Beijing's muscular approach to the long and disputed border with Bhutan and India, its pursuit for a security presence in Tajikistan, the active search for a larger role in Afghanistan are examples of China's assertiveness.
- **Pakistan's reluctance:** Pakistan has declined to join the recently held Delhi Regional Security Dialogue on Afghanistan as a part of developing a Eurasian strategy.

#### Way ahead for India

- **Greater Engagement with EU and NATO Members:** India's Eurasian policy must necessarily involve greater engagement with both the European Union and the North Atlantic Treaty Organisation as a crucial step towards a sustained security dialogue with Europe.
- **Intensifying India-Russia Dialogues:** Russia does see China as a long-term rival and extended the scope of Greater Eurasian Partnership (GEP) to include countries like India, Iran, South Korea to dilute Beijing's power in the region. This is an opportunity for India where the two countries could cooperate in areas like Central Asia, Afghanistan, Russia's Far East and Arctic to further boost their relationship and widen cooperation on Eurasian security.
- **Geo-Economic Cooperation:** India can pursue EU countries to engage in Indo-pacific narrative to mobilise massive economic resources for sustainable development of regional infrastructure, wield political influence and leverage its significant soft power to shape the Eurasian discourse.
- **Collaboration with Iran and Arab peninsula:** Iran's location makes it critical for the future of Afghanistan and Central Asia and the religious influence of Arabia is quite consequential in the region. India's partnerships with these countries is also critical in overcoming Turkey's alliance with Pakistan.
- **Balancing the priorities:** India needs to balance its Connect Eurasia policy with its Act East Policy and Indo-Pacific Strategy. Being an important member of BRICS, SCO, and RIC, India must utilize the platforms to promote multi-dimensional strategic cooperation with Russia and China.

#### Major Initiatives by India

- **Boosting Connectivity to balance China's growing presence in the region**
  - **International North-South Transport Corridor (INSTC)** to gain smooth access into Central Asia and beyond bypassing Pakistan.
  - India, Iran and Uzbekistan discussed ways for **joint use of the Chabahar port** for trade and enhancing regional connectivity.
  - Memorandum of Intent was signed to open a **maritime route between Chennai and Vladivostok (Russia's Far East)**.
- **India-EU Strategic Partnership:** Common roadmap to guide joint action and further strengthen the India-EU Strategic Partnership over the next five years.

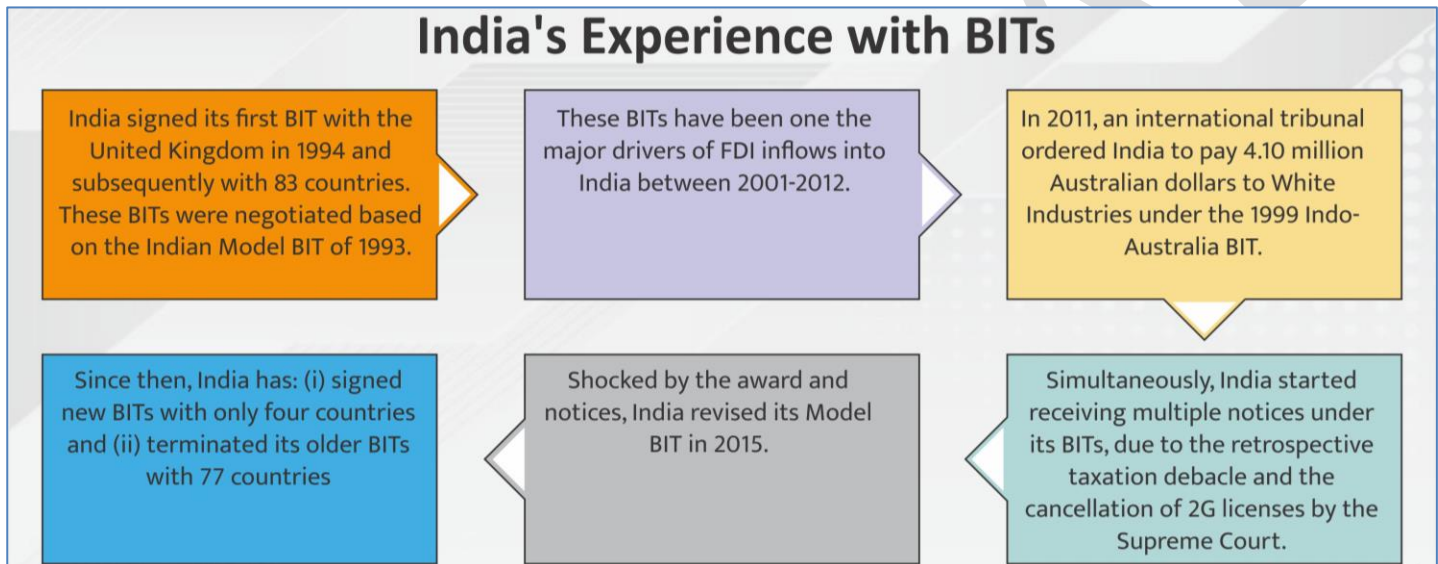
## 2.2. BILATERAL INVESTMENT TREATIES

### Why in news?

Recently, the Standing Committee on External Affairs submitted its report on 'India and Bilateral Investment Treaties'.

## About Bilateral Investment Treaties (BITs)

- BITs are **international agreements** establishing the terms and conditions for private investment by nationals and companies of one state in another state **to promote and protect foreign private investments** in each other's territories.
- BIT **establishes minimum guarantees** between the two countries regarding the treatment of foreign investments, such as
  - **National treatment** (treating foreign investors at par with domestic companies),
  - **Fair and equitable treatment** (in accordance with international law),
  - **Protection from expropriation** (limiting each country's ability to take over foreign investments in its territory).
  - **Protection of investors' right** (through an alternative dispute resolution mechanism whereby an investor can approach International Centre for the Settlement of Investment Disputes (ICSID) rather than suing the host State in its own courts).
- There are more than 2,500 BITs active in the world today and **United Nations Conference on Trade and Development (UNCTAD) maintains a database of all BITs** between all states.



## Issues with Model BIT 2015

Model BIT was a knee-jerk reaction to the White Industries case and the series of notices that India received. As a result, the sole focus is on limiting the liability for the host state and raise the bar required to bring a claim under the BIT through provisions such as:

- **Narrow Definition of Investment:** India proposed a narrow 'enterprise-based' definition for investment, whereby only direct investments are protected under the treaty and precludes portfolio investments, interest in debt-securities, intangible rights, etc. from the definition of investment.
- **Exhaustion of Domestic Remedy:** Model BIT mandates exhaustion of domestic remedy prior to initiating international arbitration proceedings. This does little to increase confidence in foreign investors.
  - According to the 'Ease of Doing Business 2020' report, India currently ranks 163 out of 190 countries in ease of enforcing contracts, and it takes about 1,445 days for dispute resolution.
- **Wide Discretionary Powers to Host State:** Host state can unilaterally exclude any dispute from the jurisdiction of a tribunal, merely by asserting that the conduct in question is a subject matter of taxation.

## Recommendations of the committee

The Committee observed that the number of BITs signed by India after 2015 and the number under negotiation are inadequate to attract the required foreign direct investment (FDI) in India. The committee thus recommends

- **Signing new BITs** in identified priority sectors with countries with which India had such treaties in the past.
- **Drafting BITs:** BITs should be drafted without any ambiguity, to avoid overbroad interpretation by arbitrators and tribunals, investment disputes or claims against India, and the abuse of certain provisions by investors.

- **Revising the Model BIT** considering new experience gained in disputes arising out of BITs and incorporating best practices and provisions from BITs adopted by advanced countries.
- **Timely settlement of investment disputes** through pre- arbitration consultation or negotiations
- **Developing local expertise** in investment arbitration and promoting the New Delhi International Arbitration Centre as a world- class arbitration center.
- **Reforming domestic judicial system:** A few steps have been taken in this direction through the Commercial Courts Act, 2015 and the amendments to the Arbitration and Conciliation Act, 1996.

### Conclusion

With India's likely emergence as a capital exporting nation, Make-in-India policy, its goal of becoming a \$5 trillion economy by 2025, and as the global companies contemplate moving their investments away from China, it is an opportune time to review and revise the Model BIT from the present inward-looking protectionist approach to a more pragmatic one.

## 2.3. INDIA-RUSSIA MILITARY COOPERATION

### Why in News?

At the recently held **21<sup>st</sup> India-Russia summit**, both nations signed a **10-year defence cooperation pact** in the background of ongoing deliveries of the **S-400 air defence systems**.

### Background of India-Russia Defence and Security Cooperation

India-Russia relationship is based on the principles of **mutual trust, respect for each other's core national interests and similarity of positions on various international and regional issues**, both nations are long standing and time-tested partners.

In 1971, both nations signed the **Treaty of Peace, Friendship and Cooperation** and became Strategic partners in 2000. The importance and relevance of the ties can be gauged from the infographic:

The 2021 summit took it another step ahead with the **first 2+2 dialogue** of Foreign and Defence Ministers to exchange views in global and regional political-security developments.

#### Major agreements at 21st India-Russia Summit

Along with the defence cooperation, the major agreements signed between two nations include-

- **Joint production** of more than **600,000 AK-203 assault rifles** to advance self-reliance in the defence manufacturing sector.
- Promote greater economic cooperation with target to increase **bilateral trade to \$30b** and **bilateral investments to \$50b by 2025**.
- **Reserve Bank of India** and **Bank of Russia** to jointly respond against **cyberattacks**,
- Jointly fight against terrorist organizations like **ISIS-Al Qaeda-LeT, drug trafficking and organised crime etc.**

### Defence and Security Cooperation

The Defense relationship between India and Russia have various dimensions **including but not limited to arms trade-**

- **Military and military-technical cooperation** has remained a pillar of **Special and Privileged Strategic Partnership** between India and Russia.
- India purchased the **MIG-21** from Russia (erstwhile USSR) in 1962 and the **warm relationship and commonality of interests** expanded this cooperation to other armed forces with promotion of licensed production, maintenance, and repair operations in India.
- In 2009, a **bilateral intergovernmental Military and Technical Cooperation** was signed for the period 2011-20.
- Today, joint research, development and production of advanced defence technologies and systems and subsequent export to mutually friendly third countries is the defining feature of **India-Russia defence and security cooperation**.  
E.g.
  - Joint Venture (JV) to produce **BrahMos Missile System**.
  - JV to manufacture **AK series assault rifles** at under Make-in-India program.
  - Shareholders agreement on JV to **manufacture Ka-226T helicopters** in India.
- Recently, despite US threat of sanctions, India began taking deliveries of the **S-400 Triumph Air Defence Missile System** (under a \$5.4 billion deal of 2018) for supply of five S-400 regiments to offset air defence capability gaps.

#### **S-400 Triumph Air Defence Missile System and CAATSA**

- The S-400 air defence system is one of the **most advanced mobile air defence missile system in the world**. It is equipped with four different missiles, and it can engage enemy aircraft, ballistic missiles, and Airborne Warning And Control System (AWACS) planes at multiple ranges.
- **CAATSA Act**, also known as **Countering America's Adversaries Through Sanctions Act**, was enacted by USA in 2017 to impose sanctions on three nations, i.e., Russia, Iran, and North Korea.
- Apart from sanctions on the three nations, the act also imposes sanctions on countries who deal with these nations. This **brings the current S-400 deal between India and Russia under this orbit**.
- But US cannot afford to alienate a **strategic ally and a defense market like India**. As a result, the US lawmakers have introduced a bill for sanction waiver to avoid retaliatory US actions on India. But only time can tell what the future holds for this quagmire

#### **Changing Dynamics of Defence and Security Cooperation**

The **S-400 Triumph deal signifies deepening of ties between India and Russia**. But this step is not an isolated incident but a culminating effect of changing global and bilateral dynamics-

- **Changing World Order:** The rising new bipolar world with USA and China as global powers has increased the closeness of two nations with rival superpowers, i.e.
  - Russia is becoming close to China while tensions exist between India-China, and
  - India is becoming close to the USA while tensions exist between Russia-USA.
- **Geo-strategic Interests:** With a reasonable shift in India's approach from an inward-looking (strategically as well as economically) and non-aligned nation, the old commonalities of interest between two nations are replaced by divergence in geo-strategic interests. E.g.
  - **Indo-Pacific Region:** India joining the **Quadrilateral Security Dialogue (Quad)** for a free and open Indo-Pacific region with Japan, USA, and Australia.
  - **Eurasian Region:** Commonality of interest between India and Europe to curb growing Chinese strategic assertiveness in the region.
- **Economic Relationship:** Unlike India-Russia with bilateral trade of just \$7.5 bn in 2019, the economic relationship between India-USA or Russia-China are far more diverse and deeper.
  - E.g., In 2014, Russia-China signed a \$400 bn gas deal. Similarly, the trade between India-USA in 2020-21 stood at \$80.5 bn with \$13.8 bn of FDI.
- **Modernization with Diversity:** To modernize and diversify away from Soviet-era and Russian military equipment, India has expanded its defense purchases from other nations like France, Israel, and the USA. E.g., Between 2016-20, Russia accounted for 49% of Indian arms purchase in comparison to 70% in 2011-15 (as per **SIPRI Fact Sheet**).
  - In 2014, Russia removed its self-imposed sanction on arms sale to Pakistan, considered as a warning on Indian diversification.

#### **Way Forward**

The latest defence cooperation, for period 2021-31, will help as a step to take forward the ongoing engagements between two nations. But it needs more synergy of interests and operations to withstand the forces which will impact it by-

- **New Theatres of common interest:** Broaden collaboration on bilateral and regional issues with work on new theatres of cooperation such as Eurasian region, Arctic, Afghanistan etc. as part of shared common responsibilities on global peace and stability.
  - Regular NSA level security dialogue on such issues can help in enhancing strategic understanding and coordination of operations.
- **Upgrading Defence Cooperation through Make in India:** Promote **joint development and co-production** of weapons including niche domains of weaponry, promoting **self-sufficiency** and reducing India's dependence on others for modernization and diversity under **Make in India**.
- **Joint manufacturing of Spare parts and Logistics Support:** With a large part of Indian defence equipment from Russia, both nations should jointly manufacture spare parts and promote reciprocal logistics support; enhancing military-to-military cooperation as well.
- **Upgrade Relationship:** The relations between two nations should be elevated from government-to-government to greater cooperation in the private sector for trade diversity.

- **Work on Rules-based International Order:** To protect the strategic autonomy of not just self but of others as well, greater cooperation at UN and other forums (BRICS, SCO etc.) is required for more rules-based international order, protecting multipolarity/multilateralism.

## 2.4. NEWS IN SHORTS

### 2.4.1. OVER 87,000 UN PEACEKEEPERS FACE GREATER THREATS FROM COMPLEX CONFLICTS

- United Nations peacekeeping chief, Jean-Pierre Lacroix, said that UN peacekeeping missions are confronting greater threats today compared to two or three years ago.
- **Challenges in solving conflicts for peacekeeping forces today include**
  - **Conflicts are driven by multiple factors** including ethnic tensions and the impact of organized crime to illegal exploitation of resources and terrorism.
  - **Conflicts are multi-layered** i.e. not only local and national, but also regional and global. For ex, increasing terrorist activity in Africa's impoverished Sahel region.
  - **Presence of conflict enhancers**, including digital technologies, impact of fake news and misinformation and usage of increasingly sophisticated means.
  - **Political and security environment deteriorated.**
- **Steps required to make UN peacekeeping more effective:**
  - **Improved medical support and equipment** to make peacekeepers more nimble, mobile and reactive, especially more helicopters.
  - **Increasing the number of women** in peacekeeping operations as more women in peacekeeping means more effective peacekeeping.
  - **Digital transformation** of peacekeeping which will enable better communication and help in countering misinformation, and the better collection and processing of information.
- **About UN Peacekeeping**
  - Peacekeeping operations get their **mandates from UN Security Council.**
  - Their troops and **police are contributed by Members States**
  - They are guided by **three basic principles: Consent** of the parties; **Impartiality** and **Non-use of force** except in self-defense and defense of the mandate.

### 2.4.2. INDIA AND USA AGREE ON A TRANSITIONAL APPROACH ON EQUALISATION LEVY (EL)

- Both **signed a pact for transition from EL** (or digital tax).
  - Settlement is broadly **on the lines of one reached under Unilateral Measures Compromise** among UK, Austria, France, Italy and Spain with US.
- EL was introduced in 2016 **to tax foreign firms with no permanent establishments in India** (Ex Amazon, Google etc).
  - Later **US conducted investigation into such digital taxes** adopted by Austria, India, Italy, UK etc **stating these discriminated against US digital companies.**
- In October 2021, **136 countries, including India, agreed to enforce a global minimum corporate tax rate of 15%**, as well as an equitable system of taxing profits of big companies in markets where they are earned.
  - **Deal requires countries to remove all digital services tax** and other similar unilateral measures.
- Proposed solution of **global tax deal consists of two components: Pillar One**, which is about reallocation of an additional share of profit to the market jurisdictions and **Pillar Two**, consisting of minimum tax and subject to tax rules.
- As per India-US pact, **India will continue to impose EL till March 31, 2024**, or till the implementation of Pillar 1 whichever is earlier.



**SMART QUIZ**

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





# 3. ECONOMY

## 3.1. STATE FINANCES

### Why in news?

RBI released **report** titled, “**State Finances: A Study of Budgets of 2021-22**” with theme “Coping with the Pandemic: A **Third-Tier Dimension.**”

### More about news

- It is an **annual publication** that provides information, analysis and an **assessment of the finances of State governments.**

- Key Highlights of report:**

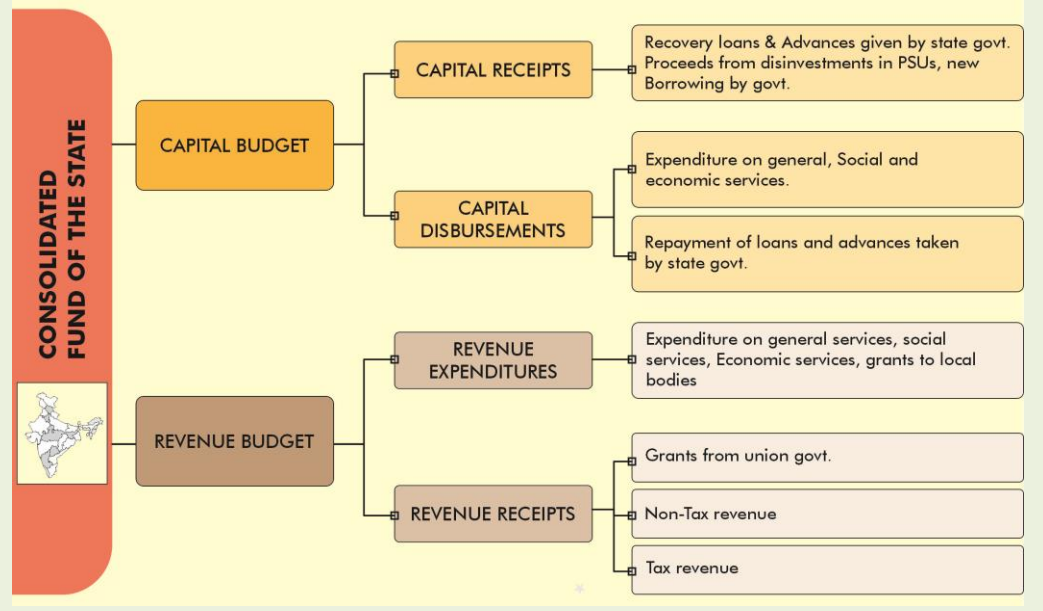
- For 2021-22, States have budgeted their **consolidated gross fiscal deficit (GFD)** to gross domestic product (GDP) ratio at **3.7 %** (improvement from **4.7 %** in the revised estimates for 2020-21).
- The combined **debt to GDP ratio** of States which stood at **31 % at end-March 2021**. It is higher than the **target of 20 % to be achieved by 2022-23** as per recommendations of the FRBM Review Committee.
  - ✓ 15th Finance Commission expects the **debt-GDP ratio to peak at 33.3% in 2022-23**, and gradually **decline thereafter to reach 32.5% by 2025-26**.
- The ratio of **interest payment to revenue receipts** has been increasing in recent years at a steady pace, indicating **erosion of debt sustainability**.
- Market borrowing**, the largest component of outstanding debt, is expected to **reach 63 per cent** at end-March 2022.
- The shares of **National Small Savings Fund (NSSF)**, **loans from banks and financial institutions** and **public accounts** in total outstanding liabilities of the States have declined over the years.
- With the third-tier governments in India playing a **frontline role in combating the pandemic** by implementing containment strategies, healthcare, quarantining and testing facilities etc, their finances have come **under severe strain**.
- It is estimated that **local authorities would lose around 15-25 per cent of their revenues** in 2021, which may make the maintenance of the current level of service delivery difficult.

### Why understanding of State Finances is important?

- Capital Spending:** About **two-thirds of India’s public capex comes from states**, the highest decentralization of capital spending globally (as per RBI 2020 report). Refer infographic for **comparison of central and state government capital expenditure**.

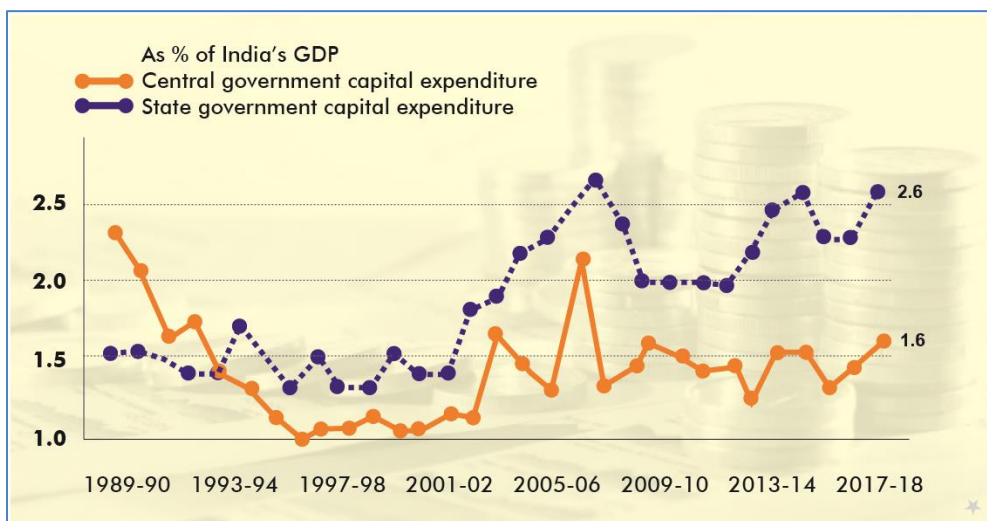
### About State Budget

- The structure of State Government Accounts is quite similar to that of the Union Government. For the States also, the Constitution of India stipulates that **no expenditure can be incurred** from the Consolidated Fund of a State **without the authority of Appropriation Act**.
- In order to obtain this authorisation from State Legislature, a **statement of anticipated receipts and expenditure for each financial year** needs to be laid before the State Legislature. See infographic for structure of the state budget.



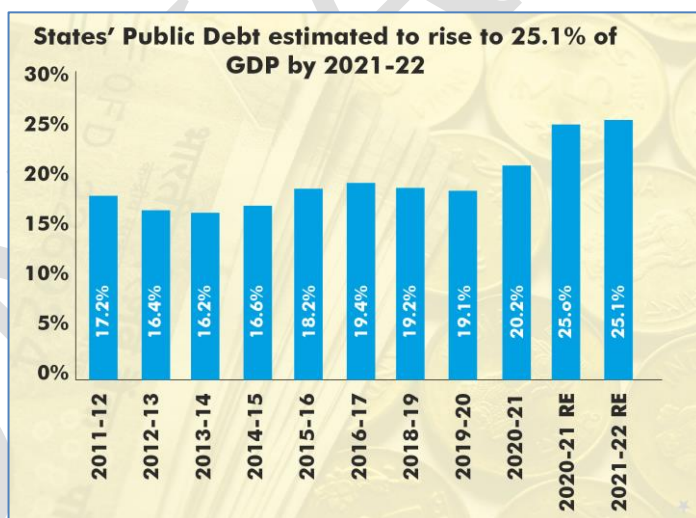
- **Employment Generation:** States employ **five times more people than the Centre.**

- Further, high market borrowings by states has serious implications on the interest rates charged in the economy, the availability of funds for businesses to invest in new factories, and the **ability of the private sector to employ** new labour.



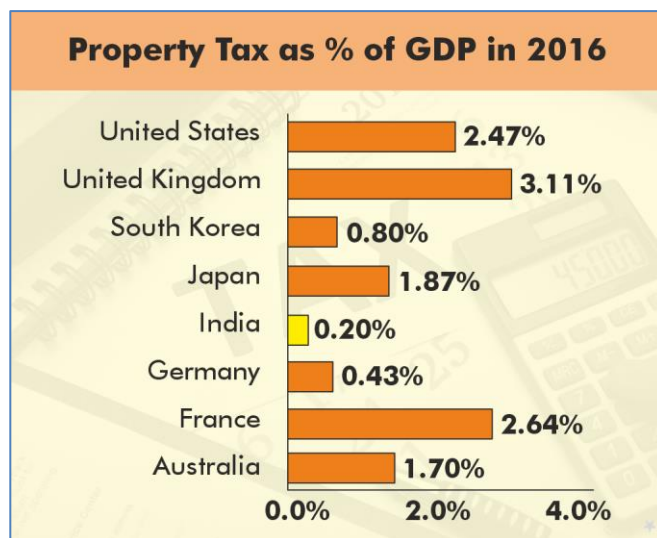
- **Impact on national economy:** States have a greater role to play in determining India's GDP which makes it crucial to understand their spending pattern. If, for example, their combined **expenditure contracts** from one year to the other, then it **will bring down India's GDP.**

- **Macroeconomic stability:** If states find it difficult to raise revenues, a rising mountain of debt (captured in the debt-to-GDP ratio) could start a **vicious cycle** wherein states end up **paying more and more towards interest payments** instead of spending their revenues on creating new assets that provide better education, health and welfare for their **residents.**



**Key trends in state finance**

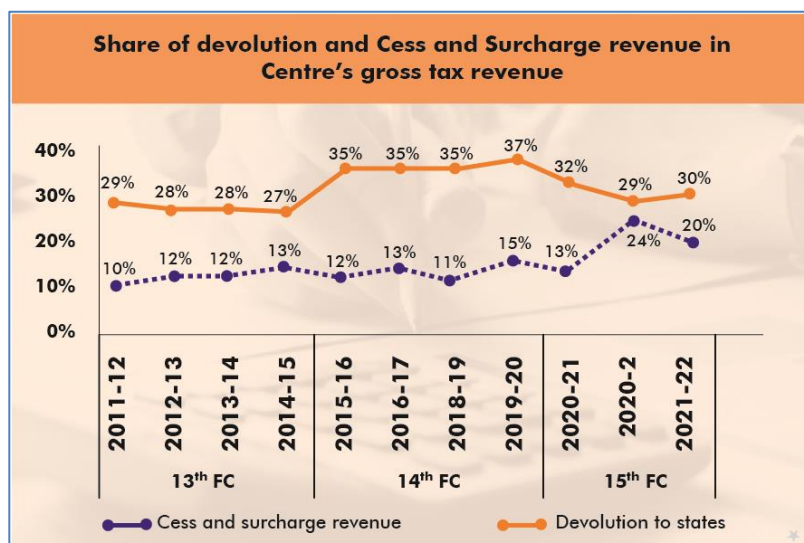
- **Increase in Fiscal deficit:** States' **fiscal deficit** increased from 2.9% of GDP in 2019-20 to **4.1% of GDP in 2020-21** (by Rs 2.25 lakh crore).
- **Rising Public debt:** At the end of 2021- 22, aggregate public debt of states is estimated to be **25.1% of GDP**, a significant rise from **17.2% of GDP** in 2011-12 (Refer map).
- **Own tax revenue is the largest source of revenue:** States' own tax revenue is estimated to be the largest source of revenue (**45% of total revenue receipts**) for states in 2021-22. It is estimated to be **6.7% of their GSDP.**
- **Low property tax collection:** Property tax collection level in India is **significantly lower (0.2% of GDP)** as compared to some of the developed countries. The 15th FC highlighted factors like **undervaluation** of property, incomplete property tax **records**, and **inefficient** administration for low property tax revenue.
- **Turnaround of discoms to remain a priority for containing risks to state finances:** In most states, state-owned power distribution companies (discoms) remain a **source of strain on state finances** as they continue to make losses and their liabilities are on the rise.



- For instance, in 2020-21, 16 states provided guarantees for borrowing of Rs 1.36 lakh crore by discoms, i.e., **0.67% of 2019-20 GDP.** Such guarantees pose a **potential risk to state finances** in the event of any default by discoms.

## Issues with state finance

- Decline in tax devolution:** The total central transfers to states can be classified as: (i) **states' share** in central taxes as per the recommendations of the FC, (ii) **grants** recommended by the FC, and (iii) **other grants** by the Centre such as those for centrally sponsored schemes.
  - The 15<sup>th</sup> FC has recommended **41% share** for states in the divisible pool of central taxes for 2021-26. However, due to the **declining size of the divisible pool** as a share of gross tax revenue of the Centre, the share of tax **devolution is estimated to decline** in the overall scheme of central transfers.
- Growing cesses and surcharges reduce tax devolution to states:** While the cess and surcharge revenue remained around **10-15% of GTR** (Gross Tax Revenue) during 2011-20, its share is estimated to significantly increase to **24% in 2020-21**.
  - Consequently, **devolution to states has decreased** from nearly **35% of GTR** during 2015-20 to around **30% of GTR in the last two years**.
- Reduction in share of untied funds in central transfers to states:** As per the 15th Finance Commission estimates, untied funds (tax devolution + revenue deficit grants) in central transfers are estimated to be **29.5% of the Centre's gross revenue receipts during 2021-26**. This is notably **less than the same during 2015-20 (32.4%)**.
- Overoptimistic revenue estimates:** During the 2015-20 period, states **raised 10% less revenue** than their budget estimates. During the same period, on average, states **underspent their budget** by 9%.
- Lower capital expenditure:** According to SBI research, nine of the 13 states reported **lower capital expenditure** (good spending) in 2020-21, as **compared to budgeted amounts**. Reduction in capital expenditure has potentially **adverse implications for economic development**.
- Other issues:** Populist programs such as **farm loan waivers** launched by a number of state governments contribute to the **fiscal stress**, without doing much to raise farm incomes.
  - The rather tepid performance of the **power debt restructuring scheme, UDAY**, also strained state finances.
  - Covid-19 induced lockdowns and **initial ban on liquor, the sharp fall in mobility**, which hit fuel stations hard, and the slump in the property market **also hit state governments hard** as they are **heavily dependent on liquor, fuel, and real estate** for revenues.
  - States are contending with **shrinking revenue autonomy** and a **low tax buoyancy** (taxes are rising at a lower proportion than an equivalent growth in GDP).



### Steps taken by Centre to support states

- Reform-linked additional borrowing space for 2020-21:** In view of the COVID-19 pandemic, in May 2020, the central government permitted states to increase their fiscal deficit limit from 3% of GSDP to **5% of GSDP in 2020-21**.
  - Of this 2% increase, an increase of 1% of GSDP was to be permitted upon **completion of reforms** in four areas (0.25% of GSDP for each reform): **one nation one ration card, ease of doing business, urban local body, and power distribution**.
  - As per the Union Ministry of Finance, states gained permission for reform-linked borrowing worth **0.42% of their aggregate GSDP** in 2020-21 (Rs 89,944 crore).
- Special Assistance to States for Capital Expenditure for 2021-22:** Under the scheme, states will be provided **interest-free loans of up to Rs 15,000 crore** in 2021-22, that need to be **repaid after 50 years**. Of this, **Rs 5,000 crore of loans are earmarked for states which carry out disinvestment** of State Public Sector Enterprises or monetisation/ recycling of infrastructure assets.

## Road Ahead

- Overhaul of Fiscal Responsibility and Budget Management (FRBM) framework:** The 15th FC report recognizes that the FRBM Act needs **major restructuring**, especially post the pandemic, and recommends that a **new framework** is needed to **achieve debt sustainability**.

- **Reporting of liabilities:** States should amend their fiscal responsibility legislation to ensure **consistency with the Centre’s legislation**, in particular, with the **definition of debt**. Standards should be developed for reporting and disclosure of broader **public debt and contingent liabilities, and their risks**.
- **Fiscal policy should act as a stabilising tool:** fiscal policy of the states has to be re-engineered so that **fiscal spending becomes anti-cyclical**, rather than procyclical, and function as a **stabilising tool**.
- **Power sector reforms:** Undertaking power sector reforms will not only **facilitate additional borrowings** of 0.25 per cent of GSDP by the States but also **reduce their contingent liabilities** due to improvement in financial health of the DISCOMs.
- **Independent Fiscal Council:** As recommended by 15<sup>th</sup> FC, an independent Fiscal Council should be established with powers to **assess records** from the Centre as well as **states**.
- **Productive expenditure should be prioritised:** States to reprioritise spending with a special focus on **high multiplier capital projects** with low gestation periods and also in building healthcare facilities and support systems like **better social security nets**. Similarly, **universal health coverage** has to be rolled out in the deficit states.
- **Strengthen third-tier governments:** RBI report has made recommendations like increasing the **functional autonomy** of the civic bodies, strengthening their **governance structure** and **empowering them financially** via higher resource availability, including through own resource generation and transfers.

## 3.2. NATIONAL MULTIDIMENSIONAL POVERTY INDEX

### Why in News?

Recently, India’s first ‘**National Multidimensional Poverty Index: Baseline Report and Dashboard**’ was released by **NITI Aayog** in collaboration with **United Nations Development Programme (UNDP)** and **Oxford Poverty and Human Development Initiative (OPHI)**.

### About Multidimensional Poverty Index (MPI)

- First developed in **2010 by UNDP and OPHI**, MPI is a poverty estimation measure **used in UNDP’s flagship Human Development Report**.
- It is based on three macro dimensions of poverty - **health, education and living standards** - covering **10 indicators** of acute deprivations faced by a person simultaneously.
- MPI helps in identifying the most vulnerable people - the poorest among the poor and revealing poverty patterns within countries and over time.
- India was ranked at **62 out of 109 nations with 27.9% population as multidimensionally poor**.

### MPI: Benefits and Limitations vis-à-vis other measures

Using multipurpose household surveys for data on different dimensions, MPI offers benefits like:

- **Better Comparison:** It shows composition of multidimensional poverty across different regions, ethnic groups or any other population sub-group, with useful implications for policy,
- **Complement to income-based poverty measures:** Income poverty data come from different surveys, and these surveys often do not have information on health, nutrition etc.

### Limitations

- **Less Sensitive** as households need to be deprived of more indicators to be poor,
- **Unable to capture inequality** among the poor,
- **Unable to capture intra-household inequalities** because of no individual-level indicator
- **Limits cross-country comparison** due to unavailability of data on all indicators.

### Indian efforts to measure poverty

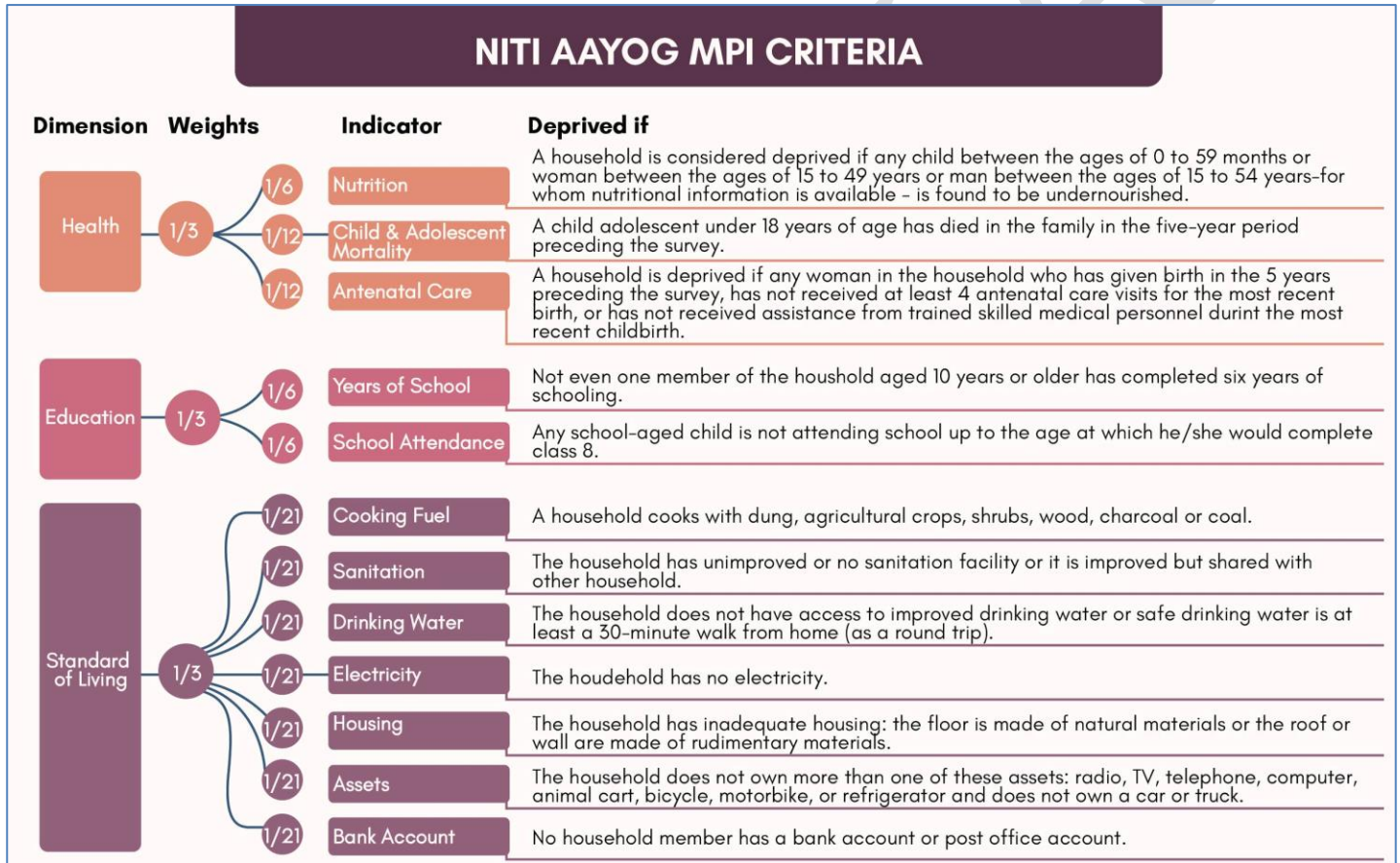
- Defining poverty has remained a complex task with long pending dispute on whether it is **absolute** (i.e., only material deprivations) or **relative** (including social exclusion as well).
- Based on different methodologies for estimation of poverty, efforts are on to define poverty in India from Pre-independence time as-

Pre-Independence Poverty Estimation	<ul style="list-style-type: none"> <li>• <b>Dadabhai Naoroji in 1901</b>, in his book ‘Poverty and the Un-British Rule in India’, <b>National Planning Committee (NPC) in 1938</b> and ‘<b>Bombay Plan</b>’ authored in <b>1944</b> gave their respective poverty lines.</li> </ul>
Post-Independence Poverty Estimation	<ul style="list-style-type: none"> <li>• <b>Planning Commission Working Group in 1962</b> gave a separate poverty line for rural and urban India.</li> <li>• <b>Dandekar and Rath in 1971</b> suggested poverty based on calorie intake.</li> <li>• <b>Alagh Committee in 1979</b> introduced poverty line based on the <b>nutritional requirements</b> and related consumption expenditure for rural and urban areas.</li> </ul>

- **Lakdawala Committee** in **1993** continued the poverty line based on the **calorie consumption** and introduced **state specific poverty lines** based on **CPI-IW** for urban areas and **CPI-AL** for rural areas.
- **Tendulkar Committee** in **2009** introduced a uniform poverty line basket across rural and urban India.
  - It shifted from Calorie consumption basket and included private health and education expenditure and use of **Mixed Reference Period (MRP)** for estimates.
- **Rangarajan Committee** in **2014** gave recommendation on use of separate all-India rural and urban baskets with food items ensuring recommended calorie, protein, and fat intake per capita per day.
- It included non-food items and health expenditure with use of **Modified Mixed Reference period** and gave a **poverty threshold**.

**Multidimensional Poverty Index by NITI Aayog**

- Part of Global Indices for Reforms and Growth (GIRG) initiative, the latest Index is based on the MPI from UNDP and OPHI with inclusion of two additional indicators, i.e., **antenatal care** and **bank account** under the dimensions of **health** and **standard of living**.
- This baseline report of India’s first ever national MPI measure is **based on the reference period of 2015-16 of the National Family Health Survey (NFHS)**.



**Key findings from National MPI**

With estimates of national MPI headcount ratio and intensity of India, States and UTs, as well as for all the districts, the major findings from it are:

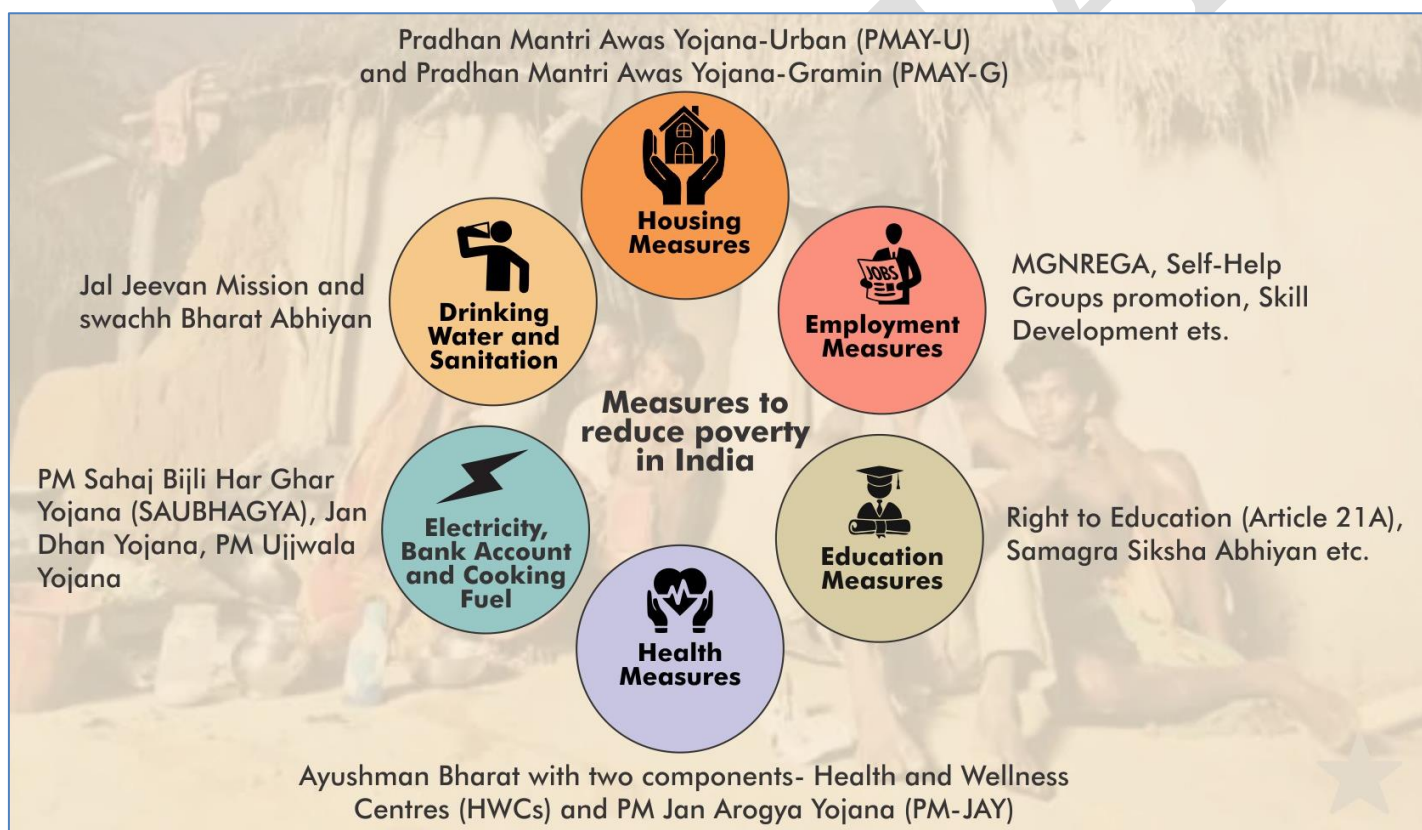
- **National MPI:** At **0.118** with **Rural MPI** at **0.155** and **Urban MPI** at **0.04** (MPI ranges from **0 to 1** and higher values imply higher poverty).
- **Highest Poverty States/UTs:** Bihar with 51.91% of the population as poor, followed by Jharkhand and Uttar Pradesh.
- **Lowest Poverty States/UTs:** Kerala with 0.71% of the population as poor, followed by Puducherry and Lakshadweep.
- **Household level deprivations on Important Indicators**
  - Households deprived of **healthy nutrition levels: 37.6%**.

- Households deprived of **six years of schooling: 13.9%**.
- Households with **unimproved or no sanitation facility: 52%**.

### Benefits of National MPI

With its indicators having close relation with realizing the SDGs, in particular –target **1.2 of the 2030 Agenda** which specifically focuses on addressing **poverty in all its dimensions**, the national MPI will-

- **Enable the analysis** of comparative and relative performance among States, UTs and districts in India.
- **Help in evidence-led policy** and design programs for focused interventions to reduce poverty. E.g. Fine-tuning of State policies and programmes who are at the forefront of public service delivery and social protection.
- **Strengthen the federal structure of India** with involvement of district administrations for effective implementation of interventions and schemes.
- **Empowering policymakers and local officials** to manage complexity and scale so that no one is left behind.
- **Enhance India’s capability to reduce poverty** as the country builds back stronger from the effects of the COVID-19 pandemic
- **Serve as a public policy tool** for an informed public dialogue across a range of stakeholders, including civil society, the research community, and businesses through tracking of progress towards achieving this goal.



### Challenges to Poverty Reduction

- **Limitations of Fund:** Due to low tax-to-GDP ratio, the government ability to finance its expenditures and welfare measures is low.
- **Slump in Economic Activities:** Due to slowdown in economic growth for the last few years the job creation and growth in India has remained a concern.
- **Poor Human Resource Development:** With lack of quality education, skill development and productive poverty alleviation initiatives, the human resource development of India is low.
- **Lack of Credit Access:** Due to high NPAs and other reasons- the access to institutional credit, especially for MSMEs sector- has remained a challenge.

- **Impact of Covid-19:** Due to stalled economic activities by Covid-19, the people employed in agriculture have increased with further constraints on government resources.
- **Gaps in Schemes:** The coverage of welfare schemes like PDS, Jan Dhan Yojana etc. is not universal with problems of corruption.

### Way Forward

- **Accelerate Economic Growth:** High economic growth can help in increasing state funds as well as in creation of productive employment
- **Agricultural Growth:** With over 40% workforce employed in agriculture, high agricultural growth or promotion of allied activities can help in poverty reduction.
- **Accelerating Human Resource Development:** Through quality education, skill development and other initiatives India needs to increase in human resource development.
- **Infrastructure Development:** To attract private investment, including FDI, the connectivity and accessibility in India needs to be improved.
- **Other Steps:** Capacity development of government officials, removing gaps in schemes for universal coverage and better coordination among all tiers of governance.
- **Universal Basic Income (UBI),** i.e., periodic and unconditional cash payments to all citizens or a quasi UBI to supplement the welfare measures. The importance of UBI becomes more under ongoing impact on jobs by Covid-19 pandemic and rising inequalities in society.

## 3.3. CASH ECONOMY

### Why in News?

On 08 November 2021, demonetisation marked its five years- date on which **currency notes of ₹500 and ₹1000 ceased to be legal tender in India in 2016.**

### More on News

- **Demonetization** can be broadly understood as stripping the legal tender status of a currency unit.
- It is a **drastic intervention used by nations to-** stabilize currency and fight inflation; Push informal economy towards transparency/**formalization**; Facilitate trade and access to markets; and eliminating the ills of black money and corruption from the country.
- On **08 November 2016, demonetization of ₹500 and ₹1000 note** was announced by the government. The process had a drastic impact on the **level of immediate liquidity and the cash economy.**

### What is Cash Economy and why do people prefer cash?

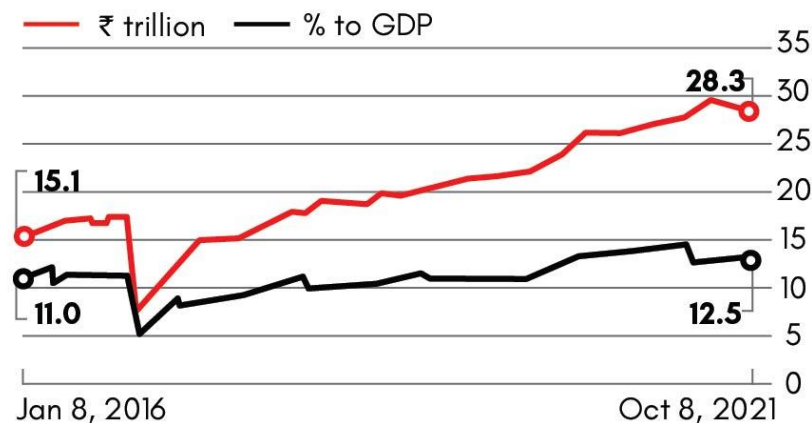
Cash Economy is defined as **‘an economic system, or part of one, in which financial transactions are carried out in cash (currency or coins), rather than instruments like cards (debit and credit cards), bank transfer etc.’**

The preference for cash stems from following reasons-

### Impact of demonetization on Cash Economy

#### CASH TO GDP RATIO HIGHER THAN PRE-DEMO

Currency with public



Source: Reserve Bank of India, National Statistical Office

- After an initial decline in the **Cash to GDP Ratio or Currency in Circulation (CIC) to GDP Ratio** (i.e. the value of cash in circulation as a ratio of GDP) it now stands at record levels with a peak of **14.7%** in comparison to historical ratio of **less than 12%**.
- The share of high denomination notes (Rs 500 and 1000) which accounted for over **86% before demonetisation** is now at **85.7%** (Rs 500 and 2000).
- At the same time, **digital payments** are mainstreamed with **over 4 billion transactions** in the month of **October** alone worth **Rs 7.71 trillion.**

- **Large informalization:** Vital for functioning of an economy, especially in nations with **large informal economy like India**. Cash is the preferred mode of transaction by **socially vulnerable citizens**, such as poor or low-income and elderly people; and informal businesses.
- **Simple and reliable form of payment** as it serves as a **legal tender across India** (state-guaranteed means of payment to the general public).
- **Ensuring freedom and autonomy** as it doesn't involve third party and can be used easily even without internet or electricity with **no extra processing**.
  - **Protecting Right to Privacy** of citizens, a fundamental right, by protecting the identity and data in financial matters,
- **Fast and secure** as payments can be made instantly with no risk of cybercrime, digital frauds or financial risks for the payer and payee.

But increasing digitization, development of an online world and increasing global and local interconnectedness are pushing towards the idea of a cashless society.

#### What are the advantages of moving towards a cashless society?

- **Financial Inclusion:** The technology driving the digital economy can help enable participation within it by those who may be excluded through conventional banking practices.
  - For example, encouragement to cashless economy would **minimize the leakages in the Direct Benefit Transfer (DBT) mechanisms**.
- **Discouraging growth of black economy:** Moving to a cashless society makes transaction more transparent and thus traceable. This indirectly discourages the growth of black economy.
  - For example, money laundering will become very difficult as there will always be a digital paper trail.
- **Curtailing use of counterfeit notes:** Printing of counterfeit currency, increasing need from central banks to update security features and create awareness among people on genuine notes would be ameliorated.
- **Lowered cost of printing and transactions:** Regular printing of currency by central banks to meet the demand could be decreased. Also, less time and cost is associated with handling, storing, and depositing paper money.

#### What are the challenges in transition from a Cashless Economy?

- **Limited Awareness** as parts of India still continue to remain unbanked and remain unaware vis-à-vis the financial developments such as adoption of UPI, mobile banking etc.
- **Poor financial literacy:** National Centre for Financial Education findings state that **only 27% of Indians are financially literate**. This translates to poor transition towards Cashless economy.
- **Limitations** in relation to **Safe and secure infrastructure** to convince market participants. This can be seen in growth of high technology risks like cyber-attacks and digital frauds.
- **Challenges associated from** alternative forms of payment like **cryptocurrencies and other virtual currencies** (non state-guaranteed means of payment).
- **Low availability of financial services** as the **Financial Inclusion Index (FI-Index)** of India was **53.9** by March 2021 (released by RBI with **access, usage and quality** as sub-indices).
  - The already **prevalent digital divide will also start reflecting in financial access and growth** if transition to cashless economy is premature.

#### Way Forward

With cash and non-cash payment means having own unique benefits and challenges for different people, the **progression from cash economy** needs to be gradual and measured through-

- **Integrated Payment Regulatory Ecosystem:** Creating an integrated regulatory ecosystem will ensure that the transition to a cashless system is smooth and is centered around creating a safe, fast and cost efficient payment system.
- **Broadening and deepening of the financial system:** Work on financial literacy and financial inclusion needs to be acted upon simultaneously and in an integrated manner.



- **Create Enabling Infrastructure:** Enhance the reach of high speed internet and telecommunication networks to ensure wider reach of appropriate technology to the general public. E.g., accelerating the completion of the BharatNet project.
- **Ensure State and Central Banks Participation:** It will help in having a state-guaranteed means of payment for the public to maintain competition and efficiency of the system.
  - It will also help in bringing **behavioral Changes in users** as cash-on-delivery is still the most trusted payment method by consumers on e-commerce platforms.
- **Adopt a Global Approach:** With global scale of digital money revolution, India should be aware of global developments and work on building a global approach to ensure safe and secure transactions

### 3.4. INSOLVENCY AND BANKRUPTCY CODE (IBC), 2016

#### Why in news?

Recently, GN Bajpai committee report on Insolvency and Bankruptcy Code (IBC), 2016 was released.

#### More on news

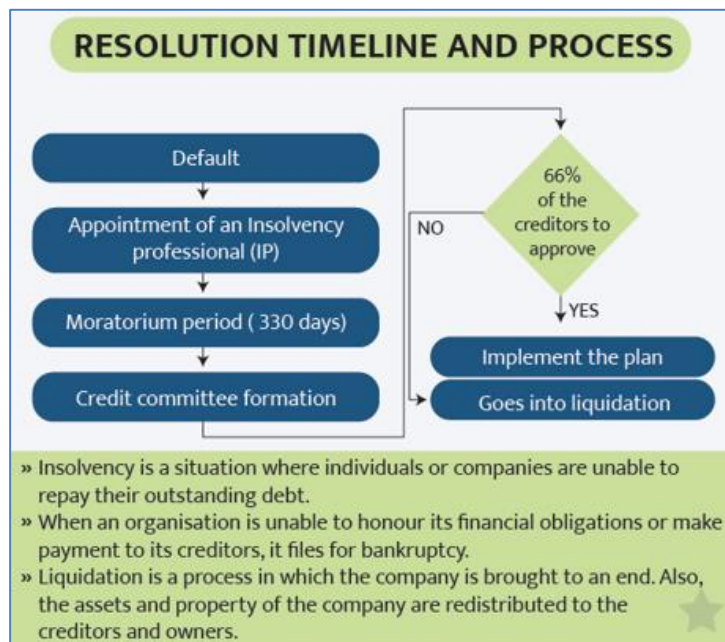
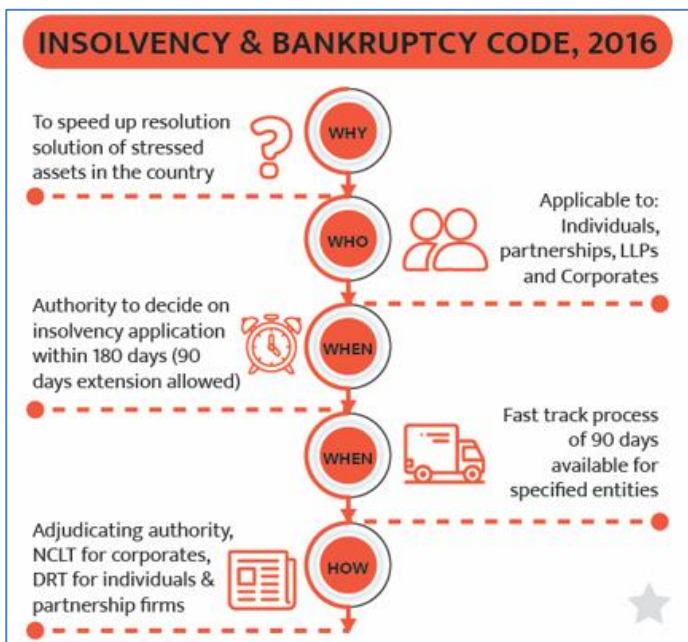
- The **Working Group on Tracking Outcomes of Insolvency and Bankruptcy Code, 2016 (IBC)** was constituted in May, 2019 by the Insolvency and Bankruptcy Board of India (IBBI).

#### About IBC, 2016

- **The IBC, 2016** provides for **resolution of stress assets** of a company, a limited liability partnership, a proprietorship, or partnership firm, or an individual (refer to the infographics).
- Implementation of code consists of **4 pillars**:
  - **Adjudicating authorities** (the National Company Law Tribunal or NCLT & the Debt Recovery Tribunal or DRT),
  - **IBBI** to exercise regulatory oversight over insolvency professional agencies,
  - **Insolvency Professionals (IPs)** and
  - **Information Utilities (IUs)**.

#### Key Highlights of the committee report

- The Working Group has come out with a **comprehensive framework for developing a metrics for measuring the outcomes of IBC** to objectively evaluate the achievements under the IBC.
- Committee has **identified goals for the IBC process**
  - Resolution of the distressed asset
  - Promotion of entrepreneurship
  - Availability of credit
  - Balancing the interests of stakeholders.
- **Key recommendation**
  - Suggested a **standardised framework to assess the success of the IBC** and improve its implementation.
  - **Reliable real-time data is essential to assess the performance** of the insolvency process.
  - **Measure** and track both **quantifiable and non-quantifiable outcomes** of the Code.
  - **Non-quantifiable outcomes such as behavioural changes** in the debtors and creditors, ushered in by the Code need to be corroborated by research and quantifiable proxy indicators.

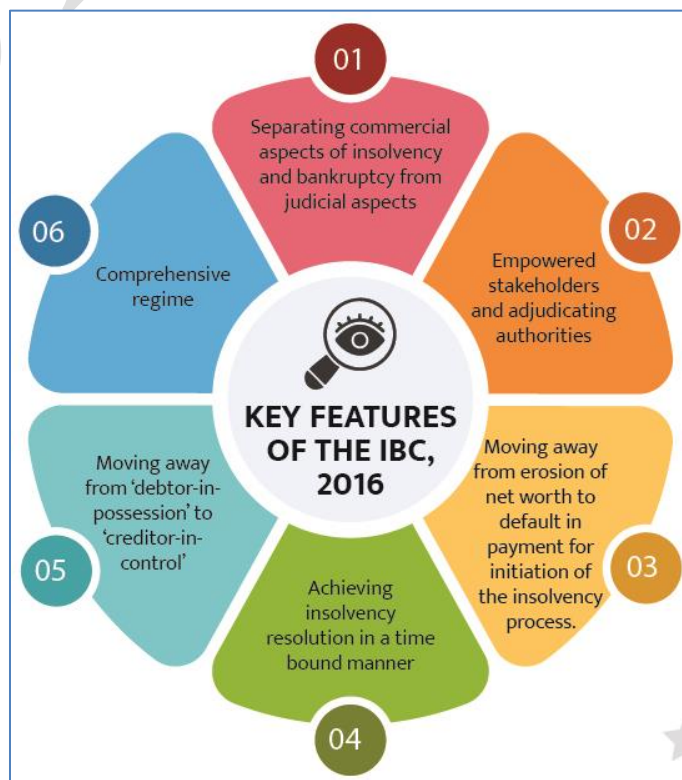


### Issues in IBC, 2016

- **Subpar performance:** Low recovery rate with haircut as much as 95% as well as delay in resolution process with more than 71% cases pending for more than 180 days point towards a deviation from the original objective of the code.
- **Role of Resolution Professionals:** Fresh graduates being appointed as IPs or RPs raises doubt about their competency in handling cases of huge and complex corporates. Parliamentary Standing committee has also pointed numerous conduct issue with these RPs or IPs. The rationale behind multiple IPAs overseeing their IPs is unclear. Also, this practice leads to conflict of interest between the regulatory and competitive goals of the IPA.
- **Discretion of CoCs:** According to the Ministry of Corporate Affairs, the commercial wisdom of CoC is supreme. Additionally, CoC also decides whether to continue with the interim RPs or as RPs or to replace the interim RP with another RP without any guidelines. Such discretion without any code of conduct may impinge upon the efficiency of the CoC.
- **Appeals against NCLT judgements:** NCLT judgements are litigated continuously in the NCLAT and the Supreme Court which further delays resolution and recovery.
  - Plus, more than 50% of the sanctioned strength in NCLT is lying vacant and the issues of vacancy has plagued the Tribunal for years.
- **Rigidity in resolution plan:** A combination of bidders taking different business units or assets may well be far superior to one bidder acquiring the entire business from the CoC. However, the RP does not currently have the flexibility within the IBC to dispose of the corporate defaulter across multiple bidders.

### Way ahead

- **Strengthening creditors rights:** As the insolvency process has fairly matured now, there may be an imperative to have a bench-mark for the quantum of “hair-cut”, comparable to global standards.
- **Institute of RPs:** A professional self-regulator for RPs that functions like the Institute of Chartered Accountants of India (ICAI) should be put in place.



- **Capacity building:** Smooth functioning of IBC depends on the functioning of IPs, IPAs and IUs. These entities have to evolve overtime, for which capacity enhancement programme should be conducted from time-to-time.
- **Code of conduct for CoC:** There is an urgent need to have a professional code of conduct for the CoC, which will define and circumscribe their decision. Moreover, IBBI should frame guidelines for the selection of RPs by the CoC in a more transparent manner, as these have larger implication for the efficacy of the code.
- **Curbing delays:** IBC needs to be amended so that post hoc bids are allowed during the resolution process. There should be sanctity in deadlines, so that value is protected and the process moves smoothly.
- **More competent members in the NCLT:** The NCLT members should be at least High Court judges so that the country could benefit from their judicial and procedural experience and wisdoms.
  - **Augmenting human resource:** An analysis of the requirement of the capacity in dealing with projected cases in the coming 3-4 years may be done so that recruitment process can be suitably planned. Required sanctioned strength may be filled without any further delay. There is also a need for imparting better training to NCLT members. National Law Schools should be involved in the NCLT system so that they can conduct academic research, develop suitable case-based training materials and provide appropriate support through law clerks and so on.
- **More flexible resolution plan:** The CIRP regulation 37 does allow the resolution professional much more flexibility in developing a resolution plan across multiple bidders each taking different piece of the corporate defaulters. IBC is clearly a Parliamentary legislation while CIRP Regulations are delegated subordinate legislation. Therefore, the IBC should be amended to clarify that the resolution plan could be achieved through any of the means prescribed under regulation 37 of the CIRP.

## Conclusion

The legal framework for insolvency and bankruptcy in India prior to the enactment of the IBC, 2016 was fragmented and ineffective. The evolution of the economic and financial system rendered it necessary to overhaul the erstwhile debt restructuring mechanism. This led to codification of the IBC, 2016. However, 5 years, since the law came into the force, down the line may shortcomings have become visible in the IBC, 2016 which needs to be addressed forthwith to achieve its objectives.

## 3.5. PROMPT CORRECTIVE ACTION (PCA)

### Why in news?

RBI issued **revised norms for commercial banks** that are to be placed under the Prompt Corrective Action (PCA) framework with effect from January 1, 2022.

### About PCA

- PCA is a framework under which **banks with weak financial metrics are put under watch by the RBI.**
- **RBI introduced the PCA framework in 2002** as a structured early-intervention mechanism for banks that become undercapitalised due to poor asset quality, or vulnerable due to loss of profitability.
- The framework was **reviewed in 2017** based on the recommendations of the working group of the **Financial Stability and Development Council and the Financial Sector Legislative Reforms Commission.**
  - Under the existing rules, 12 banks were placed under restrictions after they crossed the tolerance threshold.
  - Barring one, all banks have exited the framework over the last two years timeframe **but no uniform policy was applied for their exit.**
- **Objective of PCA**
  - **Enable supervisory intervention at appropriate time** and require the Supervised Entity to initiate and implement remedial measures in a timely manner, so as to **restore its financial health.**
  - Act as a **tool for effective market discipline.**
  - **Check the problem of Non-Performing Assets (NPAs)** in the Indian banking sector.
  - Help **alert the regulator as well as investors and depositors** if a bank is heading for trouble.
  - **Entails curbs on high-risk lending**, setting aside more money on provisions and restrictions on management salary thus curbing further haemorrhaging of bank balance sheets.

## Recent changes introduced to the PCA Framework

- **PCA applicability and criteria**
  - PCA Framework **would apply to all banks operating in India including foreign banks** operating through branches or subsidiaries based on breach of risk thresholds of identified indicators.
  - However, **payments banks and small finance banks (SFBs) have been removed** from the list of lenders where prompt corrective action can be initiated.
- **Parameters for PCA**
  - **Capital, Asset Quality and Leverage** are 3 parameters which will be the key areas for monitoring in the revised framework and **there are three risk threshold, from 1 to 3,** in the increasing order of severity.
  - The revised framework has **removed return on assets as an indicator.**
- A bank will be placed under PCA Framework based on the **Audited Annual Financial Results and the ongoing Supervisory Assessment made by RBI.**
  - RBI may **impose PCA on any bank during the course of a year** (including migration from one threshold to another) in case the circumstances so warrant.
- **Exit from PCA and Withdrawal of Restrictions under PCA**
  - **If no breaches in risk thresholds** in any of the parameters are observed as per **four continuous quarterly financial statements**, one of which should be Audited Annual Financial Statement (subject to assessment by RBI);
  - Based on Supervisory comfort of the RBI, including an assessment on sustainability of profitability of the bank.
- **Corrective actions prescribed after a bank is placed under PCA**

### Key Economic terms & Definitions

- **Non Performing Asset**
  - It is a loan or advance for which the **principal or interest payment remains overdue for a period of 90 days.**
  - Banks are required to **classify NPAs further into Substandard, Doubtful and Loss assets.**
    - ✓ **Substandard assets:** Assets which have remained NPA for a period less than or equal to 12 months.
    - ✓ **Doubtful assets:** Assets which have remained in the substandard category for a period of 12 months
    - ✓ **Loss assets:** It is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted, although there may be some salvage or recovery value.
- **Capital adequacy ratio:** It governs the capital that a bank ought to hold as a percentage of its total assets.
- **Asset quality:** It entails what portion of the loans is unlikely to be paid back, reflected in the net non-performing asset ratio — i.e., the portion of total advances tagged 'non-performing', after the provisioning for bad loans.
- **Leverage ratio:** It shows how much a lender has stretched itself in borrowing funds to generate income. The more the leverage, the riskier the turf on which the lender stands.
- **Return on assets (RoA):** It measures profitability, derived from net income (profit) as a percentage of total assets.

Mandatory and Discretionary actions by RBI		
Specifications	Mandatory actions	Discretionary actions
Risk Threshold 1	<ul style="list-style-type: none"> <li>• <b>Restriction on dividend distribution/remittance</b> of profits.</li> <li>• Promoters/Owners/Parent (in the case of <b>foreign banks</b>) to <b>bring in capital.</b></li> </ul>	<b>Common menu</b> <ul style="list-style-type: none"> <li>• Special Supervisory Actions</li> <li>• Strategy related</li> <li>• Governance related</li> <li>• Capital related</li> <li>• Credit risk related</li> <li>• Market risk related</li> <li>• HR related</li> <li>• Profitability related</li> <li>• Operations/Business related</li> <li>• Any other</li> </ul>
Risk Threshold 2	In addition to mandatory actions of Threshold 1, <ul style="list-style-type: none"> <li>• <b>Restriction on branch expansion;</b> domestic and/or overseas</li> </ul>	
Risk Threshold 3	In addition to mandatory actions of Threshold 1 & 2, <ul style="list-style-type: none"> <li>• <b>Appropriate restrictions on capital expenditure, other than for technological upgradation</b> within Board approved limits.</li> </ul>	

- However even under PCA, **banks are allowed to invest in government securities/other high-quality liquid investments.**

### Benefits of Prompt Corrective Action

- It **helps in bank recapitalisation and maintain capital requirements** as most bank activities are funded by deposits which need to be repaid, hence it is imperative that a bank carries a sufficient amount of capital to continue its activities.

- It ensures **limited Regulation** as RBI will regulate loan disbursements/ credit by PCA banks to unrated borrowers or those with high risks; however, it will not place a complete ban on the bank's lending.

### Conclusion

PCA, though not a panacea, but is still a **key indicator in identifying the financial health of a bank at an early stage** leading to timely intervention and efficient financial management.

### Issues of PCA

- **Lack of capital:** PCA banks already starve for funds because government finances are too tight. **These banks are not in a position to raise capital on their own.**
- **Further decline:** PCA sometimes accelerate the loss of market share and cause further decline of the position of the PSBs in the financial system in favour of private banks and foreign banks.
- **Not much on the governance or reform front.**

## 3.6. SUSTAINABLE BUSINESS PRACTICES

### Why in News?

Recently, the **Federation of Indian Chambers of Commerce and Industry (FICCI)** organized an event on the role of 'Business Responsibility and Sustainability Report' (BRSR) in driving climate actions in India at the **CoP26 (Glasgow)**.

### About Business Responsibility and Sustainability Reporting


- With increased **global push** from **investors**, regulators are **mandating companies** to report their **sustainability performance** globally. E.g. all companies with more than 500 employees in the EU need ESG disclosure.
- Indian version of **Sustainability performance**, or **ESG disclosures** or BRSR was introduced by **SEBI in May 2021** to push the listed companies to make additional disclosures on **non-financial parameters** along with the **mandatory financial disclosures**.

### What is BRSR and its principles?

- BRSR includes **essential (mandatory) and leadership (voluntary)** disclosures related to **Environment, Social and Governance (ESG)** under the **SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015**.
  - Presently, it is reported **voluntarily by few companies**. E.g. Recently, IndiGo became the first Indian carrier to show its efforts for sustainable aviation through ESG report.
- Segregated into three sections- **General disclosures, Management disclosures** and **Principle-wise performance disclosures**, with **nine principles**, BRSR will measure the impact of companies on **economy; environment and people** using **key performance indicators**, bringing higher transparency on its contribution to sustainability and **creates value** for the company.



# KEY PERFORMANCE INDICATORS

 <b>ENVIRONMENTAL</b>	 <b>SOCIAL</b>	 <b>CORPORATE GOVERNANCE</b>
<p>GHG Emissions</p> <p>Energy and Emission Intensity</p> <p>Waste management</p> <p>Water Usage</p> <p>Climate Risk Mitigation etc.</p>	<p>CEO Pay Ratio</p> <p>Gender Diversity</p> <p>Gender Pay Ratio</p> <p>Global Health and Safety</p> <p>Human Rights etc.</p>	<p>Board Diversity</p> <p>Board Dependence</p> <p>Ethics and Anti-Corruption</p> <p>Data Privacy</p> <p>Disclosure practices etc.</p>

## Nine Principles of BRSR



### What is the need for Business Responsibility and Sustainability Practice?

- **Business Resilience** through corporate adaptation and mitigation efforts against climate change impact.
- **Helping transition towards a sustainable economy** by promoting low-carbon, climate resilient and sustainable economy; vital for India in meeting its **Net Zero Ambition** by 2070.
- **Creating Long-term Value** for stakeholders, especially investors through identification on future risks by comparison across companies and sectors. E.g. Banks can make investment decisions on **Green Deposits**, i.e. the term deposits to be invested in environmentally beneficial projects and initiatives.

- **Increased Access to Capital** by opening up rising **capital of global sustainable funds**. As per Morningstar data, the global sustainable fund assets have more than quadrupled in the past two years, from a little under USD 900 billion at the end of September 2019 to USD 3.9 trillion at the end of September 2021.
- **Inclusive growth in India** through socially responsible business practices.
- **Strengthening of Corporate Governance** through improvements in transparency, diversity among others.

#### Major Global standards on Reporting of Sustainability

- **GRI Standards** by Global Reporting Initiative (GRI), an independent, international organization,
- **Sustainability Accounting Standards Board (SASB)**, also by Value Reporting Foundation, a global nonprofit organization,
- **ISO 26000 Standards** on social responsibility by International Organization for Standardization, an independent, non-governmental international organization.
- **United Nations Global Compact**, world's largest voluntary corporate sustainability initiative based on universal sustainability principles.

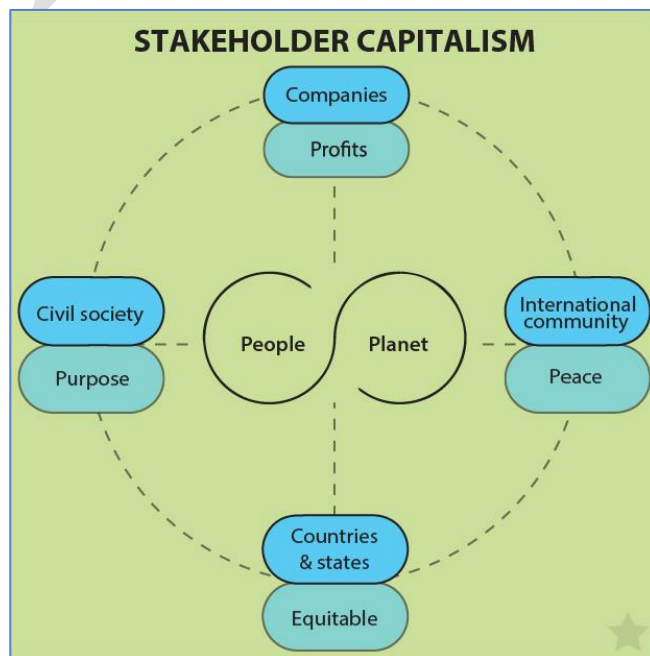
#### Challenges to adoption of BRS practices in India

- **Reporting Standard and Framework:** With multiplicity of **sectors** and **standards**, no one-size fits all criteria can be provided for all companies.
- **Compliance Risks:** In near future, compliance to the **qualitative** and **quantitative** standards by organizations will be a challenge due to issues like:
  - **Cost risks** to collect ESG-related data, monitor it and report the same.
  - **Limited access to technology and qualified professionals** to ensure compliance.
  - **Sustainability risks** for certain businesses to meet a low carbon economy due to the transitions, risks to assets (due to climate change) and reputation.
- **Lack of Benchmarks:** With lack of benchmarks on performance indicators, the companies and stakeholders will struggle to make sense of disclosures. Also, the disclosures are **company specific** rather than **sector or plant specific**; carrying risks of a skewed picture.
- **Greenwashing:** A practice of conveying a false impression or entities taking a path that seemingly promotes ESG, but the results do not reflect the same.
- **Leadership Issues:** The recent corporate governance lapses at Yes Bank, IL&FS etc. highlights the issues of leadership and focus on narrow interests of self or shareholders only.
- **Large informal economy:** It suffers from issues like lack of access to capital, obsolete technology, and **behavioral issues** of remaining informal to avoid scrutiny.

#### Way Forward

The ongoing Covid-19 pandemic highlighted the importance of protecting people, planet, and prosperity together for a **sustainable future**. BRSR is just the first step towards it through **regulatory sanction**. We can encourage its **adoption** and **compliance** by corporate India through:

- **Promotion of stakeholder capitalism**, i.e., to serve the interests of all stakeholders (see image).
- **Comprehensive Disclosures** to ensure data trail for other stakeholders to confirm actions.
- **Capability Building of stakeholders** by increasing their participation to check compliance the financial and operational impact.
- **Promoting Research** in sustainability reporting to develop manpower, technologies and methods to collect and track data.
- **Promote International Cooperation** for greater interoperability and cross-referencing on disclosures.
- **Increase formalization of economy** with improved access to capital and technology necessary for transition.
- **Increase awareness** on not just risks but the **opportunities it offer** as well.
- **Make sustainability part of the vision and mission statement** of the **company** and its **leadership**, making it a part of business strategy.



## 3.7. MINERAL CONSERVATION AND DEVELOPMENT (AMENDMENT) RULES, 2021

### Why in news?

Ministry of Mines has notified the Mineral Conservation and Development (Amendment) Rules, 2021 to amend the Mineral Conservation and Development Rules, 2017.

### Background

- The **Mines and Minerals (Development and Regulation) Act, 1957** regulates the mining sector in India and mandates the requirement for granting leases for mining operations.
- **Section 18** of the MMDR Act, 1957 **empowers Central Government to frame rules for conservation and scientific development of minerals and protection of environment** from mining operations.
- Accordingly, **Mineral Conservation and Development Rules (MCDR)** were framed (amended from time to time).

### National Mines and Mineral Scenario

- **Minerals**
  - India continues to be **largely self-sufficient** in minerals which constitute **primary raw materials** supplied to industries such as **iron & steel, aluminium, cement, bauxite, chromite, limestone, china clay-based ceramics, glass** etc.
  - India is deficient in **kyanite, magnesite, rock phosphate, manganese ore** etc. which are imported to meet demand.
  - The **total value of mineral production** (excluding atomic & fuel minerals) during 2020-21 which shows a **decrease of about 11.35%** over that of the previous year due to COVID-19 pandemic and lockdown.
- **Mines**
  - Indian mining industry is **characterized by a large number of small operational mines**.
  - Out of 1303 reporting mines, **most of the mines reported are in Madhya Pradesh** followed by Gujarat, Karnataka, Odisha, Andhra Pradesh, Chhattisgarh, Tamil Nadu, Rajasthan, Maharashtra, Jharkhand, Telangana and Goa.
  - In terms of **value of mineral production**, about **87% comes from 10 states** with percentage share shown below:

### About Mineral Conservation and Development (Amendment) Rules, 2021

The highlights of amendments in the Rules are as follows:

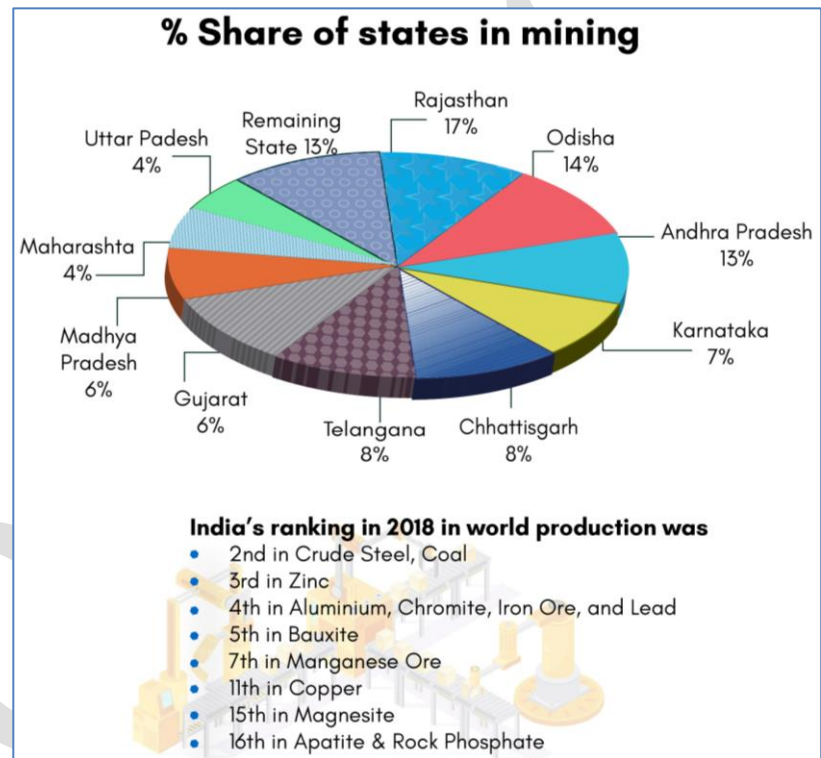
- **Submission of Digital plans:** All plans related to mine shall be prepared by combination of **Digital Global Positioning System (DGPS)** or **Total Station** (an electronic/optical instrument used for surveying) or **by drone survey** for certain or all leases as **specified by Indian Bureau of Mines (IBM)**.
- **Mandatory drone survey**
  - Persons holding lease of mines (Lessees), with **excavation plan of 1 million tonne or more/leased area of 50 hectare or more**, are required to submit **drone survey images of leased area and up to 100 meters outside the lease boundary every year**.
  - Other lessees will **submit high resolution satellite images**.
- **Enhance employment:** Mining Engineer can have **diploma in mining and mine surveying** along with a **second class certificate of competency** issued by the **Director General of Mines Safety**.
- **Reduction of compliance burden**
  - Provision of daily return has been **omitted to reduce compliance burden**. In addition to State Government, **IBM also has power of taking action** against wrong information in monthly or annual returns.
  - **Part-time mining engineer** or **part-time geologist** can be engaged for **category 'A' mines** (leased area below 25 hectares). This will **ease compliance burden for small miners**.
- **Financial assurance:** If lease holder does not submits final mine plan within specified time frame, he/she **forfeits financial assurance or performance security**.
- **Rationalization of penalty rules**
  - Previously, the rules provided for penalty of imprisonment, fine or both for **violation of each and every rule irrespective of the severity of the violation**.
  - Amendment in the rules have categorized violations as Major (fine, imprisonment or both), Minor (Only fine, reduced penalty) and decriminalized rest of the violations.

### Challenges to mining sector in India

- **Regulatory challenges**
  - There is no guarantee of obtaining mining lease even if a successful exploration is done by a company.
  - The mining licenses are typically awarded on a first come first serve basis in principle but there is no transparent system.



- **Inadequate Infrastructure facilities**
  - The inadequacy of infrastructure is related to the **absence of proper transportation and logistics facilities**.
  - **Railway connectivity in most key mining states is poor** and it has inadequate capacity for volumes to be transported which adds to the overall supply chain cost.
  - There is **inadequate capacity at ports for handling minerals** and the rail / road connectivity to some ports is poor.
- **Sustainability challenges**
  - The importance of sustainability in mining, in India, can be illustrated by the fact that **40% of mining proposals failed to get environmental clearance from MoEFCC**.
  - In addition to the environment and forest clearances, mining projects also have to comply with **requirements aimed at enhancing the welfare of the local community**. Obtaining these approvals and clearances is a tedious process.
- **Environmental challenges**
  - **Air**
    - ✓ Surface mines produce **large amount of dust from blasting operations**.
    - ✓ Many coal mines release **methane**, a potent greenhouse gas.
    - ✓ Smelting operations release **sulphur dioxide and other heavy metals**.
  - **Water**
    - ✓ Heavy metals and toxic elements such as **mercury, lead, arsenic** etc. can **leach into groundwater** from mines.
    - ✓ Mining operations utilise large quantities of water which can lead to stress on water bodies.
  - **Land**
    - ✓ Blasting and surface mining can put pressure on sub-surface rocks and lead to **collapse of material overlying mineral deposit** and even **earthquakes**.
- **Health and safety challenges**
  - Mining operations are extremely hazardous, especially underground mining, as miners face **poor ventilation, low visibility and potential collapse of mine itself**.
  - Several accidents have taken place over the years which have resulted in death of mineworkers.



### Steps taken to mitigate challenges

- **Reforms in MMDR Act, 1957**  
The Act was comprehensively amended in **2015** to bring several reforms, notably:
  - **Mandating online auction** of mineral concessions to improve transparency.
  - Establishing **District Mineral Foundation** and **National Mineral Exploration Trust**
  - Stringent penalty for illegal mining.
  - The Act was further amended in the years 2016 and 2020 to **allow transfer of leases for non-auctioned captive mines** and to deal with the **emergent issue of expiry of leases**.
- **National Mineral Policy, 2019**  
It includes provisions to boost mining sector, such as:
  - Encouraging the private sector to take up **exploration**.
  - Encouragement of **merger and acquisition** of mining entities.
  - Transfer of mining leases and **creation of dedicated mineral corridors** to boost private sector participation.
  - Proposes to grant **status of industry to mining activity** to **boost financing** of mining for private sector.

- **Prevention of illegal mining**
  - There is a three-pronged strategy for prevention of illegal mining viz.
    - ✓ Constitution of task force by the State Governments at State and District Level
    - ✓ Framing of rules under Section 23C of the MMDR Act, 1957
    - ✓ Furnishing of quarterly returns on illegal mining for review to the Central Government
- **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) and District Mineral Foundation (DMF)**
  - The PMKKKY has mandated 60% of the funds to be utilized for high priority areas, such as
    - ✓ Drinking water/environment preservation and pollution control/Health care/education/skill development/welfare of women, children, aged and disabled people / sanitation
    - ✓ Rest 40% of the funds to be utilized for other priority - roads & physical infrastructure/irrigation/watershed development.
  - PMKKKY is to be implemented by the DMFs of the respective districts.

### Conclusion

Both the government and industry need to take a comprehensive view of sustainable development that should cover dimensions other than environment, such as stakeholder engagement and consultations, local area socio-economic development and transparency in communication and accountability.

## 3.8. ELECTRONICS INDUSTRY

### Why in news?

Ministry of Electronics & Information Technology has released its Vision Document on “**Increasing India’s Electronics Exports and Share in Global Value Chains (GVC)**”.

### More on news

- The Vision document focuses on the opportunities and key inputs **to increase India’s share in the GVC and build large-scale manufacturing capabilities** to achieve a **substantial share in global electronics export**.
- It is a part of **MeiTY’s Vision 1000 Days** that sets a target of achieving **\$1 Trillion Digital Economy for Atma Nirbhar Bharat**.

### Overview of Electronics Industry

- **Potential of Electronics for India:** The electronics sector has the potential to become one of the **top exports of India in the next 3–5 years**.
  - **Raising share in terms of GDP:** India is targeting a quantum jump of **increasing the share of electronics sector from 2% to 10% in India’s GDP** in near future.
  - **Rising Demand-** As per MeiTY, demand for electronics hardware in the country is projected to increase from USD 45 billion in 2009 to USD 400 billion by the year 2020.
  - **NPE 2019:** The National Policy on Electronics (NPE) 2019 set the target of \$400 billion turnover by 2025.
  - **Flagship Programs: Vision set by Government of India** under Digital India and Make in India programs is boosting electronics sector.
- **New emerging export destinations: India is considering new markets with huge potential** like as North Africa, South America, etc.
- **India a strong investment destination:** Due to rapidly rising cost of manufacturing and labour in China.
- **Focus on Infrastructure:** 200 Electronic Manufacturing Clusters (EMCs) are to be setup with world class logistics, Infrastructure.

### Challenges faced by the Sector

- **Less attention towards production and manufacturing:** India’s presence in the global manufacturing sector of electronics (according to market size) is meagre at around 1-2%.
- **Infrastructural Gaps:** Physical infrastructural issues like power shortages, shortages of basic utilities .
- **Supply chain and logistical constraints:** High transportation costs, high cost for raw materials and difficulties due to inefficient transportation.

- **Trade Barriers:** High import duties, additional state-level taxes and inverted duty structure are proving themselves as barriers against trade.
- **Discouraging heavy import statistics:** Currently, 65% of the demand for electronics products and almost all critical electronics components in met by imports.
- **Possible supply-demand gap:** The estimated production of Indian electronics industry will reach USD 104 billion by the year 2020 against a demand of USD 400 billion.
- **Tough Competition from Global Players:** The geographical concentration of the electronics GVCs shows that most of India's competition are in Asia itself, with China and Vietnam being prominent ones.

### Way Forward

- **Upgrade infrastructure:** As electronics industry is manufacturing industry, it is necessary to provide required infrastructure, ultra-modern technological supplies, power, etc.
- **Rationalize value chain:** Cost of raw materials, contribution of taxes, duties and other constraints should be considered to encourage indigenous manufacturing of electronics components, products and entire product chains.
  - The vision document recommends that manufacturers will be **incentivized to relocate manufacturing capacities** for finished products, sub-assemblies and components from any nation, for a **period of 1–4 years**. The path taken could be **100% FDI or joint ventures**.
- **Remove Trade barriers:** Attracting GVCs requires open trade and investment policies and tariff and non-tariff barriers can deter investment.
- **Reduction of tariffs for inputs:** Tariffs have to be rationalized, with introduction of lower tariffs and removal of an inverted tariff structure, to reduce costs of manufacturers and support PLI scheme.
- **Export promotion:** India must galvanize **Export Promotion Councils** and **Export Hubs** for helping lead firms to scale up business operations and position regional businesses to participate in global supply chains.
- **Encourage MSMEs:** Government should encourage small and medium scale enterprises engaged in electronics manufacturing sector with necessary financial aids to sustain growth.
- **Enhance Research and Development:** Every central and state university should establish a chair dedicated to improve industry-academia interface, training and development in electronics industry to create skilled, and electronics industry-ready workforce.

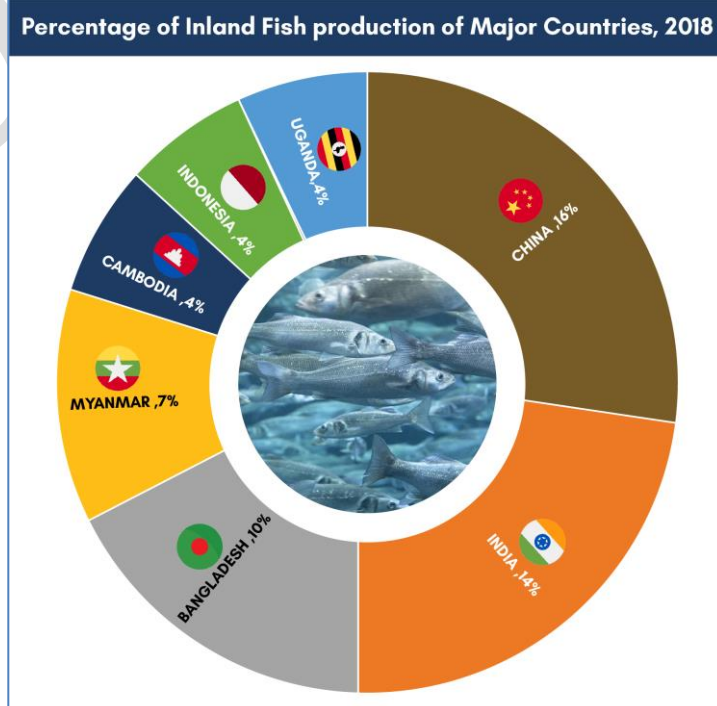
## 3.9. FISHERIES SECTOR IN INDIA

### Why in news?

Recently, The Government has set target of Rs 1 lakh crore exports from fisheries sector by 2024-25.

### About Fisheries in India

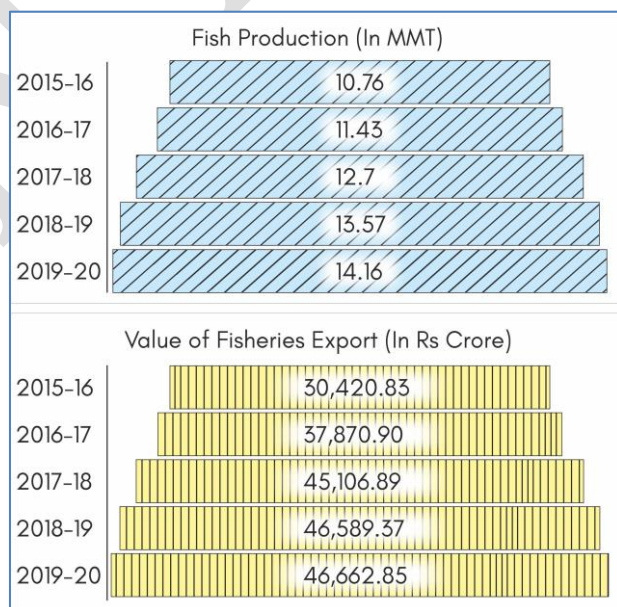
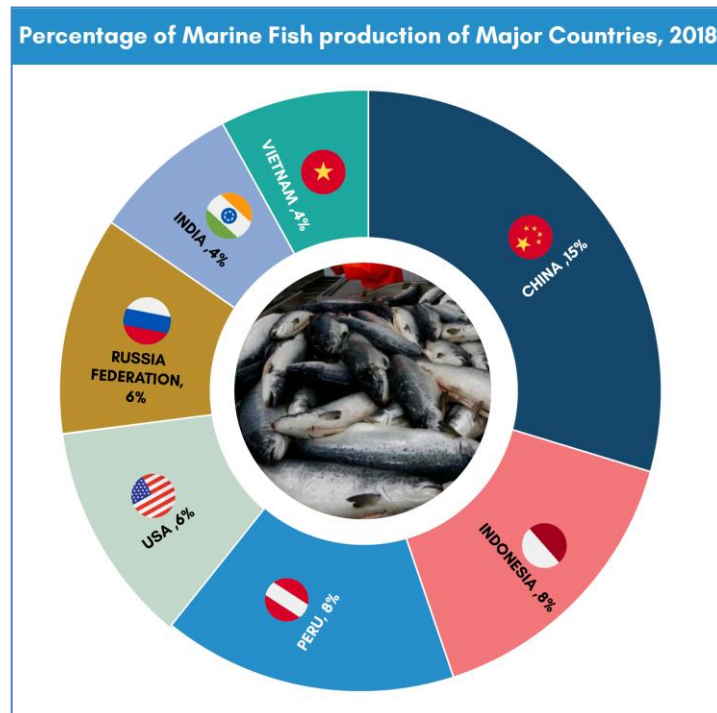
- India is the **3rd largest fish producing and 2nd largest aquaculture nation** in the world.
  - Aquaculture is the farming of aquatic animals, including finfish, crustaceans, molluscs, etc. and aquatic plants, mostly algae, using or within freshwater, sea water, brackish water, and inland saline water.
- India contributes about **7.7% to the global fish production and country ranks 4th in global exports of fish products**.
- India has more than 10% of the global biodiversity in terms of fish and shellfish species.
- Fisheries being a **State subject, the States play a pivotal role in fisheries governance**.
  - The role of the **Central Government is to complement the former's efforts** in this regard under the guiding principles of cooperative federalism.



- While **Inland Fisheries are fully managed by State Governments, Marine Fisheries are a shared responsibility between the Central and Coastal State/UT Governments.**

### Significance of fisheries sector

- Food Security:** It provides **important food and nutritional resources**, especially for the rural economies. Over 90% of global inland capture fisheries production is used for human consumption among which the majority is in the developing world.
  - Inland fish are particularly important in addressing **'Hidden hunger'** e.g. Inland fishes **provide micronutrients to those where other nutritional sources are not available** or are cost-prohibitive. **Fisheries and aquaculture are fundamental to food sovereignty globally.**
- Economy:** Many of these fisheries are conducted by the rural poor, often for **subsistence and small-scale economic security**. Fisheries provides livelihood to about **25 million fishers and fish farmers** at the primary level and twice the number along the value chain.
  - Recreational fishing and tourist activities** have strong economic multiplying effects for the experiential activities in addition to the market value of the fish.
- Environment:** Inland fishes serve as **indicators of ecosystem function and ecosystem change**. Additionally, because of the **low environmental impact** of many inland capture fisheries and aquaculture operations, they can be recognized as relevant to the **'green food' movement**.
- Social:** They play an **important role in communities** around the globe. In many cultures, inland fish are **sacred and contribute to community identities**.
  - Fisheries are a **last resort when primary income sources fail**, for instance, economic shifts, war, natural disasters, and water development projects. They serve as **social safety-nets, providing alternative or supplemental sources of income, employment, and food**.
- Empowerment:** These provide opportunities to **empower individuals to meet their own physical and psychological needs** and provide for their dependents.
  - This role is particularly important in **poverty prevention for marginalized populations including ethnic minorities, the rural poor, and women**.
  - Human health and well-being:** It contribute to advancements in disease control and medical research.
  - Larvivorous fish are frequently used for the **control of disease-carrying (e.g., malaria, Dengue fever, yellow fever) mosquitoes**.



### Constraints in the Growth of Fisheries Sector

- Inadequate infrastructure:** Especially **fishing harbours, landing centers, cold chain and distribution systems, poor processing and value addition, wastage, traceability and certification, non-availability of skilled manpower** etc. are some of the other factors constraining the growth of the capture fisheries.
- Technological lag and financial constraints:** It have been the major bottlenecks in the delayed take off the deep-sea fishing industry in India. Also, **new technology allows fleets to double fishing capacity and deplete fish stocks faster**.

- **Overexploitation: Unsustainable fishing poses a serious threat to fish and aquatic biodiversity** and to the livelihoods of people in riverine and lake communities.
  - Major causes are **excessive food demands, market pressures, fishing gear technology development, weak or lack of appropriate management approaches and policies, accidental by-catches, and an unregulated aquarium trade in wild species.**
- **Environmental pollution:** The outcome of **pollution on freshwaters because of industrial, domestic or agricultural activities is often catastrophic** and can result in the elimination of fish species, and dead rivers and lakes.
- **Climate change:** It is causing the world's waters to warm as well as **bringing changes to rainfall patterns, water levels, river flow and water chemistry.** Fish cannot control their body temperature. Therefore, **increasing or decreasing water temperatures will have an impact on growth and reproduction, as will changes of flow and chemistry.**
- **Invasive species:** The introduction of **exotic or alien invasive species is one of the greatest global threats** to native fish communities and their freshwater ecosystems.
- **Habitat modification, fragmentation and destruction:** A large number of freshwater fish species are also being threatened by degradation, reduction or even loss of floodplains by damming, agriculture practices, urban development, rivers dredging and geomorphological modifications.

#### Fisheries subsidy at WTO

- WTO members are seeking to **reach an agreement on prohibiting 'harmful' fisheries subsidies** that lead to overfishing and depletion of fish stocks worldwide.
  - Negotiations were first launched in 2001 at the Doha Ministerial Conference.
- A draft World Trade Organization text aimed at reducing global fisheries subsidies **has proposed time bound exemptions for subsidies given by developing and least-developed countries for fishing close to shore.**
  - Developed countries claim that **fisheries subsidies create significant distortions in global fish markets** and are a major factor contributing to overfishing and overcapacity and the depletion of fishes.
- **India's concern:**
  - **Dilution of developing countries' special and differential treatment (S&DT) rights.**
    - ✓ **S&DT provides several flexibilities for developing countries**, such as longer time periods for implementing agreements and commitments, lower levels of commitment and measures to increase trading opportunities.
  - **Abolishing subsidies would cost means of livelihood** for the low-income and resource poor fishermen.
  - It will **limit the food security** of the nation.
  - **Sovereign rights of coastal states** to explore, exploit and manage living resources within their maritime jurisdiction (enshrined in international instruments) **must be preserved and not be subject to WTO dispute settlement mechanism.**
  - Any agreement must **recognise that different countries are at different stages of development** and **current fishing arrangements should** reflect it.

#### Government initiatives

- **Blue Revolution:** It is implemented with **Centre outlay of Rs 3000 crore and focuses on creating an enabling environment for integrated and holistic development and management of fisheries** for the socio-economic development of the fishers and fish farmers.
- **Pradhan Mantri Matsya Sampada Yojana (PMMSY):** In 2019, the Government launched this new scheme to **double fishers and fish farmers' incomes and generate meaningful employment and enhance the contribution of the fisheries sector to Agricultural GVA and exports.**
  - The government has infused **Rs 20,000 crore** in the sector.
- **Establishment of Fisheries and Aquaculture Infrastructure Development Fund (FIDF)** to the tune of Rs 7522 crore created during 2018-19.
- In 2019, The Government has created a **new Ministry of Fisheries, Animal Husbandry and Dairying with two separate Departments:**
  - The Department of Fisheries
  - The Department of Animal Husbandry and Dairying
- **National Policy on Marine Fisheries, 2020:** launched to develop an **ecologically healthy, economically viable and socially inclusive fisheries sector** that contributes towards economic prosperity and well-being of fishers and fish farmers and provides food and nutritional security to the country in a sustainable and responsible manner.
- Recently, Government has extended support of **Kisan Credit Card (KCC) to fishermen and women.**

#### Conclusion

Sustainable resources exploitation from fisheries sector is still possible through **regulatory management strategies and concerted policy efforts** for different species and for different regions. There is a need to come up with **environment-friendly fishing and look for sustaining the sector while continuing the consumption.**

## INITIATIVES REQUIRED



- Enhancement of Fish production and productivity for ensuring sustainability limited to aquaculture sector taking into consideration of major inputs like quality and healthy fish seeds, feed etc and promising species.



- Diversification of marine fishing activities to tap the deep sea and under utilized resources, multiday fishing, species-specific fisheries, utilization of by catch etc.



- Adoption of culture based capture fisheries in reservoirs and under-utilized larger water bodies.



- Revamping of FFDAs and involvement of Cooperative Societies and Self Help Groups (SHGs) and ensuring the Socio economic welfare of fisher folk.



- Networking of all line Departments/organizations dealing with fisheries under a single agency



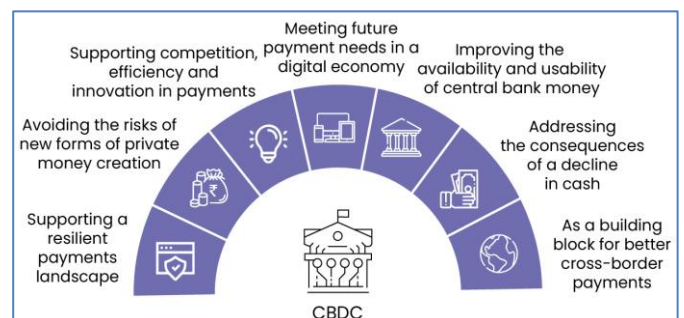
- Post harvest, value addition and marketing infrastructure

### 3.10. NEWS IN SHORT

#### 3.10.1. RBI WANTS DIGITAL CURRENCY INCLUDED UNDER DEFINITION OF 'BANK NOTE'

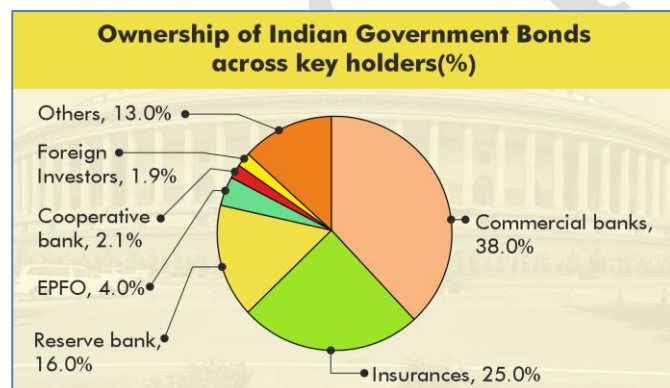
- Proposal was put forth by Reserve Bank of India in October, 2021 for amendment to the Reserve Bank of India Act, 1934 to enhance the definition of 'bank note' to include currency in digital format, popularly known as Central Bank Digital Currency (CBDC).
  - CBDC is the legal tender issued by a central bank in a digital form. It is the same as a fiat currency (backed by govt) and is exchangeable one-to-one with the fiat currency. Only its form is different.
- CBDC for India comes with the following advantages
  - India has a unique scenario of increasing proliferation of digital payments in the country coupled with sustained interest in cash usage, especially for small value transactions.

- India's high currency to GDP ratio holds out another benefit as the cost of printing, transporting, storing and distributing currency can be reduced.
- Advent of private virtual currencies (VCs) is another reason as if these VCs gain recognition, national currencies with limited convertibility are likely to come under threat.
- Makes it easy for depositors to withdraw balances if there is stress on any bank.



### 3.10.2. GOVERNMENT SECURITIES (G-SECS) TO SOON JOIN GLOBAL BOND INDICES

- **Global Bond Index includes investment-grade and government bonds from around the world with maturities greater than one year.**
  - Move is expected to **attract foreign inflows in the debt market** and will **help the government in its market borrowing programme.**
- **G- Sec is a tradeable instrument issued by the Central or state Governments.** It acknowledges government's debt obligation.
  - **Such securities are short term** (usually called treasury bills, with maturities of less than one year) **or long term** (usually called Government bonds or dated securities with maturity of one year or more).
  - **Central Government issues both,** treasury bills and bonds or dated securities while **State Governments issue only bonds or dated securities,** called State Development Loans.
  - G-Secs carry practically no risk of default and, hence, are **called risk-free gilt-edged instruments.**
- **Benefits of joining global bond indices**
  - It will **reduce pressure on commercial banks** to absorb chunk of government bonds issued.
  - Greater participation from foreign investors will **help in building goodwill for the Indian bond markets.**
  - Foreign flows into bonds will **give strength and stability to Indian rupee.**
  - It will also lead to **lower cost of capital and softening of interest rates,** resulting in sustainability of debt.



### 3.10.3. RBI RETAIL DIRECT SCHEME

- Scheme aims to **ease retail investor access to the government bond market.**
- It offers a **portal to invest in Central Government securities, Treasury Bills, State Development Loans and Sovereign Gold Bonds**

- Individual investors can access the online portal to **open a securities account with RBI, bid in primary auctions and buy and sell securities in the market.**
- **No fee will be charged** for any of the services provided under the scheme.

### 3.10.4. HARBINGER 2021 – INNOVATION FOR TRANSFORMATION

- It is **RBI's first global hackathon** with the theme 'Smarter Digital Payments'.
- Hackathon invites participants **to develop solutions that have the potential to**
  - Make **digital payments accessible to the under-served.**
  - **Enhance the ease of payments** and user experience.
  - **Strengthen security of digital payments** and promoting customer protection.

### 3.10.5. SPECIAL CREDIT LINKED CAPITAL SUBSIDY SCHEME (SCLCSS)

- Union Minister for MSME launched **SCLCSS for services sector.**
- Scheme will help in **meeting the technology related requirements of enterprises** in the services sector.
- SCLCSS has a **provision of 25% capital subsidy for procurement of Plant & Machinery and service equipments** through institutional credit to the SC/ST MSEs without any sector specific restrictions on technology upgradation.

### 3.10.6. LEADS (LOGISTICS EASE ACROSS DIFFERENT STATES) 2021 REPORT

- **Ministry of Commerce and Industry** unveiled third LEADS report 2021.
- LEADS index was **launched in 2018** with the main objective of **ranking States and UTs on the efficiency of their logistics ecosystem.** It aims to enhance focus on **improving logistics performance** across states which is key to improving the **country's trade and reducing transaction cost.**
- Similar to "LEADS 2019", the 2021 edition focuses on **both international and domestic trade.** No report was **released in 2020.**
- However, while LEADS 2018 and 2019 editions were **perception-based,** 2021 report has introduced **objective parameters** in the index formulation by engaging with **all the 36 States/UTs for the first time.**
- **The 2021 index** is based on **twenty-one indicators** including seventeen perception indicators and four objective indicators

- Perception indicators are structured along the **three dimensions**:
  - **Infrastructure** (Road, rail, unimodal, multimodal, warehousing)
  - **Services** (Quality, timeliness, Capability of Logistics Service Providers, Safety and Security etc)
  - **Operating and Regulatory Environment** (Facilitation, Ease of Obtaining Approvals and Efficiency of Regulatory Services)
- **Key Highlights**:
  - **Gujarat, Haryana and Punjab** have emerged as the **top performers**.
  - Within the North Eastern States and Himalayan Region, **Jammu and Kashmir is the top ranker** followed by Sikkim and Meghalaya.
  - **Delhi stands at the top** rank among Other UTs.
  - Uttar Pradesh, Uttarakhand and Jharkhand and have emerged as the **top improvers**.
- **Suggestive initiatives for states and UTs**:
  - Frame State Logistics **policy** and State Logistics **Master Plan**;
  - Implement **single-window clearance** system for logistics;
  - Establish effective **grievance redressal** and dispute resolution mechanism;
  - Enable **skilling in logistics** through State skilling infrastructure.
- This move also gains significance as the **total number of retail investors increased by 14.2 million in FY21**.
- The charter outlines the **rights and responsibilities** of investors
  - **Rights include**
    - ✓ Getting **fair and equitable** treatment.
    - ✓ Expecting timely redressal of investor grievances filed in the SCORES portal.
      - SCORES is an **online platform designed** to help investors to lodge their complaints with SEBI against listed companies and intermediaries.
  - **Responsibilities on investors**
    - ✓ Dealing with **SEBI recognised** Institutions and **SEBI registered or regulated** entities only.
    - ✓ **Updating their contact details** in case of any change.
    - ✓ Ensuring grievances are **raised within set time limits**.
    - ✓ Their accounts are operated **only for their own benefits**.
- From January 2022, all SEBI regulated entities will be required to disclose the average time taken for solving each grievance on their respective websites.

### 3.10.7. NATIONAL APPRENTICESHIP TRAINING SCHEME (NATS)

- Recently, **Cabinet approved continuation of NATS** from 2021-22 to 2025-26.
- NATS (under Ministry of Education) is a **one year programme equipping technically qualified youth with practical knowledge and skills** required in their field of work.
  - Apprentices are imparted **training by the organizations at their place of work**.
  - During the period of apprenticeship, **apprentices are paid a stipend amount, 50% of which is reimbursable** to the employer from Government of India.
- NATS will provide employment to approximately 7 lakhs youths in the next five years and approx 9 lakhs apprentices will be trained.

### 3.10.8. SEBI UNVEILS INVESTOR CHARTER

- **Vision**: To protect the **interest of investors** by enabling them to understand the risks involved and invest in a **fair, transparent and a secure market**.
  - Budget 2021 had proposed investor's charter with an objective to **protect investors' from mis-selling of all financial products**.

### 3.10.9. TARGET TO HALVE GLOBAL FUEL CONSUMPTION BY 2030 IS STALLING: IEA REPORT

- According to International Energy Agency's (IEA) **Global Fuel Economy Initiative (GFEI) update**:
  - Progress towards achieving a global goal to half the fuel **consumption of new light-duty vehicles by 2030 from 2005 levels has been lagging**, underlining the urgency of policy action.
  - It suggests **stronger policies that boost the market shares of efficient electric cars and global adoption of efficiency technologies** in internal combustion engines.
  - To meet the GFEI 2030 target, countries **need to align legislation on fuel economy with their climate pledges**.
- GFEI was founded in 2009 with the **purpose of promoting and supporting government action to improve energy efficiency** of the global light-duty vehicle fleet.
  - GFEI is a partnership between the **IEA, UNEP, the International Transport Forum of the OECD (ITF)**, the International Council on Clean Transportation (ICCT), the University of California-Davis and the FIA Foundation.
  - It has a target of improving average fuel economy of light duty vehicles by 2030 for new vehicles



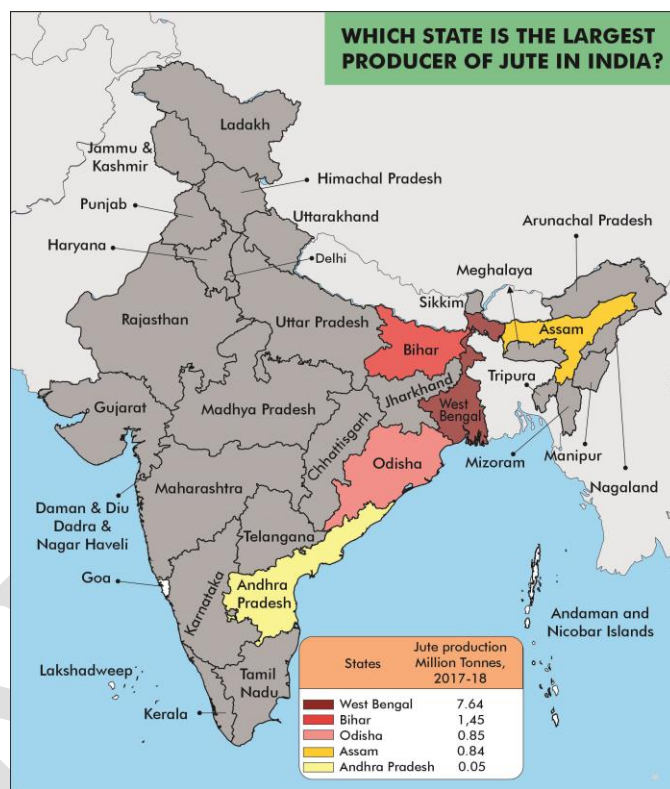
(compared with a 2005 baseline) and **includes electric and hybrid technology.**

- IEA is an **autonomous intergovernmental organization** established in the framework of OECD in 1974 to help countries collectively respond to oil supply disruptions.
  - It advises its member countries on **issues related to energy security** and economic development.
  - In 2017, **India had joined as an associate member.**
  - IEA publishes **World Energy Outlook, Oil Market Reports** etc.

### 3.10.10. CABINET APPROVES RESERVATION NORMS FOR JUTE PACKAGING MATERIALS


- CCEA approved reservation norms for the mandatory use of jute in packaging this year, **stipulating that 100% of food grains and 20% of sugar must compulsorily be packed in jute bags.**
  - This has been done under **Jute Packaging Materials (Compulsory use in Packing Commodities) Act, 1987.**
  - Act provides for **compulsory use of jute packaging material in supply and distribution of certain commodities** in the interests of production of raw jute and jute packaging material, etc.
- **Significance**
  - **Protect environment** because jute is natural, biodegradable, renewable and reusable fibre.
  - Protect the **interest of domestic production of raw jute** and jute packaging material in India.
  - **Ensures a guaranteed market** for the produce of 40 lakh jute farmers.
- **Government initiatives for promoting Jute industry**
  - **Jute-Improved Cultivation and Advanced Retting Exercise** for improve the productivity and quality of raw jute.
  - **Jute SMART** an e-govt initiative to promote transparency in the jute sector.
  - Jute is **included in MSP regime.**
- **About Jute:**
  - India is the **largest producer** of jute in the world.

- Jute requires **alluvial soil and heavy rainfall** and 20 to 40 degree Celsius temperature.
- **Warm and high humid climate** during monsoon season is suitable.




### 3.10.11. CENTRE AMENDED LEGAL METROLOGY (PACKAGED COMMODITIES), RULES 2011

- The amendments to come into effect from 1st April, 2022
- **Key Highlights:**
  - **Mandatory declaration of MRP** in Indian currency inclusive of all taxes on pre packed products.
  - **Declaration of date of manufacture** on the pre packed commodities is made mandatory for pre packed commodities.
  - **Unit Sale Price for all pre packed commodities** meant for retail sale is introduced to allow easier comparison of the prices.



**SMART QUIZ**

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



# 4. SECURITY

## 4.1. PERSONAL DATA PROTECTION

### Why in News?

A Joint Parliamentary Committee (JPC) has finalised and adopted the draft report on The Personal Data Protection Bill (PDP Bill), 2019.

### More on News

- **PDP Bill was first brought in 2019 and was referred to the JPC** for examination at the time.
  - Provisions of the PDP Bill, 2019 are based on the recommendations of the report of the Expert Committee (Chair: Justice B. N. Srikrishna).
- JPC has been deliberating on the report since 2019 and **got five extensions to submit its report.**

### About Data Protection

- Data protection refers to **policies and procedures seeking to minimise intrusion into the privacy of an individual** caused by collection and usage of their personal data.
- It **assures that data is not corrupted, is accessible for authorized purposes only**, and follows applicable legal or regulatory requirements.
- It ensures the security of individuals' personal data and **regulates the collection, usage, transfer, and disclosure of the said data.**
- It places **accountability measures for organizations processing personal data** and supplements it by providing remedies for unauthorised and harmful processing.

### Personal and Non-Personal Data

- **Data can be broadly classified into two types:** personal and non-personal data.
  - Personal data pertains to characteristics, traits or attributes of identity, **which can be used to identify an individual.**
  - Non-personal data **includes aggregated data through which individuals cannot be identified.**
- For example, while an individual's own location would constitute personal data; information derived from multiple drivers' location, which is often used to analyse traffic flow, is non-personal data.

### BROADLY THREE APPROACHES TO DATA PROTECTION EXIST

- **US follows a laissezfaire approach** and does not have an overarching data protection framework.
  - US courts however, have collectively recognised a right to privacy by piecing together the limited privacy protections reflected in various Amendments to the US Constitution.
- **European Union**, at the vanguard of global data protection norms, has adopted General Data Protection **Regulation 2018 that deals with all kinds of processing of personal data** while delineating rights and obligations of parties in detail.
- **China has approached** the issue of data protection primarily **from the perspective of averting national security risks.**

### Need for Data Protection

- **Tapping transformative potential of the digital economy:** Insufficient protection can create negative market effects by reducing consumer confidence, and overly stringent protection can unduly restrict businesses, with adverse economic effects as a result.
- **Data as new currency:** With the increase in user-generated data and the exponential industrial value of data, it's becoming vital that the government bodies take necessary steps to protect the data rights of their citizens.
- **To protect Digital sovereignty:** Data generated by citizens is considered as a national asset which may be required to be stored and guarded within national boundaries subject to the security and strategic interests of India.
- **Defining entitlements expected from right to privacy:** Data protection law will help in clarifying the scope of our privacy rights, explaining what data fiduciaries that collect our personal data can and cannot do with regard to it.
- **To meet internationally accepted standards of data protection:** It is important for India to set out a lucid set of rules for ensuring legitimate cross-border transfer of data and afford the same level of data protection to those residing in India and other countries.
- **Rise in data collection during Pandemic:** Digital contact tracing and general health surveillance include collection of vast amounts of personal and non-personal sensitive data. Such measures can potentially lead to the infringement of fundamental human rights and freedoms.

- **Increasing sophistication of cyber-crimes:** which are now extremely organised and collaborative. Moreover, volume of data generated on internet and the spread of new technologies like artificial intelligence, internet of things, big data poses a threat of abuse and misuse of data.

### Challenges to Data protection for India

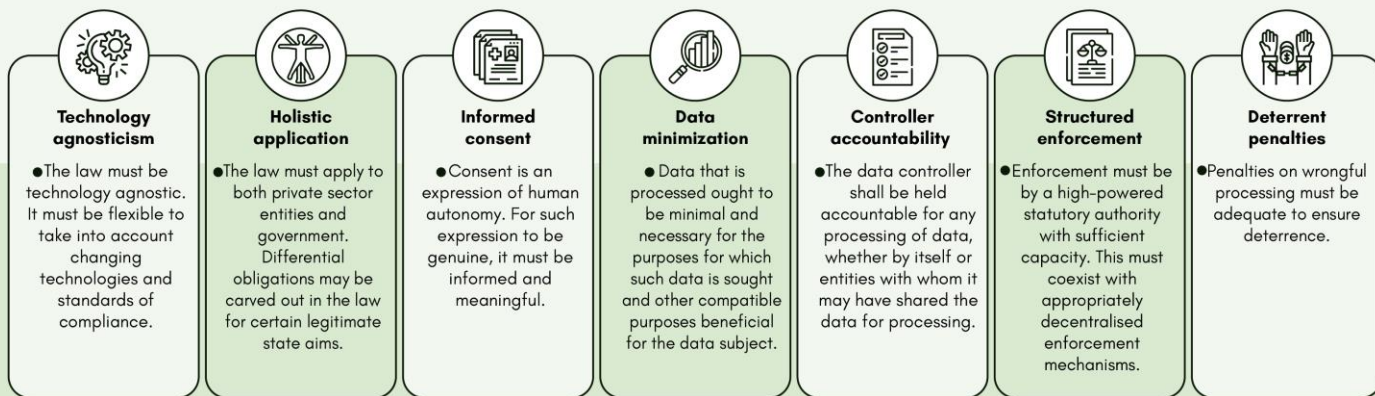
- **India doesn't have any comprehensive legislation** that deals in the protection of data and privacy. The policies and legislation which exist, essentially, are sectoral in its nature.
- **India lacks capability for data localization** i.e. to store data within country.
  - Most of the data storage companies are based abroad. They also export data to other jurisdiction making it difficult to apply Indian laws.
- **Multiple private players are involved in data dynamics** which makes it difficult to apply uniform data protection framework.
- Because of the **veracity and volume of data in technology-driven world**, it becomes overwhelming to handle millions and possibly even billions of data records.
- According to a survey by Dell Technologies, around 66% of respondents in India are concerned that their existing data protection measures may not be sufficient to cope with malware and ransomware threats, while 74% agree they have increased exposure to data loss from cyber threats with the growth of employees working from home.

#### Data Protection in India

- **India does not have any dedicated legal framework** for data protection. Presently **some acts/judgments cover the data protection in general.**
  - **Right to privacy has been recently recognised as a fundamental right** emerging primarily from Article 21 of the Constitution, in Justice K.S. Puttaswamy (Retd.) v. Union of India.
  - **Sec 43A of Information Technology Act 2000** protects user data from misuse but it is applicable to only corporate entities and not on government agency. Also, the rules are restricted to sensitive personal data only — medical history, biometric information among other things.
  - **Other acts like Consumer Protection Act, Copyrights Act** among others also attempt to protect the personal information.

## KEY PRINCIPLES AROUND DATA PROTECTION IN INDIA

A data protection framework in India must be based on the following seven principles



### Conclusion

With the increase in user-generated data and the exponential industrial value of data, it's becoming vital that the government bodies take necessary steps to protect the data rights of their citizens.

A robust Personal data protection law is the need of the hour. Such a law must understand from the ground up the particular concerns and aspirations pertaining to personal data shared by Indians, their fears and hopes.

### Personal Data Protection Bill (PDP Bill), 2019

Provision	Key features of Personal Data Protection Bill (PDP Bill), 2019	Recommendations by JPC
<b>Personal data (data that can</b>	<ul style="list-style-type: none"> <li>• It talks about <b>various types of personal data</b>, such as</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Non-personal data should also be included</b> within the ambit of the law.</li> </ul>

<p><b>identify an individual)</b></p>	<ul style="list-style-type: none"> <li>○ <b>Sensitive personal data</b> (related to finances, health, official identifiers, sex life, sexual orientation, biometric, genetics, transgender status, intersex status, caste or tribe, religious or political belief or affiliation).</li> <li>○ <b>Critical personal data</b> (military or national security data and the government can define it from time to time).</li> <li>○ <b>General personal data</b>- other than sensitive and critical personal data.</li> </ul>	
<p><b>Applicability</b></p>	<ul style="list-style-type: none"> <li>● <b>Bill governs the processing of personal data by</b> <ul style="list-style-type: none"> <li>○ Government</li> <li>○ Companies incorporated in India</li> <li>○ Foreign companies dealing with personal data of individuals in India.</li> </ul> </li> </ul>	
<p><b>Obligations of data fiduciary (an entity or individual who collects and decides the means and purpose of processing personal data)</b></p>	<ul style="list-style-type: none"> <li>● Personal data <b>can be processed only for specific, clear and lawful purpose.</b></li> <li>● All <b>data fiduciaries must undertake certain transparency and accountability measures</b> such as: <ul style="list-style-type: none"> <li>○ Implementing security safeguards (such as data encryption and preventing misuse of data).</li> <li>○ Instituting grievance redressal mechanisms to address complaints of individuals.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Companies will need to <b>report a data breach within 72 hours.</b></li> <li>● Mandatorily disclose if information relating to a data principal (person or entity that owns the data) is passed on to someone else.</li> <li>● <b>Appoint senior management personnel as data protection officers</b> who will ultimately be held responsible for lapses or violations.</li> <li>● <b>Additional compliance</b> for companies that deal <b>exclusively with children’s data.</b></li> </ul>
<p><b>Rights of the data principal (the individual whose data is being collected and processed)</b></p>	<ul style="list-style-type: none"> <li>● <b>These include the right to</b> <ul style="list-style-type: none"> <li>○ <b>Obtain confirmation from the fiduciary</b> on whether their personal data has been processed.</li> <li>○ <b>Restrict continuing disclosure</b> of their personal data by a fiduciary, if it is no longer necessary or consent is withdrawn.</li> <li>○ It also includes the <b>right to be forgotten which will allow users to erase their personal data</b> published online and give them the freedom to ask entities such as Facebook and Twitter to delete any data they do not want in the public domain.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <b>No changes to Section which allows the processing of personal data without a person’s consent</b> if this is necessary, among other things, <b>for provision of services or benefits from the government</b>, or issue of licences/certifications/permits from the government for any action or activity.</li> </ul>
<p><b>Social media intermediaries</b></p>	<ul style="list-style-type: none"> <li>● The Bill defines these to include intermediaries which enable online interaction between users and allow for sharing of information. <ul style="list-style-type: none"> <li>○ All such intermediaries which have users above a notified threshold, and whose actions can impact electoral democracy or public order, have certain obligations, which include providing a voluntary user verification mechanism for users in India.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○ No social media platform should be allowed to operate unless the <b>parent company handling the technology sets up an office in India.</b></li> <li>○ <b>All social media platforms</b>, which do not act as intermediaries, <b>should be treated as publishers</b> and be held accountable for the content they host, and should be held responsible for the content from unverified accounts on their platforms.</li> <li>○ <b>A statutory media regulatory authority</b>, on the lines of the Press Council of India, may be set up for the regulation of the contents on all such platforms.</li> </ul>
<p><b>Data Protection Authority</b></p>	<ul style="list-style-type: none"> <li>● Bill sets up a Data Protection Authority <b>which may take steps to protect interests of individuals, prevent misuse of personal data, and ensure compliance with the Bill.</b></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Data Protection Authority (DPA)</b>, which is to be set up under the law to regulate how data is to be managed and processed, <b>should be bound by</b></li> </ul>

		<b>directions of the Union government in all cases – not just questions of policy.</b>
<b>Transfer of data outside India</b>	<ul style="list-style-type: none"> <li>○ <b>Sensitive personal data may be transferred outside India for processing</b> if explicitly consented to by the individual and subject to certain additional conditions. However, such sensitive personal data should continue to be stored in India.</li> <li>○ <b>Critical personal data can only be processed in India.</b></li> <li>○ Personal data other than sensitive and critical personal data don't have such 51ncentivize51 mandates.</li> </ul>	<ul style="list-style-type: none"> <li>● Central Government must prepare and <b>pronounce an extensive policy on data 51ncentivize51.</b></li> <li>● Ensure that <b>copies of sensitive and critical personal data</b> already in possession of foreign entities <b>be brought back in a timebound manner.</b></li> <li>● Development of an alternative <b>indigenous financial system for cross-border payments</b> on the lines of Ripple (U.S.) and INSTEX (E.U.).</li> <li>● Government should make efforts to establish a mechanism for the <b>formal certification process for all digital and IoT devices</b> that will ensure the integrity of all such devices with respect to data security.</li> </ul>
<b>Exemptions</b>	<ul style="list-style-type: none"> <li>○ <b>The central government can exempt any of its agencies from the provisions of the Act:</b> <ul style="list-style-type: none"> <li>✓ In interest of security of state, public order, sovereignty and integrity of India and friendly relations with foreign states.</li> <li>✓ For preventing incitement to commission of any 51ncentiviz offence (i.e., arrest without warrant) relating to the above matters.</li> </ul> </li> <li>○ <b>Processing of personal data is also exempted from provisions of the Bill for certain other purposes such as:</b> <ul style="list-style-type: none"> <li>✓ prevention, investigation, or prosecution of any offence</li> <li>✓ personal, domestic</li> <li>✓ journalistic purposes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <b>JPC did not accept suggestions</b> by various members arguing that there is a need <b>to balance the concerns regarding national security, liberty and privacy of an individual.</b></li> <li>● Dissent note by members includes arguments like: <ul style="list-style-type: none"> <li>○ <b>Public order should be removed as a ground</b> for exemption.</li> <li>○ There should be <b>judicial or parliamentary oversight</b> for granting such exemptions.</li> <li>○ There should be an order in writing with reasons for exempting a certain agency from the ambit of the Bill.</li> </ul> </li> </ul>







## 4.2. ROLE OF TECHNOLOGY IN LAW ENFORCEMENT

### Why in news?

Prime Minister recently called for adoption of future technologies for grass root policing requirements and development of inter-operable technologies which would benefit Police forces across the country.

**TECHNOLOGIES USED IN LAW ENFORCEMENT**

Some common technologies being used for Crime surveillance and Monitoring include CCTV cameras, Drones and Global Positioning System (GPS). Various other newly emerging technologies are:

<p><b>Body-Worn Cameras and In-Car Videos</b> </p> <ul style="list-style-type: none"> <li>● for better evidence documentation, increased accountability and transparency.</li> </ul>	<p><b>Automatic Tag and License Plate Readers</b> </p> <ul style="list-style-type: none"> <li>● Mounted to the exterior of patrol cars, and instantly analyzes license plates on every vehicle that comes within their range of view.</li> </ul>	<p><b>Biometrics and Hand- Held Fingerprint Scanners</b> </p> <ul style="list-style-type: none"> <li>● Use of biometrics using unique biological traits such as finger- prints, retina scans, and DNA to identify individuals.</li> </ul>
<p><b>Brain Fingerprinting</b> </p> <ul style="list-style-type: none"> <li>● Uses brain scans to capture how a crime suspect's brain reacts when being questioned by police.</li> </ul>	<p><b>Google Glass</b> </p> <ul style="list-style-type: none"> <li>● Mobile interceptors that take photographs of traffic violations and instantly upload them to their police department's system.</li> <li>● It is <b>currently being used on the National Highways in India</b></li> </ul>	<p><b>Predictive-Analytics Software</b> </p> <ul style="list-style-type: none"> <li>● It helps find crime patterns and deploy police accordingly.</li> <li>● Delhi government has recently collaborated with ISRO to start with new technology called <b>Crime Mapping Analytics and Predictive System (CMAPS)</b>.</li> </ul>

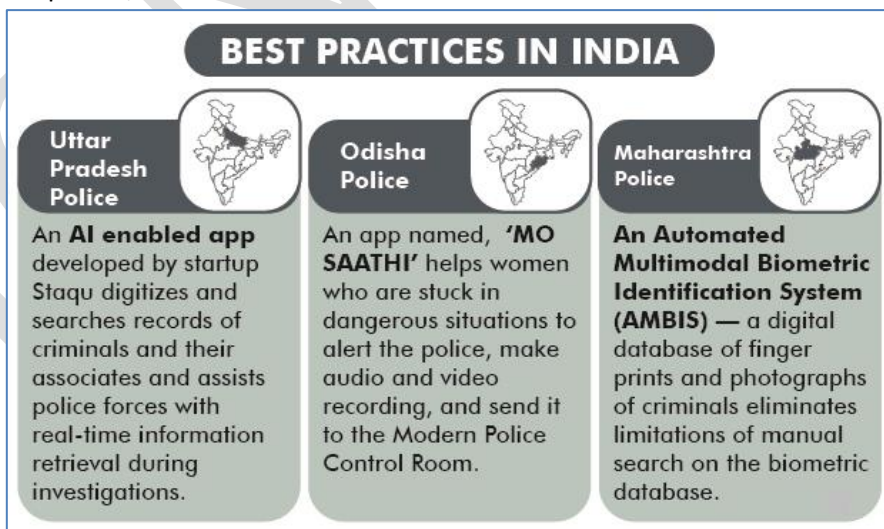
## Significance of leveraging technology in policing

In India, police to population ratio is less than 150 per 100,000, against the UN recommended 222. Technology therefore can **act as a force multiplier** thereby increasing the efficiency and effectiveness of police in various ways:

- **Improving Public Police interface:** Most citizens in India dread the idea of having to go to a police station. By providing digital access to the police, citizens can avail services from the comfort of their home.
  - **Punjab Police** for instance, has a **citizen-facing portal, Saanjh**, which provides online services for downloading first information reports and searching for stolen vehicles and lost mobiles, among other services.
- **Crime prevention: Big Data** can play a major role as it can be used to identify crime patterns and hot spots. **Artificial Intelligence (AI)** on the other hand can be used to draw correlations between the type of crime, time, location. The findings can then be used to deploy beat constables more effectively thereby reducing/preventing crime.
  - Recently, Government has approved implementation of the **National Automated Facial Recognition System (NAFRS)** that will use facial recognition technology to facilitate investigation of crime or for identifying a criminal regardless of face mask, makeup etc.
- **Crime detection:** Technology can effectively help get a digital footprint of the criminal. For instance, **Mobile forensics** can be used to retrieve critical information such as contacts, photos, SMS, video, etc., **AI** can be used to match fingerprints, facial images, analyse CCTV footage and **Big Data** can be used to integrate data from multiple sources such as social media tools, financial institutions, travel records, hotel stays, CDRs and criminal records.
  - The trio can help create a 360-degree view of the criminal and draw linkages between criminal associates.
- **Awareness generation:** Social media can be used by law enforcement agencies to reach out directly to citizens — providing information on traffic jams, how to protect against cybercrime, dispelling rumours, countering fake news etc.
- **Improving Internal Efficiency:** Key performance indicators such as the time taken to file a charge-sheet, types of crimes solved, time is taken to address complaints, citizen feedback scores can be used to determine an officer's performance in a more objective manner.
- **Real-time integration:** The five pillars of the criminal justice system are police, courts, prosecution, jails and forensics. Real-time integration between the information technology systems of these pillars help in reducing duplicate data entry and errors and can significantly increase the efficiency of law enforcement agencies.

## Challenges in extensive use of technologies

- **Breach of privacy:** It has been observed that excessive use of technology in criminal investigations has also led to a situation where police get into personal information, not relevant to the investigation.
  - For instance, Body-Worn Cameras and In-Car Videos are being used in some countries but faces issues like privacy, data retention and public disclosure policies.
- **Absence of regulation:** In the absence of laws to regulate and specify the procedure for the use of technology, it is left to the police itself as to how this can be used.
- **Expensive Affair:** Technology is being updated every day and with the changing technology, the police department needs to upgrade. However, the technologies are expensive, and changing them every now and then would lead to huge expenditure.
- **Increased stress for police officials:** There is an inherent amount of stress involved with learning and applying many of the advanced technologies. Officers are expected to embrace technology and, unfortunately, do not always receive the proper training needed to use it at a mastery level.



## Way ahead

- **Addressing other perennial issues:** Technology adoption needs to be corroborated by long-pending police reforms to address other issues being faced by the LEAs such as lack of accountability, poor representation of women and shortage of weaponry.
- **Regulating technologies:** The enactment of the Personal Data Protection Bill 2019 and DNA Technology (Use and Application) Regulation Bill, 2018 must be expedited in order to bring in required regulations for safe use of technology and addressing privacy concerns.
- **Capacity building:** Providing proper time for training officers on new technologies to bring in confidence and reducing stress by improving the officer's proficiency in using the equipment.
- **Building Digital Trust :** There is a need to imbibe Digital ethics, which is a broader framework that includes technology, transparent data and digital ethics to create digital trust in society.

## Conclusion

Not only does technology promise to improve police effectiveness and efficiency in controlling crime, it may also enhance their professional status and incentivize legitimacy. There is a need for keeping pace with technologies that assist law enforcement globally and adopt them, as suited to the Indian environment.

## 4.3. SELF-RELIANCE IN DEFENCE MANUFACTURING

### Why in news?

Prime Minister handed over the **indigenously developed** light combat helicopter (LCH), drones and electronic warfare suite to the **three services**.

### More about news

- He also laid the foundation stone of a ₹ 400 crore plant of Bharat Dynamics Limited, the **first unit of the Jhansi node of UP Defence Industrial Corridor** that would come up on 183 acres.
- Laying emphasis on gaining **self-reliance in defence**, he highlighted that the country's mantra is '**Make in India, Make for the World**' to make our armed forces '**Atmanirbhar**' (self-reliant).

### Evolution of India's Defence Industrialization

India's defence industrialization can be divided into **five different phases**:

<b>From independence to the mid-1960s</b>	<ul style="list-style-type: none"><li>• 18 <b>ordnance factories</b> of British India formed the core of the <b>state-led defence industry</b>.</li><li>• <b>Self-sufficiency</b> was the overall economic principle governing India's industrial development.</li></ul>
<b>From 1960's – 1980's</b>	<ul style="list-style-type: none"><li>• Term <b>self-reliance</b> replaced self-sufficiency in defence production.</li><li>• <b>License production and direct purchase</b> remained the predominant course of action.</li></ul>
<b>From mid-1980s till the early 2000s</b>	<ul style="list-style-type: none"><li>• The focus was shifted towards <b>co-development and co-production</b> with foreign companies.</li><li>• India and Russia signed agreement to jointly <b>produce BrahMos</b>.</li></ul>
<b>From the mid-2000s to late 2014</b>	<ul style="list-style-type: none"><li>• Government decided to allow <b>100 per cent participation of the private sector</b> in defence production.</li><li>• Under the <b>offset clause</b> (first announced in 2005), foreign companies winning contracts worth Rs 300 crore or more were required to <b>plough back 30 per cent of the foreign exchange component</b> of the contractual value to the Indian defence enterprises.</li></ul>
<b>From 2014 to present</b>	<ul style="list-style-type: none"><li>• Self-Reliance through <b>Make in India</b> Initiative.</li><li>• Like previous phase, goal of self-reliance in defence manufacturing to be achieved <b>through greater participation of the private sector</b>.</li><li>• There has been a greater degree of <b>political and bureaucratic will</b> to achieve the objective.</li></ul>

### Issues in achieving self-reliance in defence manufacturing

- **Huge import dependency:** Import dependency can be seen even in indigenously developed products. For example, CAG 2011 report had highlighted that **90 per cent import dependency** for production even for **indigenously designed and developed Advanced Light Helicopter (ALH)**.

- **Absence of an Overarching Policy Framework:** Main challenge in achieving self-reliance is the **absence of a pragmatic overarching 54ncentivize54at** policy. Notification issued by the Department of Defence Production (DDP) in 2019 suffers from many **conceptual and procedural inadequacies**.
  - For example, the stipulation that the ‘indigenised product should **invariably be cheaper** and meet all technical and functional specifications of the imported component which it seeks to replace’, makes it **unrealistic and unworkable**.
- **Absence of mechanism to monitor Self-Reliance:** There is **no institutional mechanism** to enable the **review the progress** in the direction. The procurement data is given under numerous procurement sub-heads, and **each sub-head is sketchy** regarding the **precise level of the indigenous contribution**.
- **Lack of synergy among stakeholders:** Rama Rao Committee (2008) had pointed out the lack of synergy between the **R&D agency, the industry, and the users** in the context of some of the major projects undertaken by the DRDO.
  - The **lack of user participation** in developmental projects, and the **delay in identification** of the production agencies, has led to **delays and uncertainty**.
- **Cosmetic emphasis on Qualitative Requirements (QRs):** Unlike in other countries where QRs are prepared by an **integrated, professional agency**, in India the task is performed by the **individual Service Headquarters (SHQs)** whose officers often **lack the necessary training or expertise**.
  - The QRs prepared by the SHQs are often found to be **unrealistic vis-à-vis the capability of the domestic industry**.
- **Lack of investment in Research and Development (R&D):** For instance, R&D spending in Ordnance Factory Board (OFB) is as low as **0.7-0.8% of their turnover**. The expenditure on **new capital is less than 1%** of their revenue expenditure.
- **Obstacles faced by private sector:** There has been a **discrimination towards the defence manufacturing sector vis-à-vis other sectors** such as power, telecom, refinery, etc., which enjoy a **host of tax benefits and other incentives**.
  - Private sector has also raised **concerns related to payment terms, exchange rate variation and cost of capital**, which render its products **uncompetitive vis-à-vis the products of public sector companies** as well as foreign vendors.

## KEY FACTS RELATED TO INDIA'S DEFENCE INDUSTRY

### Defence Spending

- Accounts for 3.7% of the global military spending, making it the **third highest military spender** in the world.
- Defence expenditure constituted **2.9% of India's total GDP** with approximately \$72.9 billion spent on defence in 2020.
- In the budget 2021-22 the defence capital outlay has been **increased by 18.75%** from the preceding year, the **highest ever increment** in the last 15 years.

### Defence Industry

- Size of the Defence Industry, including Aerospace and Naval Shipbuilding Industry is **currently estimated to be about Rs 80,000 Cr (2019-20)**.
- While the contribution of Public Sector is estimated to be **Rs 63,000 crores**, the share of Private Sector has steadily grown to **Rs 17,000 crores over the years**.
- As of 2020, nearly 500 industrial licenses (ILs) have been issued to about 300 **private sector companies**.
- Defence industry is supported by a strong base of **over 8,000 MSMEs**.

### Defence Exports

- India's defence exports during 2015-20 grew at a **cumulative annual growth rate (CAGR) of 35 per cent** from around Rs 2,000 crore to Rs 9,000 crore.
- India was ranked at the **23rd position as a global arms exporter** by SIPRI in 2020.
- In 2019-20, over **85 per cent of export authorisations** were to private sector companies.

### Defence imports

- India emerged as the **second-largest importer** of arms transferred between **2016-20**, with a share of **9.5% of global arms imports**.
- Although, its imports **fell 33% from that between 2011-2015**.
- Russia ranks as the subcontinent's largest arms supplier, delivering **49% of its total imports**.

### Foreign Direct Investment (FDI)

- As per data released by the Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflow in the defence sector for April 2000 - June 2021 stood at **US\$ 10.15 million (Rs. 61.52 crore)**



- Procurement of indigenously developed products/systems involves **conducting several tests and trials** that **consumes a considerable amount of time**. As a result, placement of orders is delayed and the industry finds it difficult to carry out **advance production planning**.
- **High-cost and technology-intensive nature** of the defence items, combined with the **sporadic demand and limited market access** further discourages private sector.
- The industry has demanded its inclusion in the **government's Harmonised Master List of Infrastructure Sub-Sectors** and its eventual inclusion in RBI's circular on '**Financing of Infrastructure – Definition of Infrastructure Lending**'.

### Recent Initiatives to promote self-reliance in defence manufacturing

Initiative	Details
Draft Defence Production and Export Promotion Policy 2020	<ul style="list-style-type: none"> <li>• Objective is to achieve a turnover of Rs US\$ 25Bn including <b>export of US\$ 5 Bn in Aerospace and Defence goods and services by 2025</b>.</li> </ul>
Defence Acquisition Procedure 2020 (DAP)	<ul style="list-style-type: none"> <li>• To transform India into a <b>global manufacturing hub</b> with a focus on <b>indigenously designed, developed, and manufactured</b> weapon systems.</li> </ul>
Positive Indigenisation list	<ul style="list-style-type: none"> <li>• Ministry of Defence (MoD) has prepared a <b>list of 209 items</b>, Positive Indigenization List, for which there would be an <b>embargo on the import</b> beyond the timeline indicated against them.</li> </ul>
Technology Development Fund (TDF)	<ul style="list-style-type: none"> <li>• TDF has been created under DRDO to <b>promote self-reliance in Defence Technology</b> through participation of Public/Private industries especially <b>MSMEs and start-ups</b>.</li> </ul>
Conducive FDI policy	<ul style="list-style-type: none"> <li>• The Government has enhanced FDI in Defence Sector up to <b>74% through the Automatic Route</b> for companies seeking new defence industrial license and up to <b>100% by Government Route</b>.</li> </ul>
Defence Industrial Corridors (DICs)	<ul style="list-style-type: none"> <li>• Government has established two Defence Industrial Corridors, one each in the <b>States of Uttar Pradesh and Tamil Nadu</b>. The investments of Rs 20,000 Crore have been envisaged in Defence corridors by year 2024.</li> </ul>
Strategic Partnership Model	<ul style="list-style-type: none"> <li>• It envisages <b>long-term strategic partnerships</b> with defence manufacturing companies, wherein they would tie up with global Original Equipment Manufacturers (OEMs) to seek <b>technology transfers</b> to set up domestic manufacturing infrastructure.</li> </ul>

### Road Ahead

- **Create a data bank to estimate self-reliance:** Defence Services Estimates (DSE) should be **suitably modified** to reflect information on the **procurement from indigenous sources** as well as imports and indirect imports. This will facilitate **estimation of the self-reliance index** and enable monitoring of progress made.
- **Defence Industrial Policy Statement:** Drawing upon the experience of **advanced countries such as the UK and Australia**, which periodically issue defence industrial policy statements, a similar exercise should be undertaken by the **Ministry of Defence (MoD)**.
- **Fostering innovation through Board of Research for Advanced Defence Sciences (BRADS):** Rama Rao Committee recommended the creation of BRADS, to function on the lines of **Defence Advanced Research Projects Agency (DARPA) in USA**, which has been at the forefront of **radical innovation** in defence sector.
  - A DARPA like structure with **operational flexibility** and the ability to conduct research in a **bureaucracy-free environment**, in mission mode, in the **best possible laboratories**, could go a long way in **fostering innovation** for 'tomorrow's needs'.
- **Conducive Financial Framework:** Many countries provide a host of **fiscal and other incentives** to nurture and develop the defence production sector. For example, in South Korea, government raised funds through a **special defence tax** (remained in force for 15 years) during **early phase** of defence 55ncentivize55ation.
  - Israel **continues to 55ncentivize** the local enterprises through 15 per cent **price preference**.
- **Other measures:**
  - To meet the **skilled human resources requirement**, the government should create **dedicated defence-specific universities** on the lines of similar setups by the **atomic and space departments**.
  - The government should also stick to its articulated position of **awarding no defence contracts on nomination basis and timelines of the procurement process**.

- The **Sisodia committee's** recommendation regarding **industry's involvement** in formulation of QRs should also be implemented. The efficiency in QR formulation would lead to **faster and better procurement** and promote greater self-reliance by projecting the **realistic requirements**.

## 4.4. DRUGS TRADE

### Why in news?

According to the 2021 World Drug Report of the United Nations Office on Drugs and Crime (UNODC), Afghanistan's opium production is rising for the fifth year, undermining efforts to stop the war-torn nation from being the hub of the global drug trade.

### More on news

- **Afghanistan reported a 37% increase** in the extent of land used for illicit cultivation of opium poppy during 2020 compared with the previous year.
- Afghanistan is the presently the **world's largest opium producer** (accounting for some 87% of the global production). With the collapse of Afghanistan's economy, **drugs have been a major source of revenue for the Taliban**.
- The anti-drug law enforcement agencies in India are suspecting a **steep surge in cross-border trafficking** of heroin and crystal methamphetamine with the rapid Taliban takeover in Afghanistan.
  - Recently, Bengaluru Police had arrested two Iranian nationals for peddling drugs smuggled from Afghanistan.

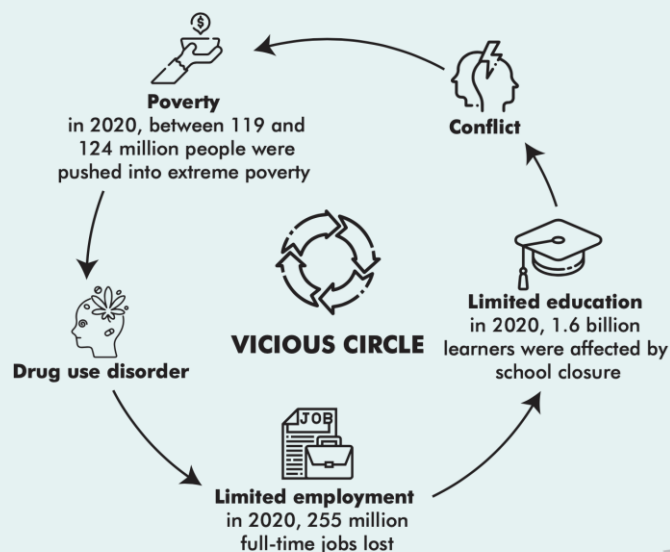
### Drug Trafficking in India

- For the last three decades **India has become a transit hub as well as a destination** for heroin and hashish produced in the Golden Triangle and the Golden Crescent.
  - In addition, various psychotropic and pharmaceutical preparations and precursor chemicals produced domestically as well as in various parts of the world are also trafficked through Indian territory.
- As per the UNODC 2020 report, **India is also among the countries with highest illicit cultivation and production of cannabis** from 2010 to 2017.
- Within India, the **worst affected regions** are North East India (especially Manipur) and North West India (especially Punjab) followed by Mumbai and Delhi and now Haryana.
- **Reasons for heightened drug trafficking:** Increased production of opium in Afghanistan,

### Other key highlights of the World Drug report 2021

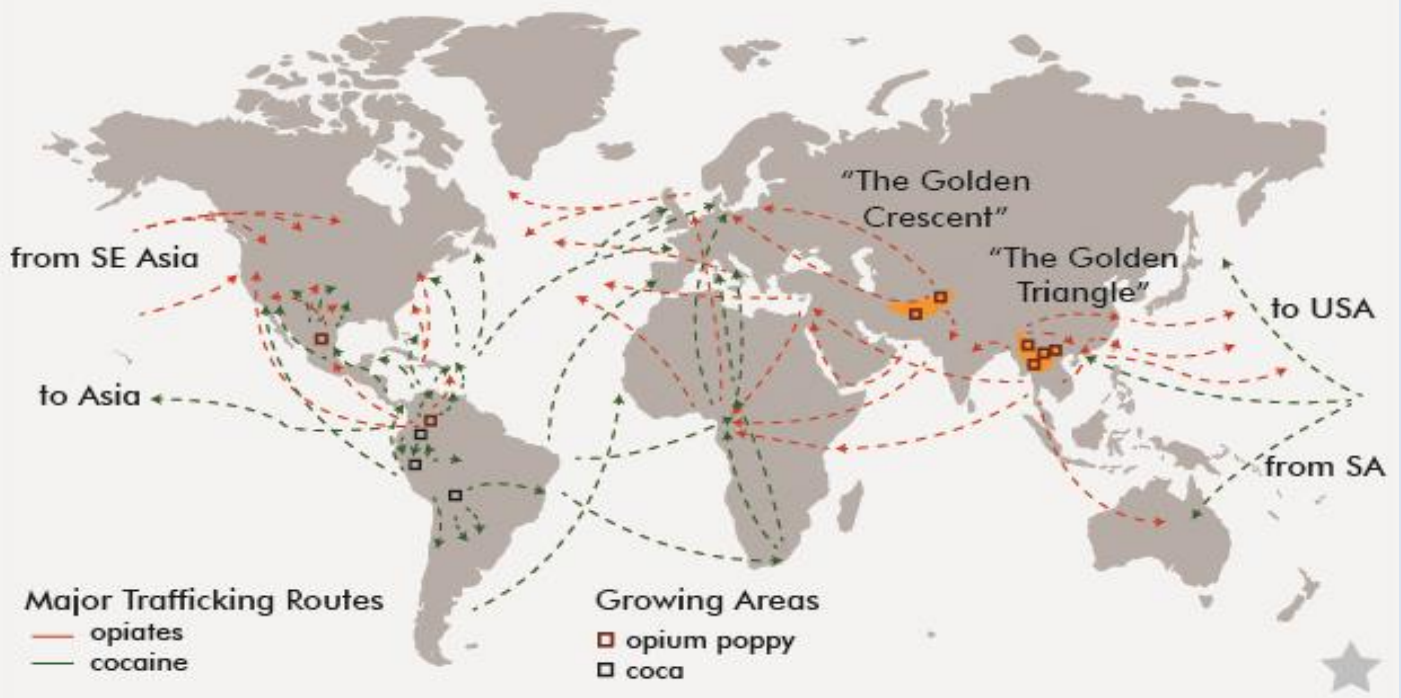
- Around 275 million people used drugs globally and over 36 million people suffered from drug use disorders.
- **Drug sales over dark web have increased** by nearly four times.
- **COVID impact:**
  - The pandemic has **accelerated some pre-existing trafficking dynamics**. These include larger shipment sizes and increased use of land and waterway routes, private planes, and contactless methods for delivering drugs to consumers, such as mail delivery.
  - **Non-medical use of Cannabis and Sedatives has increased** during the pandemic.
  - Increased economic deprivation and feelings of social isolation contributed to **increased drug use and drug cultivation** in order to earn money.

### THE COVID-19 PANDEMIC HAS EXACERBATED THE FACTORS THAT FUEL THE VICIOUS CYCLE OF SOCIO-ECONOMIC VULNERABILITY AND DRUG USE DISORDERS

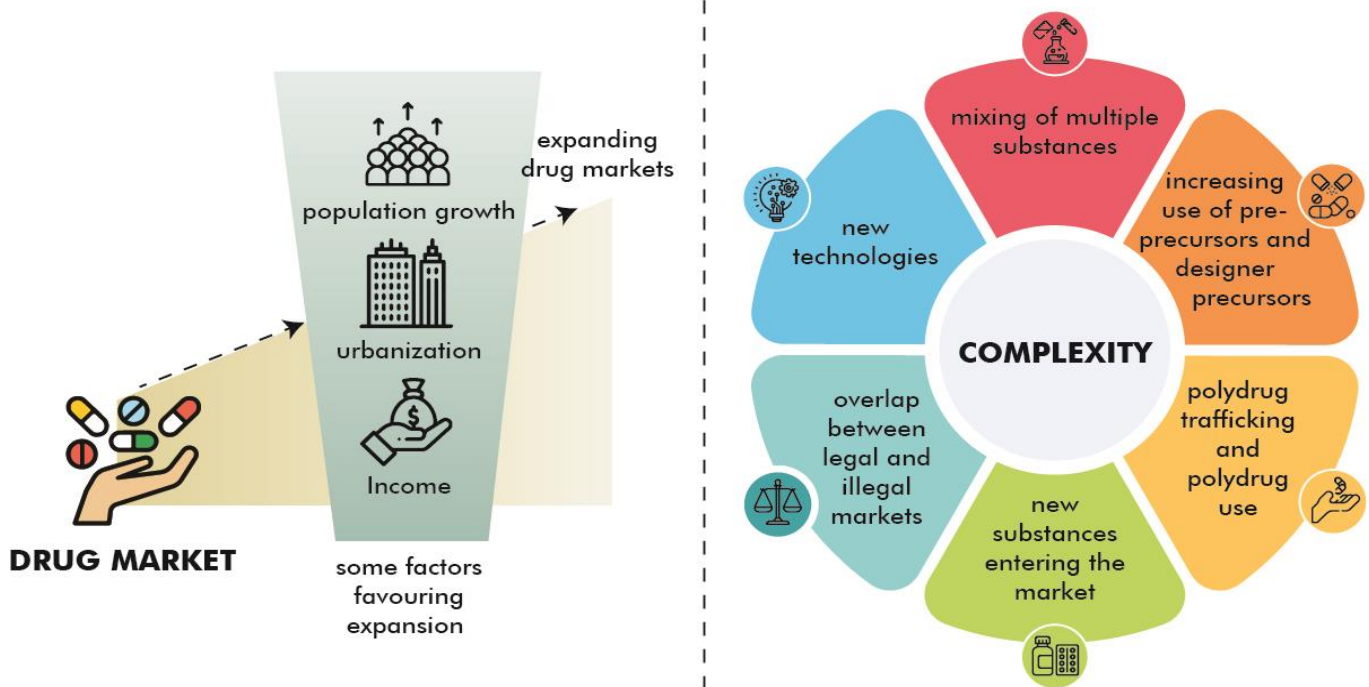


greater domestic demand in India, favourable geographical location and connivance of state government officials and border guarding forces.

## GLOBAL DRUGS TRADE PATTERN



## GLOBAL DRUG MARKET: EXPANDING AND MORE COMPLEX



## Drugs trade as significant threat to the national security

The two-way illegal flow of drugs and chemicals violates India's borders and poses a significant threat to national security in various ways such as:

- **Drug trafficking facilitates other organised criminal enterprises:** The breach of the international borders of the country by drug traffickers implies that the same routes could be used for smuggling in weapons as well as terrorists into the country.
  - For instance, during the Pathankot attack, the terrorists entered India from Pakistan through the routes tried and tested by drug traffickers.
- **Narco-terrorism:** It is the nexus between drug traffickers, criminal networks and terrorists where the aim is to destabilise the nation through the use of terrorism or weaken it through illegal drug trade. For instance, D Company had facilitated activities of Islamist terror groups in India by supporting their cross-border movement and providing them with funds and shelter in the country.
- **Terror funding:** Money generated by the illegal sale of narcotics and drugs is used for financing terrorist activities and also left wing extremism in India. It is estimated that 15 per cent of the finances of the J&K militants were generated through the sale of drugs.
- **Encourages drug consumption:** Large-scale availability of narcotics and drugs encourages their demand by domestic population. Rising drug consumption produces dysfunctional behaviour thereby creating law and order problem in the society along with a huge economic drain on the country through loss of production and diversion of resources for caring and rehabilitation of the drug addicts, etc.
  - According to a study conducted by the Indian Army in 2018, around 40% of the youth in Jammu and Kashmir suffer from some form of drug addiction, which was below 5% in 2008.
- **Impact on state institutions:** Drug trafficking also has a direct bearing on the political process as drug cartels subvert, penetrate and further corrupt state institutions to control the illegal drug trade.

### Related information

#### Global Drug Policy Index (GDPI)

- It is a **data-driven global analysis of drug policies** and their implementation and provides an **essential accountability and evaluation mechanism** in the field of drug policy.
  - GDPI is a project of the Harm Reduction Consortium.
- It is composed of **75 indicators running across five broad dimensions of drug policy:** criminal justice, extreme responses, health and harm reduction, access to internationally controlled medicines, and development
  - **Norway and New Zealand are leading countries** on humane and health-driven drug policies.
  - **Brazil, Uganda and Indonesia** are ranked **bottom three**.
  - **India's rank is 18** out of 30 countries.

## Measures taken by India

India has adopted a comprehensive approach to reducing supply as well as demand for narcotics and drugs:

- **Enacting legislations such as the Narcotics Drugs and Psychotropic Substances Act (NDPS):** Under the act, cultivation, manufacturing, transportation, export and import of all narcotics drugs and psychotropic substances is prohibited except for medicinal and scientific purposes and as authorized by the government.
- **Ensuring physical security of the borders and coasts** by strengthening patrolling and surveillance.
- **Nasha Mukt Bharat Annual Action Plan (2020-21)** for 272 Most Affected Districts for awareness building and enhancing community participation.
- **Eliciting cooperation from neighbours** by entering into several bilateral and multilateral agreements on prevention of illicit traffic of drugs and chemicals.
  - For instance, in the recent case, India has sought Iran's assistance to curb influx of drugs from Chabahar and Bandar Abbas Ports.

### Reasons for partial success in prevention of drug Trafficking

Despite these measures, prevention of drug trafficking in India has achieved only partial success. Reasons for the same are:

- **Low priority accorded to the prevention of drug trafficking** due to which concerned organisation do not display required urgency in apprehending drug peddlers and subsequent investigation.
- **Systemic issues** such as Lack of coordination between various agencies, corruption, intelligence failure, lack of manpower and infrastructure, poor drug detection training, and procedural delays.

- **Co-operating with voluntary organisations:** India is a signatory to the three UN Conventions namely, Single Convention on Narcotic Drugs, 1961, Convention on Psychotropic Substances, 1971 and Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.

### Way ahead

The enactment of various legislations has indeed provided the government with the means to achieve the twin goals of reduction in drug supply and demand. However effective implementation of the laws along with robust measures to overcome the loopholes in its strategy for prevention of drug trafficking has to be ensured.

## 4.5. NEWS IN SHORTS

### 4.5.1. INDIAN OCEAN NAVAL SYMPOSIUM (IONS)

- **7<sup>th</sup> edition of IONS Conclave of Chiefs** was hosted by French Navy at Paris.
- IONS was conceived by the Indian Navy in 2008 as a forum which seeks to enhance maritime co-operation among Navies of the littoral states of the Indian Ocean Region.
- It provides an open and inclusive platform for discussions on regionally relevant maritime issues.

### 4.5.2. INS VISAKHAPATNAM

- INS Visakhapatnam, a P15B stealth guided missile destroyer, was recently commissioned into the Indian Navy.
  - The event marks the formal induction of the first of the four 'Visakhapatnam' class destroyers.
- India's indigenous Destroyer construction programme commenced in the late 1990s with the three Delhi class (P-15 class) warships and this was followed by three Kolkata class (P-15A) destroyers commissioned a decade later.
- Presently, under the P-15B (Visakhapatnam Class), a total of four warships are planned (Visakhapatnam, Mormugao, Imphal, Surat).

### 4.5.3. VELA

- It is the fourth submarine (Kalvari, Khanderi, and Karanja are other three) of the Project-75 that was delivered to the Indian Navy recently.
- Project-75 includes construction of six submarines of Scorpene design.
  - Scorpene submarines can undertake multifarious types of missions i.e Anti-Surface warfare, Anti-Submarine warfare, Intelligence gathering, Mine Laying, Area Surveillance etc.
- These submarines are being constructed at Mazagon Dock Shipbuilders Limited (MDL) Mumbai.

### 4.5.4. DEFENCE EXERCISES

- **CORPAT or Coordinated Patrol-** 32<sup>nd</sup> military exercise between India and Thailand.
- **Shakti 2021-** 6<sup>th</sup> Edition of India-France military exercise.
- **SITMEX:** It is a Trilateral Maritime Exercise between India, Singapore and Thailand.
- **Sagar shakti exercise:** It is the 'mega multi-agency military exercise' conducted in Kutch to test India's combat readiness.
- **Exercise Dosti:** 15th edition of the Maldives, India, and Sri Lanka biennial Trilateral Exercise.

### 4.5.5. OPERATION SANKALP

- Indian Navy's ship Trikanth is currently deployed in the Persian Gulf and Gulf of Oman as part of Operation Sankalp.
- **Operation Sankalp** is the Indian Navy's effort to maintain a frontline ship in the region to:
  - Ensure safe and secure movement of trade;
  - Instill confidence in the maritime community and
  - Contribute to regional maritime security.



# 5. ENVIRONMENT

## 5.1. COP 26

### Why in News?

The 26th Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in Glasgow, hosted by the UK, recently concluded.

### More on the news

- The Conference also included the 16th session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 16), and the third session of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA 3).
- The COP26 holds significance as it aims to **finalise the Paris rulebook**, following the 2019 COP25 summit in Madrid, where many issues had not been agreed and had been pushed into the next year under the **“Rule 16” of the UN climate process**.
- The conference ended with all 197 parties to the UNFCCC agreeing to **Glasgow Climate Pact (GCP)**, the global agreement which will accelerate action on climate this decade and completes the Paris Rulebook.
  - The pact aims to **limit global warming to 1.5 degree Celsius by 2030**, as agreed under the 2015 Paris Agreement and **cut Global greenhouse gas emissions by 45 per cent by 2030 and to zero overall by 2050**.

**Intended Goals of COP26**

- Net zero and 1.5 degrees**: Countries are called on to reach net-zero carbon emissions by 2050 and to keep global temperatures below 1.5C.
- Protect ecosystems and habitats**: States are encouraged to protect and restore ecosystems and build resilient infrastructures to withstand climate change.
- Mobilise finance**: Developed nations are asked to mobilise \$100bn in climate finance per year for poorer nations to tackle climate change.
- Collaboration**: Parties at COP26 will need to collaborate to finalise the Paris Rulebook, which sets out the rules of the Paris Agreement.

### Key Outcomes of the COP26

Areas of discussion	Important Decisions and Developments
<b>Ambition</b>	<ul style="list-style-type: none"> <li>• By the end of COP26, 153 countries had submitted <b>new climate plans (known as nationally determined contributions, or NDCs)</b> to slash their emissions by 2030.</li> <li>• Countries requested to revisit and <b>strengthen their climate pledges by the end of 2022</b>.</li> </ul>
<b>Target action against fossil fuels</b>	<ul style="list-style-type: none"> <li>• <b>First-ever COP decision to explicitly target action against fossil fuels</b>, calling for a “phasedown of unabated coal” and “phase-out” of inefficient fossil-fuel subsidies.</li> </ul>
<b>Adaptation</b>	<ul style="list-style-type: none"> <li>• Countries have been urged to <b>at least double their collective provision of climate finance for adaptation from 2019 levels by 2025</b>.</li> <li>• <b>\$352 million were pledged for the UN’s Adaptation Fund</b>, the highest single mobilisation to the fund.                     <ul style="list-style-type: none"> <li>○ The fund has the advantage of being focused exclusively on adaptation projects and also being 100% grant-based rather than providing loans to poorer nations.</li> </ul> </li> <li>• <b>Sharm el-Sheikh Work Programme on the Global Goal on Adaptation</b> to reduce vulnerability, strengthen resilience and increase the capacity of people and the planet to adapt to the impacts of climate change.</li> </ul>
<b>International Carbon Markets under Article 6</b>	<ul style="list-style-type: none"> <li>• <b>Article 6</b>, which covers Market- and non-market-based mechanisms of the Paris Agreement, <b>was finalized</b>. Key decisions regarding the Article include-                     <ul style="list-style-type: none"> <li>○ <b>Carbon credits generated under the Kyoto Protocol since 2013</b> (amounting to ~ 320m tonnes of CO2 equivalent), <b>will be carried over</b> into the Paris mechanism but must be used by 2030.</li> <li>○ <b>5% of proceeds</b> under traditional market mechanisms (Article 6.4), <b>must mandatorily go toward funding adaptation</b>.</li> <li>○ Contributing funds toward adaptation under bilateral trading of credits between countries (Article 6.2) is voluntary.</li> <li>○ <b>Avoidance of double counting</b>, in which more than one country could claim the same emissions reductions as counting toward their own climate commitments.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Exclusion of the use of credits generated historically, between 2015 and 2021, from reduced deforestation and forest degradation, under the UN scheme known as REDD+.</li> </ul>
<b>Loss and damage</b>	<ul style="list-style-type: none"> <li>● <b>Glasgow Dialogue</b> created on funding for loss and damage.</li> <li>● <b>Developed countries pledged to support the Santiago network</b>, a website set up by the UNFCCC, with links to organisations such as development banks that could support loss and damage.</li> </ul>
<b>Rules on transparency of climate action and support</b>	<ul style="list-style-type: none"> <li>● All countries agreed to submit information about their emissions and financial, technological and capacity-building support using a common and standardized set of formats and tables.</li> </ul>
<b>Common Time Frames</b>	<ul style="list-style-type: none"> <li>● Countries were encouraged to use common timeframes for their national climate commitments. <ul style="list-style-type: none"> <li>○ This means that new NDCs that countries put forward in 2025 should have an end-date of 2035, in 2030 they will put forward commitments with a 2040 end-date, and so on.</li> </ul> </li> </ul>

### Voluntary Pledges/Declarations/Agendas launched during the COP26 talks

Name	Details	Is India a signatory?
<b>Breakthrough Agenda</b>	It commits countries to work together to make clean technologies and sustainable solutions the most affordable, accessible and attractive option in each emitting sector (power, road transport, steel, agriculture etc.) globally before 2030.	✓
<b>Global Methane Pledge</b>	A voluntary non-binding agreement under which signatory countries have promised to cut their methane emissions by at least 30 per cent by 2030.	✗
<b>Glasgow Leaders' Declaration on Forests and Land Use</b>	The declaration commits the countries to halt and reverse deforestation and land degradation by 2030.	✗
<b>Forest, agriculture and commodity trade (FACT) statement</b>	It was jointly led by the UK and Indonesia and aims to support sustainable trade between commodity-producing and -consuming countries.	✗
<b>Sustainable Agriculture Policy Action Agenda</b>	Signatories have agreed to urgent action and investment to protect nature and shift to more sustainable ways of farming.	✗
<b>Declaration on "accelerating the transition to 100% zero-emission cars and vans"</b>	It aims to work towards all sales of new cars and vans being zero emission globally by 2040, and by no later than 2035 in leading markets.	✓
<b>Beyond Oil and Gas Alliance (BOGA)</b>	It is an international coalition of governments and stakeholders working together to facilitate the managed phase-out of oil and gas production.	✗

### Contentious issues that remain

- **Credibility, action and commitment gap:**
  - **Targets for 2030 remain totally inadequate:** Current commitments would lead to global warming in the range of 1.8 to 2.4 degree.
  - **Poor policy implementation on the ground:** Countries do not have sufficient legal and administrative structures and short- and long-term strategies in place to fulfil their commitments including the net zero targets.
- **Rifts over Finance:** Major issues pertaining to climate finance include-
  - **Unpredictability and Low accessibility:** The climate finance landscape is very fragmented, with different criteria for different funds which cause inordinate delays and difficulties for developing nations in accessing funds.
  - **Grants-based finance:** Around 71% of adaptation finance is provided as loans instead of grants pushing developing nations into debt.
  - **Inadequacy:** Annual costs for developing countries to adapt to increased floods, droughts, heatwaves and other extreme weather are estimated to be around \$300 billion a year by 2030, and \$500 billion by 2050.
  - **Low focus on adaptation:** Adaptation received only 25% of the total climate finance in 2019. Contributions in the global climate finances are **skewed towards mitigation activities**, such as renewable energy projects, which are often seen as better investments.

- **Trust issues:** Developed countries had failed to meet the promise of \$100bn a year in climate finance for poorer countries by 2020 and are expected to meet the target only in 2023.
- **Lack of stern action for Loss and damage:** Developing countries have consistently **avoided any liability and compensation claims** for their historic responsibility in causing climate change. Glasgow climate pact does not provide any details, such as the process, structure or mechanisms for delivering funding related to loss and damage.
- **Other issues-**
  - Carrying over of Carbon credits generated under the Kyoto Protocol can disincentivise newer and stronger projects aimed at reducing global carbon emissions.
  - Several countries are still reliant on fossil fuels like coal, natural gas etc. for meeting their energy needs and would find it hard to phasedown.
  - Lack of focus on sectoral specific targets for emission reduction.

#### Explained: Important terms related to Climate Change Negotiations

- **Loss and Damage:** It refers to impacts of climate change that cannot be adapted to, and where losses are permanent. It covers both slow-onset processes like sea-level and temperature rise, and extreme events such as floods, hurricanes and tropical cyclones.
- **Market- and non-market-based mechanisms under Article 6:** It contains three separate mechanisms for “voluntary cooperation” towards climate goals, with the overarching aim of raising ambition. Two of the mechanisms are based on markets and a third is based on “non-market approaches”.
  - **Article 6.2** governs bilateral cooperation via “**internationally traded mitigation outcomes**” (ITMOs), which could include emissions cuts measured in tonnes of CO<sub>2</sub> or kilowatt hours of renewable electricity.
    - ✓ It could see countries link their emissions trading schemes, for example, or buying offsets towards their national climate goals.
  - **Article 6.4** will lead to the creation of a new international carbon market for the trade of emissions cuts, created by the public or private sector anywhere in the world, also known as the “**Sustainable Development Mechanism**” (SDM).
  - **Article 6.8** offers a formal framework for climate cooperation between countries, where no trade is involved, such as development aid.

#### Way Forward

- Countries need to scale up their ambitions by 2022 to fulfil the 1.5 degree pathway envisioned under Paris Agreement, accompanied by **strong and binding national legislations**.
  - There is also an urgent need for nuanced and transparent assessments of national net zero targets.
- Limiting global warming to 1.5°C requires **far-reaching transformations** across power generation, buildings, industry, transport, land use, coastal zone management, and agriculture, as well as the immediate scale-up of technological carbon removal and climate finance.
- **Establishment of a Glasgow Loss and Damage Facility** as a financial mechanism to respond to current climate damage can help vulnerable nations. It can build up on the efforts of 2013 international framework to address loss and damage – known as the **Warsaw International Mechanism (WIM)**.
- A **well-executed stocktake** can help evaluate whether nations are fulfilling their commitments and could guide decision-making on new emissions-reduction targets.
- **Countries can voluntarily avoid using credits from projects accredited under the Kyoto** regime towards their NDC targets.

#### Related news: Global Resilience Index Initiative (GRII)

- It was launched during COP26 by 10 global organisations including United Nations office for Disaster Risk Reduction (UNDRR), Insurance Development Forum (IDF), Coalition for Disaster Resilient Infrastructure (CDRI) etc.
- It will provide a globally consistent model for the assessment of resilience across all sectors and geographies.

#### COP26 Charter of Actions

- It was launched by the **Energy and Resources Institute (TERI)** launched ahead of the Glasgow climate change conference.
- It **assimilates questions and challenges concerning key themes for India** such as equity, green finance, adaptation & resilience, nature-based solutions, energy, clean transport, and business and industry.

#### Glasgow Financial Alliance for Net Zero (GFANZ)

- GFANZ was originally unveiled in **April 2021** as a **forum for leading financial institutions to accelerate transition to a net-zero global economy** through de-carbonization of the economy **in line with the Paris agreement**.
  - It was now launched by **UN Special Envoy for Climate Action and Finance**, along with UNFCCC Climate Action Champions, and the **COP26 Presidency**.



- **The Objective of 'net Zero' is to reach net-zero emissions by 2050.**
    - ✓ **The target is in line with Race to Zero campaign of UN** that rallies non-state actors, including companies, cities, regions, financial and educational institutions to take rigorous and immediate action to halve global emissions by 2030.
  - Members under GFANZ include **net zero banking alliance, net zero asset managers initiative, net zero asset owners alliance, net zero insurance alliance**, Net Zero Financial Service Providers Alliance etc.
    - **The Net-Zero Banking Alliance (NZBA)**, hosted by United Nations Environment Programme-Finance Initiative (UNEP FI) is the **newest net zero alliance**.
    - **Other net zero alliances include** - the Net Zero Asset Managers Initiative and the UN-convened Net-Zero Asset Owner Alliance etc.
  - **Earlier, in 2019, the UN General Assembly had also launched its principles of responsible banking (PRBs)** whereby banks had agreed to “work with their clients to encourage sustainable practices” and to align business strategy to UN sustainable development goals.
- Climate Change Performance Index (CCPI)**
- **India has retained its spot in the top 10** best performing countries in CCPI.
    - **Denmark is the highest ranked country** (top three places remained empty).
  - CCPI **evaluated 60 countries and European Union** (which together generate 90%+ of global GHG emissions) in **four categories** — GHG emissions, renewable energy, energy use and climate policy.
  - CCPI was **developed by Germanwatch as a tool for increasing transparency** in international climate change policy.

## 5.2. AIR POLLUTION IN NATIONAL CAPITAL REGION

### Why in News?

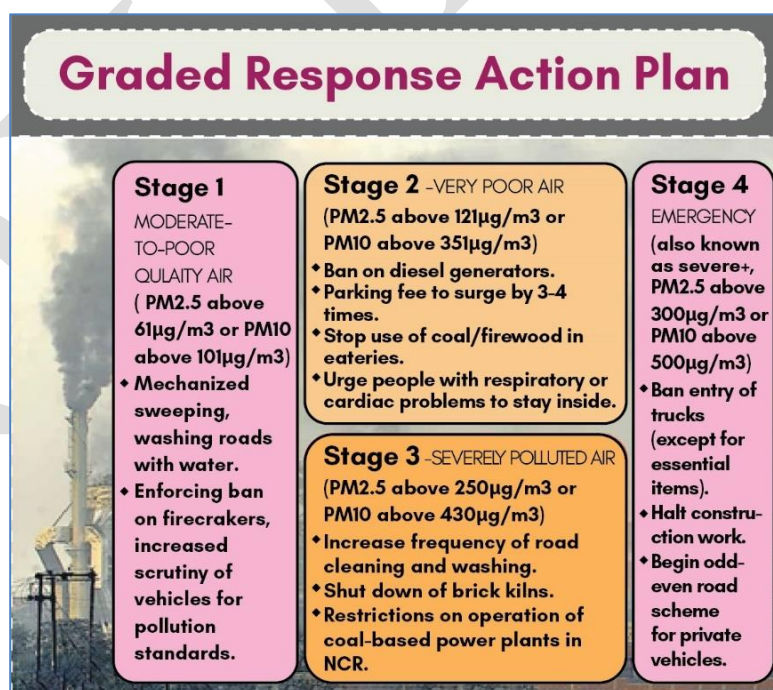
Recently, States in the National Capital Region were directed to be ready to implement actions under the 'emergency' category of the Graded Response Action Plan (GRAP) to control air pollution.

### About Graded Response Action Plan

- **GRAP is essentially a step-by-step guide** for what to do when air in Delhi-NCR gets heavily polluted (see infographic).
- It was approved by the Supreme Court in 2016.
- It includes extreme measures such as shutting down schools and implementing the odd-even road-space rationing scheme in case of severe degradation of air quality.

### Reasons for high air pollution in the NCR

- **Pollution from vehicle exhaust:** The transport sector is the main source of PM2.5 emissions and also makes up 80 percent of nitrogen oxides and carbon monoxide in Delhi's air.
- **Industrial pollution:** Delhi has many industrial clusters of small-scale industries in India that do not meet limits on air, water or soil emissions.
  - Also, the emission from power thermal plants near Delhi have resulted into polluted air in the region.
- **Stubble Burning:** As the new harvest season starts, farmers set fire to leftover rice stalks and straw after harvest for clearing out fields resulting in a dense layer of smog over the Northern Plains, including Delhi NCR.
- **Construction activities:** Fine dust from construction activities is a significant contributor to the smog. According to Delhi Pollution Control Committee (DPCC) officials, 30 percent of air pollution in the territory is caused by dust from construction sites.
- **Open waste burning:** As per a Study by IIT Kanpur, controlling the burning of garbage in the open can reduce pollutants in Delhi's air by up to 10%.



- **Combustion of fuels:** Burning of fuel for cooking and heating purposes especially in the poorer houses, during the winter season of Delhi, leads to emission of ash and carbon mono-oxide in the environment.
- **Geographical location and climatic conditions:** Due to its inland location and harsh winters (see box) much more efforts are required to clean the air of the region as compared to other metropolitan cities with similar emission levels.
- **Other sources:** such as in-situ power generation via diesel generator sets, Seasonal emissions from dust storms, forest fires etc. also compound the problem of air pollution in Delhi.

#### Reasons for rise in pollution in winter

- **Temperature inversion:** Low surface temperature causes lowering of temperature inversion layer which leads to entrapment of pollutant at lower levels of atmosphere.
- **Denser wind:** Cold denser winds have low speed which reduces the dispersion rate of pollutants creating visibility challenges.
- **Pre-Harvest season and stubble burning:** coincides with Delhi Winter.
- **Bursting of Firecrackers:** The coinciding of bursting of firecracker on Diwali with Delhi's winter also impact the air quality in short term.
- **Burning of waste for warmth:** Chlorides in the air of Delhi indicates incineration of municipal waste and burning of plastics and rubber tyres for warmth on the streets.

### IMPACT OF AIR POLLUTION

#### Health

- Fine particles (PM2.5) pose the greatest health risk, as they are minuscule and can get deep into a person's lungs and bloodstream.
- Exposure to fine particles can affect lung function and worsen medical conditions such as asthma and heart disease.

#### Economy

- Delhi's poor air quality could drive away top corporate heads and push work to other urban communities in India or abroad.
- The estimated economic cost of PM 10 pollution for Delhi has tripled from 1995 to 2015.

#### Environment

- Air pollution affects the ability of natural ecosystems to function and grow.

#### Education

- Constant closing of school can leave learning gap among the students.
- High level of air pollution can also impact the cognitive ability of students.

#### Agriculture

- Air pollution results in acid rain that can lead to crop damage.
- Ground-level ozone also affects the agricultural and forest yields, which further stuns the growth and sustainability of tree seedlings.

#### Steps taken to improve the air quality in the region

- **10-point action plan:** It is a 10-point plan which includes ten steps taken by Delhi government to reduce air pollution which includes steps like- Preparing a decomposer with the help of Pusa Institute for stubble burning, Ban on firecrackers, Installation of smog towers, construction of Eco waste park etc.
- **Stringent pollution norms for coal-based power plants:** The central government tightened pollution norms for coal-based thermal power plants in 2015.
  - However, its implementation has been extended to 2022 from 2017 earlier.
- **National Clean Air Programme (NCAP):** is a long-term, time-bound, national level strategy to tackle the air pollution problem across the country in a comprehensive manner.
  - It targets to achieve 20% to 30% reduction in Particulate Matter concentrations by 2024 keeping 2017 as the base year for the comparison of concentration.
- **Bharat Stage Norms:** Delhi was the first city in the country to implement the highest emission standards Bharat Stage VI for its vehicles.
  - The Bharat Stage (BS) emission norms are standards instituted by the government to regulate the output of air pollutants from motor vehicles.

- **Technology upgrade in industries:** Technology upgradation especially in brick kiln industry has been taken up to reduce emission intensity.
- **Commission for Air Quality Management (CAQM):** It has been constituted through an Act to have better co-ordination, research, identification, and resolution of problems related to air quality in the National Capital Region (NCR) and adjoining areas.
- **Ban on cheap fuel:** The Supreme Court has banned the use of petroleum coke or petcoke and furnace oil in the National Capital Region (NCR).
- **Delhi Electric Vehicle (EV) Policy:** the Delhi EV Policy provides demand incentives for purchasing electric two-wheelers, cars, auto-rickshaws, e-rickshaws, e-carts and goods carriers.
- **Other Short-term measures:** deployed from time to time from both central and state government include Ban on Firecrackers, Odd-Even Formula, ban of entry of vehicles from other states, ban on construction and demolition activities, etc.

### Challenges in fighting air pollution in Delhi- NCR

- **Lack of pre-emptive measures:** There is lack of pre-emptive and anticipatory measures to curb pollution in the region rather the focus is on implementing ad-hoc measures during severe conditions.
- **Non-compliance with important norms:** The compliance at all levels of government with various norms provided for better air quality is inadequate.
  - For example, the government and local municipal corporations have not adequately ensured compliance of the construction industry with environmental regulations such as covering up debris and waste management.
- **Inadequate help from neighbouring states:** Delhi is a landlocked state, and its air quality is dependent on neighbouring states. However, there are varying gaps in policies in other states.
  - For example, cheap fuel such as petcoke is still in use in several neighbouring states of Delhi.
- **Bureaucratic Apathy:** Recently, the supreme court has criticized bureaucracy by pointing out a clear bureaucratic inertia. The apex court has said that easy or difficult all decisions to be taken for improving air quality in the Delhi-NCR region are left for the court to deal with.
- **Lack of public support:** This is evident through public's reluctance in complying with odd-even rule and firecracker bans, open waste burning, builders' opposition on construction bans etc.

### Way forward

- **Dedicated air quality forecasting cells:** Delhi needs a dedicated air quality forecasting cell to facilitate GRAP rollout as preventive measures rather than using it ex-post after air quality concentrations reach a certain threatening level.
- **Behavioral change:** Public behaviour should be nudged, using suitable incentives, in the direction of green practices such as carpooling, public transport, bicycle, sustainable waste management, etc.
- **Promoting fuel efficient, zero and low emission vehicles:** The use of CNG in motor vehicles, e-vehicles should be encouraged through measures like tax incentives.
- **Capacity building:** More awareness needs to be created among policymakers and the public about the substantial impact of air pollution.
- **Inter-state coordination** is needed with neighboring states like Haryana, Punjab etc. for effectively curbing air pollution at its source.

## 5.3. CLYDEBANK DECLARATION FOR GREEN SHIPPING CORRIDORS

### Why in news?

A coalition of 22 countries have agreed to create zero emissions shipping trade routes between ports to speed up the decarbonisation of the global maritime industry.

### More on news

- The signatory countries signed the '**Clydebank Declaration for Green Shipping Corridors**' (launched at the COP26 climate summit in Glasgow) and agreed to support the establishment of at least **6 green corridors by 2025**.
  - A green corridor is **defined as a shipping route between two major port hubs** on which the **technological, economic and regulatory feasibility of zero-emissions ships is accelerated by public and private action**.

- **India has not signed** the declaration yet.
- The strategy for going carbon neutral will include **using ships that run on zero-carbon fuels** and **updating port infrastructure**.

#### Indian Scenario in shipping

- India is a member of **International Maritime Organisation (IMO)** and signatory to **International Convention on Prevention of Marine Pollution (MARPOL)**.
- Recently, India signed an agreement under IMO **to cut the shipping industry's greenhouse gas emissions by 50% by 2050**. With a coastline of about 7500 km and 12 major and 200 minor ports, **India is the 16<sup>th</sup> largest maritime country in the world**.
- Approximately, **95% of the country's trade by volume (70% in terms of value)** is moved by sea. India is **located strategically on the international trade route** and offers ship repair and maintenance services to ships plying from west to east.

#### Challenges to green shipping in India

- **Inadequate infrastructure:** There is lack of adequate quality of intermodal infrastructure (railways, waterways connectivity with highways). This leads to more cargo handling by shipping which causes emissions.
- **Lack of investment:** Shipping industry faces difficulty in securing investment funds to replace existing ships by eco-friendly ones.
- **Use of polluting fuel:** Shipping fuels contain high amounts of sulphur and release sulphur dioxide on burning. This causes environmental damage through emissions.
- **Unfavourable weather conditions:** Geographically, India faces seasonal reversal of winds along with localized weather conditions which change frequently. This leads to more deviation in shipping routes, more fuel consumption and hence more emissions.

#### Way forward

- **Use low sulphur crude oil:** The fuel sulphur limit has been reduced from the current 3.5% to 0.5% in India as it is member of International Maritime Organisation.
- **Retrofitting existing ships:** Retrofitting ship engines to run on biofuels and fitting them with scrubbers can help reduce emissions.
- **Route planning:** Taking shortest possible route and running ships on optimum speed can bring down fuel consumption and emissions effectively.
- **Green ship recycling:** National Green Tribunal (NGT) has approved the 'Beaching' method of ship recycling in Alang, Gujarat. This will help in reducing emissions from ship breaking which is highly polluting in nature.
- **Green port construction:** Green ports have a small ecological footprint. They balance the economic, environmental and social dimensions of development. India intends to increase share of renewable energy to 60% of total power demand of each of its major port from present share of less than 10%.

## 5.4. NATIONAL INTERLINKING OF RIVERS AUTHORITY (NIRA)

### Why in news?

Recently, the Centre has set in motion the process of creating the exclusive body- **National Interlinking of Rivers Authority (NIRA)**- to implement river-linking projects in India.

### What is National Interlinking of Rivers Authority (NIRA)?

- NIRA is an **independent autonomous body** for planning, investigation, financing and the **implementation of the river interlinking projects in the country**.
- NIRA will be headed by a **Government of India Secretary-rank officer**.
- It will replace the existing **National Water Development Agency (NWDA)** and will function as an **umbrella body for all river linking projects**.

• **Function of NIRA:**

- **Coordinate** with neighbouring countries and concerned states and departments as directed by the Ministry of Jal Shakti or the Ministry of External Affairs.
- Have **powers on issues related to environment, wildlife and forest clearances** under river linking projects and their legal aspects.
- Have the **power to raise funds** and act as a repository of borrowed funds or money received on deposit or loan given on interest.
- Have the power to set up a **Special Purpose Vehicle (SPV)** for individual link projects.

**About Interlinking of Rivers (ILR) Programme in India**

• **Background of ILR:**

- The initial plan to interlink India's rivers came in 1858 from a **British irrigation engineer, Sir Arthur Thomas Cotton**, who suggested **interlinking the Ganga and the Cauvery rivers** for navigational purposes.
  - ✓ But the idea of interlinking Indian rivers was revived a few decades ago independently by M. Visveswarayya, K. L. Rao and D. J. Dastur.
- In 1980, **National Perspective Plan (NPP)** was prepared by the then Ministry of Irrigation (now Ministry of Jal Shakti).
  - ✓ Under NPP, the **National Water Development Agency (NWDA)** has identified 30 links (16 under Peninsular Component and 14 under Himalayan Component). (Refer map)

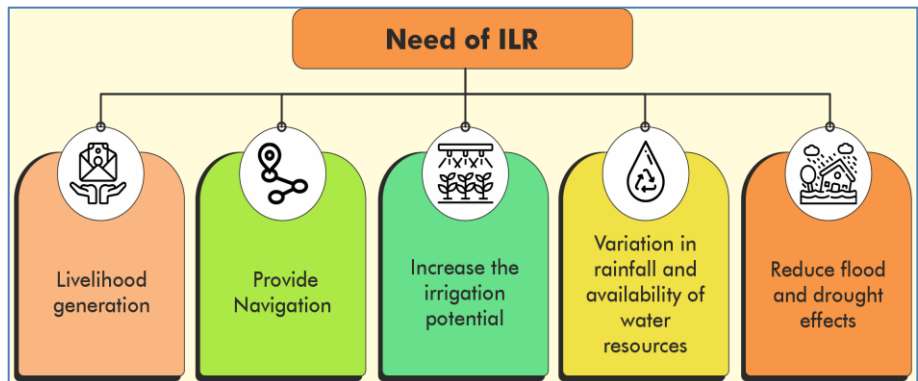
**Ken-Betwa River interlinking Project (RLP)**

- Recently, Cabinet approved the funding and implementation of Ken-Betwa RLP.
- It is **the first project under the National Perspective Plan** for interlinking of rivers.
- Ken-Betwa RLP transfers water from Ken to Betwa River through the **construction of Daudhan Dam** and a canal linking the two rivers. Both these rivers are tributaries of river Yamuna.
- It will carry **water from water surplus areas to drought prone and water deficit areas in Bundhelkhand Region**.
- **Implementing Agency:** Ken-Betwa Link Project Authority (KBLPA), a Special Purpose Vehicle.
- However, there are concerns like the project will **partly submerge the Panna Tiger Reserve in MP** and affect the habitat of vultures and jackals.

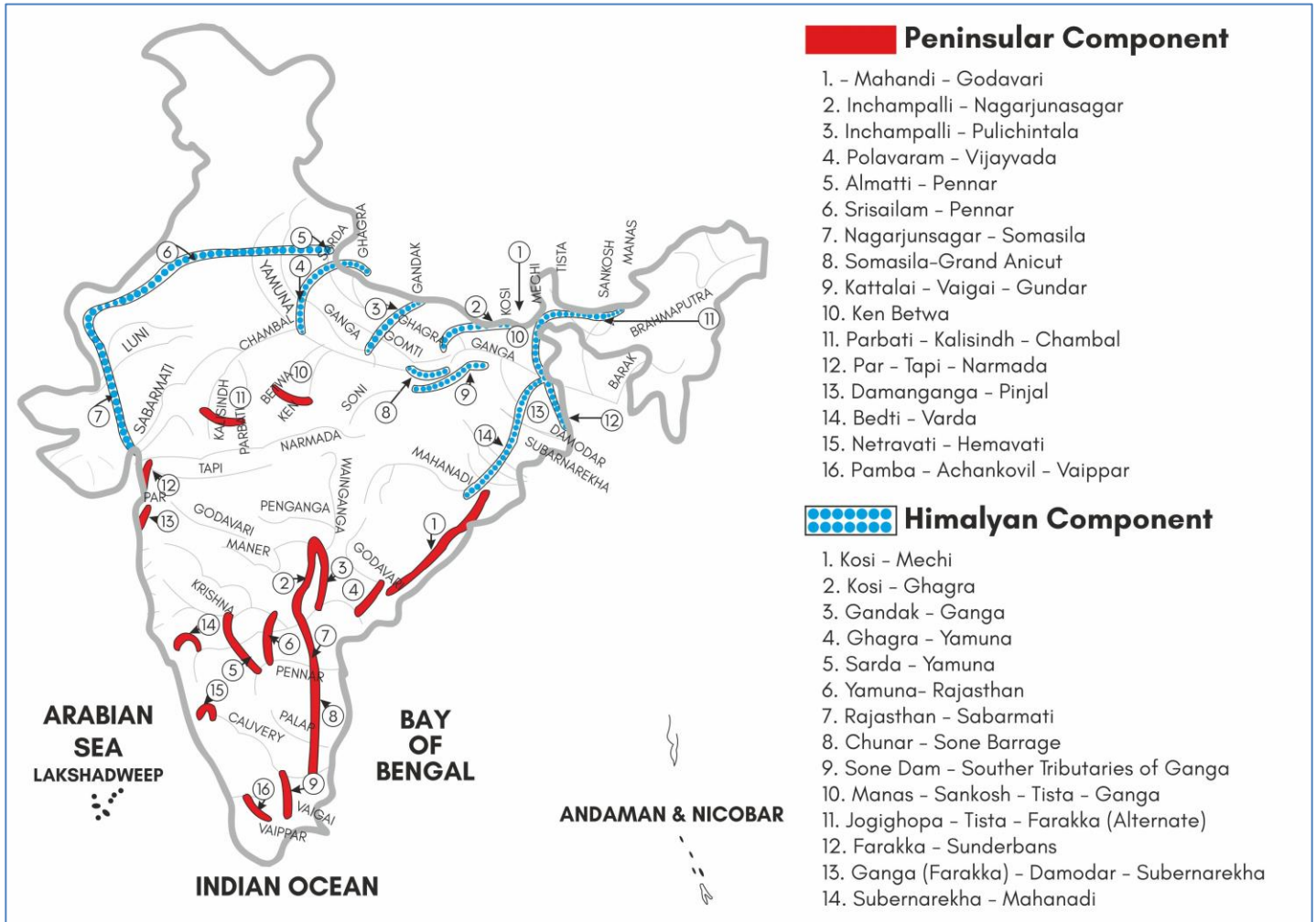


**About Ken and Betwa River**

River	Origin	River Basin	Other features
<b>Ken River</b>	Kaimur Hills (Jabalpur)	Madhya Pradesh and Uttar Pradesh	• Flows through Panna and Joins Yamuna as its last tributary
<b>Betwa River</b>	Raisen district (MP)	Madhya Pradesh and Uttar Pradesh	• Joins Yamuna as its Tributary



- A “**Special Committee on Interlinking of Rivers**” has been constituted in September, 2014 for the implementation of ILR programme.
- The **Ministry of Jal Shakti** is monitoring the progress of ILR from time to time.
- **Aim of ILR:** It is aimed at **linking different surplus rivers of country with the deficient rivers** so that the excess water from surplus region could be diverted to deficient region
- As of now, there are **six ILR projects:** Ken- Betwa, Damanganga- Pinjal, Par- Tapi -Narmada, Manas- Sankosh -Teesta-Ganga, Mahanadi-Godavari, and Godavari-Cauvery (Grand Anicut).



### Multidimensional Benefits of ILR

- **Economical:**
  - **Increase GDP:** Enhancement in economic activities especially in sector like agriculture, logistics etc. which will result in an annual increase of GDP accompanied by increased employment opportunities and the growth of the services sector.
  - **Enhanced irrigation:** Irrigation is a crucial input for agriculture growth. **For example**, the Bhakra dam resulted in increased irrigation intensity substantially in Punjab and Haryana through the dam-canal network and groundwater pumping.
  - **Navigation:** The large canals linking the rivers are expected to facilitate inland navigation.
  - **Transportation:** Boost inland waterway transportation in India and thus transportation of raw material and products will be faster and cost effective.
- **Environmental:**
  - **Tackle flood and drought:** The problems of floods and droughts would be tackled nationwide by transferring the river water from water surplus regions to water deficit regions.

- **Water availability:** Solve the water crisis by providing alternative, and perennial water resources. The poor section would be given drinkable water with greater equity.
- **Social:**
  - **Food security** as ILR helps in achieving food security and reducing volatility in the food-grain prices.
  - **Reduce burden on women and girls** to fetch water from long distances.
  - **Improve Health and Education** in the region through **reduced disease burden** (due to unsafe drinking water).
  - **Arrest the distress migration** from the region.

#### Challenges associated with ILR

- **Economical:** River interconnections are **expensive**, from the construction of connecting canals to surveillance and maintenance infrastructure.
- **Environmental:**
  - **Disrupt Monsoon pattern:** Dams could threaten the forests of the Himalayas and impact the functioning of the monsoon system.
  - **Sedimentation:** The life span and benefits of several irrigation projects has significantly reduced due to rapid rate of sedimentation.
  - **Deforestation:** Canal development would require large tracts of land resulting from large-scale deforestation in some areas.
  - **Threat to marine life:** There can be decrease in the amount of fresh water entering seas which can cause a serious threat to the marine life system and will be a major ecological disaster.
- **Social:**
  - **Human displacement:** Dams cause permanent changes in the land use patterns and in the habitats of people those who are living in the area nearby the site of dams. This is also known as "displacement due to development".
- **Political tensions:** As water is state subject in India, ILR complicates water sharing and management problems among riverine states.
  - ✓ Some of the ILR schemes have international implications, with a **possible impact on countries like Bhutan, Nepal and Bangladesh.**

#### Way forward

- **Flexible federal issues:** The need for and feasibility of river interconnection should be considered on a case-by-case basis, with a focus on making federal issues more flexible.
- **Proper assessment:** There is an urgent need to take **Socio- environmental, scientific and technical assessment** to make inter-linking of rivers techno-economically feasible. A detailed hydrological, geological, meteorological and environmental analysis of the project would be beneficial for India.
- **Rehabilitation:** Adequate rehabilitation measures should be taken up for displaced people.

#### Conclusion:

Interlinking of rivers is a good solution for the shortage of water, but interlinking has to take place after a reconnaissance survey and detailed study so that does not cause any trouble to the environment or aquatic life.

## 5.5. NATIONAL COAL GASIFICATION MISSION

#### Why in News?

Recently, a blueprint for the 'National Coal Gasification Mission' prepared by the Union Coal Ministry.

#### More in News

- The government **aims to achieve gasification of 100 Million Tonnes (MT) of coal by 2030** and this is the first time that a mission document has been released.
- In order to take ahead the Vision of 100 MT coal Gasification by 2030, Ministry of Coal has chalked out implementation strategy which include:
  - **Mapping of gasification potential of coalfields** especially in North east.

- **Development of indigenous technology** suitable for various feed stock (low ash coal, coal mixed with pet coke and high ash coal).
- **Development of suitable business model** for setting up of various projects.
- **Marketing strategy for end products.**
- **Policy support** with a view to encourage Atmanirbhar Bharat Scheme.
- **Coordination with various stake holding Ministries.**
- **Providing quantifiable targets** to various companies and monitoring the implementation of activities.

### About Coal Gasification

- Coal gasification is the **process of converting coal into synthesis gas** (also called syngas), which is a **mixture of hydrogen (H<sub>2</sub>), carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).**
- The syngas technology allows **conversion of non-mineable coal/lignite into combustible gases through in situ gasification of the material.**
- In the past, number of efforts has been made to gasify coal in India. These efforts started in year 1960s and are continuing even now with varying capacities/scales.

### Need for coal gasification

- **Eco-Friendly:** Coal gasification is considered as **cleaner option** compared to burning of coal.
  - The decision will help the country meet its **CoP-21 Paris Agreement commitments.**
- **Multiple applications:** Syn-Gas produced from Coal gasification can be used in producing **Synthetic Natural Gas (SNG), energy fuel** (methanol & ethanol), ammonia for **fertilizers and petro-chemicals.**
- **Help move towards self-sufficiency under Atmanirbhar Bharat Abhiyaan:** The gasification technology will also help India overcome the **shortage of oil, gas, methanol, ammonia, urea and other products, making the country Atmanirbhar.**
  - These products will **help in reduction in crude oil import.**
  - India currently imports 50 to 70 lakh tonnes of urea every year, and it would help increase the **availability of domestically produced fertilisers.**
- **To exploit untapped reserves:** Most of India's known coal deposits are **non-recoverable.** Underground coal gasification could help extract those plentiful reserves that are **deep, scattered and covered by forests.**

#### India's initiative for coal gasification

- Ministry of Coal has **created a Resource Group of academic and research institutions for research activities related to Coal Gasification.**
- **Bharat Heavy Electricals Limited (BHEL) has developed the fluidized bed gasification technology** suitable for high ash Indian coals to produce syngas and then convert syngas to methanol with 99% purity.
- **Jindal Steel & Power Limited has installed world's first DRI plant based on Coal gasification technology by using domestic coal** which is already operating in Angul District of Orissa for steel making.

### Challenges in coal gasification

- **Quality of Coal:** The quality of coal available in India is **mostly of low rank high ash coal. Technology for conversion of high ash coal to syn gas is one of the major challenges.** There is a need to develop indigenous technology suited to Indian coal.
- **Capital and time intensive:** Setting up of coal gasification plant is a capital-intensive work and will require at least 48 months of time.
- **Infrastructure requirement: Requirement of land, water, electricity** will play an important role in establishing Syn Gas conversion (SCG) projects. Further, **development of market for various products and transportation cost from point of production to consumption centre** will also be important.
- **Short lifespan of refractories:** These are used to line and protect the inside of a gasifier. Currently, refractories have a **lifespan of 12 to 16 months.** The relining of a gasifier costs approximately \$1 million and requires three to six weeks of downtime.
- **Water-Intensive:** Coal gasification is one of the more water-intensive forms of energy production, and large areas of China, particularly in the western parts of the country that would host new gasification plants, already suffer from water shortages.
  - There are concerns about **water contamination, land subsidence and disposing of wastewater safely.**



## Way Forward

- **Inter-Ministerial**

**Collaboration:** National Coal Gasification Mission will require collaboration amongst the Government at various levels – Central, State and Local.

- For example, if methanol is blended with gasoline and the transportation of methanol is done through inter-state pipelines – this will require close coordination of Ministry of Coal, Ministry of Petroleum & Natural Gas, and the State Governments.

Coal Gasification Products			
Source	Compounds		Products
	Precursor	Derivatives	
Bituminous coals (High grade)	Hydrogen		Refinery processes; Ammonia; Ammonium nitrate
	Carbon monoxide		Acetic acid; Chemical feedstock
		Acetic acid	Household cleaners; Waterproof sealants
	Methanol		Dyes, Formaldehyde; Fuels; plasticizers; Source for methyl acetate
		Formaldehyde	Caulks; Cements and glues; Construction adhesives; Detergents; Fingernail polish; Liquid soaps and shampoos
		Olefins:	Ethylene glycol; Polyester fibers; Engine coolant; Source for ethylene and propylene
		Ethylene	Styrene to make synthetic rubber
		Propylene	Fuel (similar to propane); Refrigerants
		Methyl acetate	Solvent for paints and glues: Source for acetic anhydride
	Acetic anhydride	Cellulosic plastics: Filter products; Photographic film	

- **Gasification Technology Adoption:** There is a need to develop research and development facilities on similar lines of China to promote gasification technology in India.
- **Funding Requirement:** The Government may attract various private investors through financial tools such as Viability Gap Funding, long term off-take contracts, creation of special economic zones and low cost of capital.
- **Policy support** such as
  - **Waiver of GST compensation cess of Rs. 400 per tonne** on the quantity of coal consumed and/ or sold for coal gasification;
  - **Tax holiday for 15 years** for coal gasification projects;
  - **Subsidy for purchase of capital equipment;**
  - **Interest Rate Subvention @ 20-30%** may be provided;
  - **15% methanol-blending target** with petrol to encourage investments in the sector.
- **Promote research and development:** There is a need to earmark adequate annual budget for funding research and development in the field of coal gasification.
- **Rationalizing domestic coal prices** on an integrated basis to ensure viability of coal gasification.

## 5.6. FLASH DROUGHT

### Why in news?

According to a new study, majority of the flash drought events in India have occurred during the monsoon season.

### Key findings of the study

- The study, published in journal **Nature Communications**, identified rapid drought intensification across the **United States, Brazil, southern Africa, Spain, western Russia and Australia**.
- The **highest frequency of flash drought occurrence** was primarily found within the **tropics and subtropics**. They include a large portion of **Brazil, the Sahel, the Great Rift Valley and India**.

### About Flash drought

- Flash drought is characterized by a **period of rapid drought intensification** with **impacts on agriculture, water resources, ecosystems, and the human environment**.

- **Drivers of Flash drought**

- It is set in motion by **lower-than-normal rates of precipitation, abnormally high temperatures, winds, and radiation.** Together, these changes in weather can rapidly alter the local climate.

- **Precipitation deficit:** When precipitation deficit occurs over an extended period of time (e.g., several weeks), **soil moisture is depleted by evapo-transpiration** which desiccates land surface.

- ✓ Evapo-transpiration is the process by which water is transferred from the land to the atmosphere by evaporation from the soil and by transpiration from plants.

- **Teleconnection:** It is correlation between meteorological or other environmental phenomena which occur a long distance apart. For example, **El Niño-Southern Oscillation (ENSO)** is a **teleconnection phase** that promotes drier and warmer conditions which **may increase flash drought frequency.**

- **Amplification of evaporative demand:** Persistent atmospheric conditions can amplify evaporative demand (extent to which the **environment ‘tries’ to evaporate water**) at the surface via **increased solar insolation and global warming.**

- **High precipitation variability:** Tropics and Sub-Tropics have high potential for drought development due to high precipitation variability and evaporative demand.

- **Oscillation of the Inter-Tropical Convergence Zone (ITCZ):** Flash drought development is more likely to occur in the May-June (period associated with increasing rainfall) if **onset of ITCZ-induced rainfall is delayed/reduced,** in combination with increased evaporative demand.

- **Anticyclones:** They have a dual impact on flash drought development:

- ✓ They suppress rainfall which limits soil moisture replenishment.

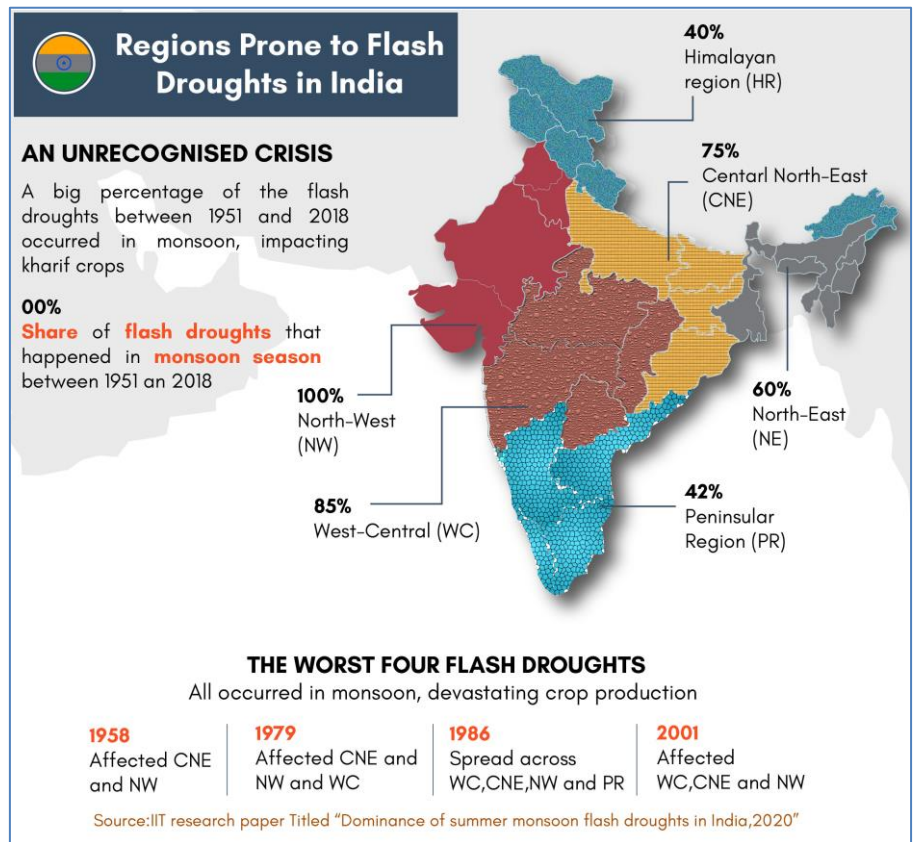
- ✓ Less cloud coverage and high surface temperatures increase evaporative demand of moisture.

- **Effects of Flash drought**

- **On agriculture:**

- ✓ About **10-15% areas under cultivation of rice and maize were affected by flash droughts** during monsoon season in **India** between **1951- 2018.**

- ✓ Flash droughts of **1979, 1976, and 1982** are the 3 most severe flash droughts that affected kharif crops during the monsoon season in India.



**A brief on Drought in India**

- **Ministry of Agriculture and Farmer's Welfare** is the **nodal Ministry** for monitoring and managing drought conditions.
- **Indian Meteorological Department (IMD)** is the designated agency for providing early warning and forecasting.
- Droughts are classified into 3 categories:
  - **Meteorological Drought:** It occurs when seasonal rainfall over an area is less than 25% of its long-term average. If deficit lies **between 26-50%**, it is **moderate drought** and **over 50% is severe drought.**
  - **Hydrological Drought:** It is defined as deficiencies in surface and sub-surface water supplies leading to a lack of water for normal and specific needs.
  - **Agricultural Drought:** It occurs when soil moisture and rainfall are inadequate during crop growing season. It is usually triggered by both meteorological and hydrological droughts.

- **On Economy**
  - ✓ Many industries depend on agriculture sector for raw materials and would suffer losses due to reduced supply and increased prices. Thus, flash drought has '**multiplier effect**' on economy.
  - ✓ As per report of **UN Office for Disaster Risk Reduction (UNDRR)**, impact of severe droughts is estimated to be about **2-5% of India's GDP per annum**.
- **On environment**
  - ✓ Low water levels in water bodies (lakes, ponds, reservoirs etc.) will **reduce availability of drinking water** and adversely affect flora and fauna.
  - ✓ It causes **deforestation, wildfires and increase desertification**.
  - ✓ Frequent flash droughts can **increase stress on endangered species** and cause **loss of biodiversity**.
- **On society**
  - ✓ It can cause people in affected areas to **withdraw their children from schools, postpone marriages and force them to sell their assets**, e.g.: cattle, land. This further **pushes people into poverty**.
  - ✓ Due to reduction in crop yield, food security is threatened as **inadequate intake of food will cause malnutrition**.
  - ✓ **Access and use of scarce water resources generate conflicts** which are socially disruptive.

#### Way forward

- **Early prediction and warning**
  - Early-warning systems (EWS) can identify trends in climate and sources of water that are required to detect the emergence or probability of the occurrence of flash droughts.
  - For e.g.: IMD monitors agricultural drought every two weeks on real-time basis during kharif and rabi crop seasons.
- **Monitoring by states:** State Governments should consider setting up of Drought Monitoring Centres (DMCs) staffed by a multi-disciplinary team of meteorologists, hydrologists and agriculture scientists to analyse information on drought parameters from National and State level agencies.
- **Use of satellites:** Satellite imagery can be accessed by relevant agencies from ISRO to check for anomalies. For eg: **delayed sowing** indicates **rainfall deficiency** and **wilting of crops** signifies **soil moisture stress** – both are indicators of flash drought.
- **Inter-Agency cooperation:** Multiple agencies are involved in monitoring various parameters for flash drought. Their efforts need to be synergized for efficient dissemination of information and activate contingency measures.

## 5.7. NEWS IN SHORTS

### 5.7.1. PAKKE TIGER RESERVE 2047 DECLARATION

- Arunachal Pradesh Cabinet adopted the **declaration on climate change-resilient and responsive Arunachal Pradesh** envisages a low emission and climate-resilient development through five broad themes:
  - Environment, forest and climate change; health and well-being of all; sustainable and adaptive living; livelihoods and opportunities and evidence generation and collaborative action.
- Cabinet also approved **Kaiser-i-Hind as the State butterfly** with a view to **boosting butterfly tourism and saving the species** from extinction in the State.

### 5.7.2. RIVER CITIES ALLIANCE (RCA)

- Recently, **Minister for Jal Shakti launched RCA**.

- RCA is a **dedicated platform for river cities to ideate, discuss and exchange information** for sustainable management of urban rivers.
  - It will focus on three broad themes- **Networking, Capacity Building and Technical Support**.
- RCA includes cities from **both Ganga basin and non-Ganga basin states**.
- RCA gives opportunities to these cities to **strengthen governance aspects for river cities and improves their liveability** to attract external economic investments.

### 5.7.3. E-AMRIT PORTAL

- **E-Amrit', a web portal on electric vehicles (EVs)** was launched by India at the **COP26 Summit in Glasgow, UK**.
- It is a **one-stop destination for all information on electric vehicles**—busting myths around the adoption

of EVs and complement initiatives of government on raising awareness on EVs.

- The portal has been **developed and hosted by NITI Aayog** under a collaborative knowledge exchange programme with the UK government and as part of the UK-India Joint Roadmap 2030.

#### 5.7.4. EARTH'S FIRST CONTINENTS FORMATION

- Based on the age of rocks from continental fragments (called cratons), researchers have found that Earth's

first **continents emerged from the ocean 700 million years earlier than thought.**

- It was widely accepted that **continents rose about 2.5 billion years ago.**
- Study also pointed that **earliest continental land to have risen** may have been **Jharkhand's Singhbhum region.**
- Research tends to **break another notion that continents rose due to plate tectonics.**
  - Continents probably rose as they were inflated by **progressive injection of magma** derived from deep in the Earth.



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## प्रारंभिक एवं मुख्य परीक्षा 2022 & 2023

### इनोवेटिव क्लासरूम प्रोग्राम

- प्रारंभिक परीक्षा, मुख्य परीक्षा और निबंध के लिए महत्वपूर्ण सभी टॉपिक को विस्तृत कवरेज
- मौलिक अवधारणाओं की समझ के विकास एवं विश्लेषणात्मक क्षमता निर्माण पर विशेष ध्यान
- एनीमेशन, पॉवर प्वाइंट, वीडियो जैसी तकनीकी सुविधाओं का प्रयोग
- अंतर - विषयक समझ विकसित करने का प्रयास
- योजनाबद्ध तैयारी हेतु करेंट ओरिएंटेड अप्रोच
- नियमित क्लास टेस्ट एवं व्यक्तिगत मूल्यांकन
- सीसेट कक्षाएं
- PT 365 कक्षाएं
- MAINS 365 कक्षाएं
- PT टेस्ट सीरीज
- मुख्य परीक्षा टेस्ट सीरीज
- निबंध टेस्ट सीरीज
- सीसेट टेस्ट सीरीज
- निबंध लेखन - शैली की कक्षाएं
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## 6. SOCIAL ISSUES

### 6.1. QUALITY OF EDUCATION IN SCHOOLS

#### Why in news?

Recently conducted **National Achievement Survey (NAS)** and **Annual Status of Education Report (ASER)** survey has brought the issues of quality of education in schools in limelight again.

#### National Achievement Survey (NAS)

- It is a nationally representative large-scale **survey of students' learning** undertaken by the **Ministry of Education**, Government of India. NAS gives a system level reflection on **effectiveness of school education**.
- NAS 2021 intends to provide information of **what India's students know and can do in key grades and subjects** at national, state, district and school type.
- During proceedings of the survey, teachers across states noticed **children**, particularly those of grades 3 and 5, **struggling to make sense of the questions, and filling the OMR sheets**.

#### Annual Status of Education Report (ASER)

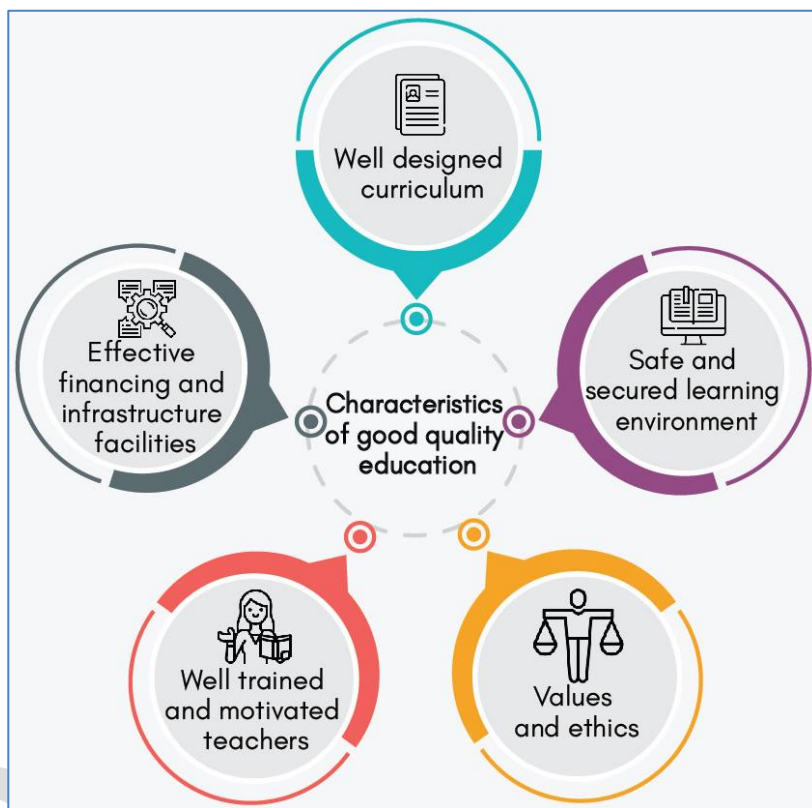
- Facilitated by **Pratham Education Foundation**, this **annual survey** aims to provide **reliable estimates** of **children's enrolment** and **basic learning levels** for each **district and state** in India.
- ASER has been conducted **every year since 2005** in all rural districts of India.
- It is the largest **citizen-led survey** in India.
- Unlike most other large-scale learning assessments, ASER is a **household-based** rather than school-based survey.
- In the context of the **pandemic**, the ASER Centre switched its focus to **access to learning opportunities** in 2020, and in its latest report.
- **Major Highlights of ASER 2021 report:**
  - There has been a clear shift from **private to government schools** between 2018 and 2021, in **all grades** and among **both boys and girls**.
  - The proportion of children taking tuition **has increased from 2018 to 2021**, mostly amongst disadvantaged households.
  - Across all grades, although **over two thirds** of all enrolled children have a smartphone **at home**, just **over a quarter of these have full access** to it for their studies (27%).

#### What is Quality Education and its significance?

Though there is **no standard definition** of quality education, it is commonly understood as one that focuses on the **social, emotional, mental, physical, and cognitive development** of each student. It prepares the **child for life** and not just for testing.

**Significance of Quality Education** can be seen as it is-

- **Crucial for development of an individual:** Global research shows that 90% of brain growth occurs by age 5, meaning that the **quality of early childhood education** has a crucial impact on the development of a child.



- **Low dropouts:** While a pleasant primary experience prompts a child **to continue middle school and pursue higher education**, an unexciting, boring, primary stint can lead to a **child dropping out of school** even before she completes primary education. In fact, **36% of children drop out** even before completing primary education.
- **To escape poverty:** An educated individual **raises the productivity levels** in the economy which is the key to prosperity. It promises employment, better earnings and wide range of opportunities to escape poverty. Thus it **empowers people** to determine their fate.
- **Positive spillovers:** Value of education is not restricted to an individual, but it confers **benefits to society** at large. A strong education system improves health and **bolsters the resilience of communities**. Every aspect of development is linked to **education, knowledge and its application**.
  - Quality education also helps to **reduce inequalities** and to reach **gender equality**. Further, it is crucial to **fostering tolerance** between people and contributes to more **peaceful societies**.
- **Sustainable Development goals (SDGs):** The most effective means of achieving SDGs is solely quality education. People **need skills** to support the idea of a **sustainable economy** which can be imbibed only with **quality education**.

#### Key facts that highlight poor quality education in Indian schools

- According to **ASER 2019 report**, only 16% of children in Class 1 in surveyed rural districts can read text at the prescribed level, while **almost 40% cannot even recognise letters**. Only **around 51%** of children in Std III can read the Std I text.
- The NAS 2017 (conducted for grades 3, 5 and 8) also found that **only 45.2 per cent of students achieving the targeted performance** levels across all subjects and classes at the national level.
- In 2009, India was ranked at **72nd among the 73 nations** who participated in the **Programme for International Student Assessment (PISA) test**.
  - Carried out every three years by the Organisation for Economic Co-operation and Development (OECD), the PISA is meant to **assess key knowledge and skills** of 15-year-old students in **mathematics, science and reading**.

#### Issues plaguing School education system

- **Inadequate attention to quality of education:** With the focus on **improving enrolment**, we have **achieved near-universal school enrolment**. However, the subsequently **needed monitoring of the quality of education and achievement of the learning outcomes** do not receive comparable attention.
- **Focus on rote-based learning:** Currently, the focus of schools is largely on completion of syllabus and learning for exams. There is a need to shift from rote-based learning to **competency based learning**, especially for Grades 1-3 where **foundational learning** is taking place.
- **One-size-fits-all teaching model:** Students in an average classroom are **at diverse learning levels** with several of them behind the current grade level. A one-size-fits-all teaching model **further this gap and cascades the learning losses** with each successive year.
- **Unhealthy competition especially from standards 9<sup>th</sup> to 12<sup>th</sup>:** Becoming a part of the growing competition culture, students tend to **focus more on grades** rather than learning. This type of mindset is extremely detrimental as it can foster the behaviour where students **only retain information for a test** and then “flush” it out of their brain after.
  - Prevalence of such a culture can cause a lot of stress and pressure on the student **affecting their mental health**. Also, it can have a **devastating effect** on the **student’s self-esteem** if he/she is unable to achieve the desired goal.
  - For example, **private tuition takes up a large chunk** of the students time and attention during these critical years.
- **Lacunae in assessments:** Current assessment framework makes it difficult to **effectively measure and track** student performance at a system level and **draw inputs to customize** teaching content and methodologies, training content, etc.
- **Engagement of teachers in non-teaching tasks:** As per a report by the National Institute of Educational Planning and Administration (NIEPA) **only ~19% of a teacher’s annual school hours are spent on teaching** activities with remaining time spent on non-teaching activities like election duties, data collection etc.
- **Lack of infrastructure and resources:** A vast number of elementary schools have **no structures, fundamental facilities** like drinking water, power, **study materials etc**. Teachers in public schools lack **innovative teaching-learning materials** (available in many private schools) to **teach maths using concrete form**, and then move to abstract form.
- **Shortage of qualified teachers:** According to NITI Aayog estimates, many teachers are themselves **scoring <60-70% in papers of the grades that they teach**.
  - It is to be noted that the **pass-percentage in central teacher eligibility tests** that stipulate eligibility for appointments as teachers has **not exceeded 25 per cent** in recent years.

- **Little or no focus on life-skills:** There is a possible **lack of alignment between traditional curricula and a life-skills learning agenda** and a **lack of understanding** of how these can be developed across the education continuum.

#### What needs to be done?

- **Properly maintained infrastructure:** There is a need to provide **effective and sufficient infrastructure** so that all students have access to **safe and engaging school education** at all levels from pre-primary school to Grade 12.
- **Academic monitoring and data backed review:** There is a need to collect data regarding **quality assessment insights**, and **data from visits to schools**, and **their academic monitoring**, which can be used for **cascaded, data-backed and regular review meetings**, which follow a prescribed structure and format.
- **Transparent and credible system of accreditation for high-quality teacher education:** A common accreditation framework should be designed through a **consultative process** including all relevant stakeholders to facilitate its **wider acceptability**.
- **Incentives to private sector:** A **definitive timeline** could be set to improve public school infrastructure and classroom pedagogy by incentivising the private sector to **invest in infrastructure in exchange for an annual payment** stream or through some other mechanism.
- **Enhanced learning:** Efforts should be made to **involve community and alumni in volunteer efforts** for enhancing learning through mechanisms like **one-on-one tutoring**, holding of **extra help sessions**, **career guidance** and mentoring to students; etc.
- **Experiential learning:** Experiential learning should be adopted, including **hands-on learning**, arts-integrated education, **story-telling-based pedagogy**, among others, as standard pedagogy within each subject, and with **explorations of relations among different subjects**.
  - To close the gap in achievement of learning outcomes, classroom transactions should shift towards **competency-based learning** and education. The assessment tools should also be aligned with the **learning outcomes, capabilities, and dispositions** as specified for each subject of a given class.
- **Leveraging technology:** Technology-driven pedagogy (TDP) can go a long way in attaining our learning goals by making the classroom transaction more **creative, interactive, interesting and engaging**.
- **Adequate support to teachers:** Teachers should be trained and supported with **modern teaching aids, tools and methodologies** like smart classrooms and digital course content. Government should also invest in **in-service teacher professional development** that is on-going, tailored, focused, and practical.
  - Reshaping the teaching profession as a **meritocratic, socially valued** career and holding teachers to high professional standards will **help in attracting best minds** of country in teaching profession.

#### Major Government initiatives

- **RTE Act:** Right of Children to free and Compulsory Education (RTE) Act, 2009, **mandates the appropriate Government** to provide **free and compulsory elementary education** to every child of the age 6 to 14 years in a neighbourhood school.
- **Samagra Shiksha:** It is an **Integrated Scheme** for the school education sector **extending from pre-school to class XII**, which aims to ensure **inclusive and equitable quality education** at all levels of school education.
- **National Education Policy, 2020:** It focuses on **improving the standard** of education through various measures such as introduction of new pedagogical and **curricular structure**, Early Childhood Care and Education, **Foundational Literacy and Numeracy**, **Transforming Assessment** etc.

## 6.2. HUNGER AND MALNUTRITION

### Why in news?

India was ranked **101 among 116 countries in the Global Hunger Index (GHI) for 2021**, trailing behind its **South Asian neighbours** Pakistan, Bangladesh and Nepal.

### Key Highlights of report

- Global hunger, represented by a **GHI score of 17.9**, is in the **moderate** category. The world as a whole will **fail to achieve** a low level of hunger by 2030.
- **Conflict, climate change, and the COVID-19 pandemic** are the most powerful forces driving hunger.
- **Level of hunger across the world:**
  - **Somalia**, suffers from an extremely alarming level of hunger.

- **Africa, South of the Sahara and South Asia** are the world regions where hunger levels are **highest**. Hunger in both regions is considered **serious**.
- Europe and Central Asia has the **lowest 2021 GHI** score of any region.
- **Case in India:** With a score of **27.5**, India has a level of hunger that is **serious**. **Performance under various indicators:**
  - **Wasting** in children under five years (%): **17.3**
  - Proportion of **undernourished** in the population (%): **15.3**
  - Prevalence of **stunting** in children under five years (%): **34.7**
  - Under-five **mortality rate** (%): **3.4**

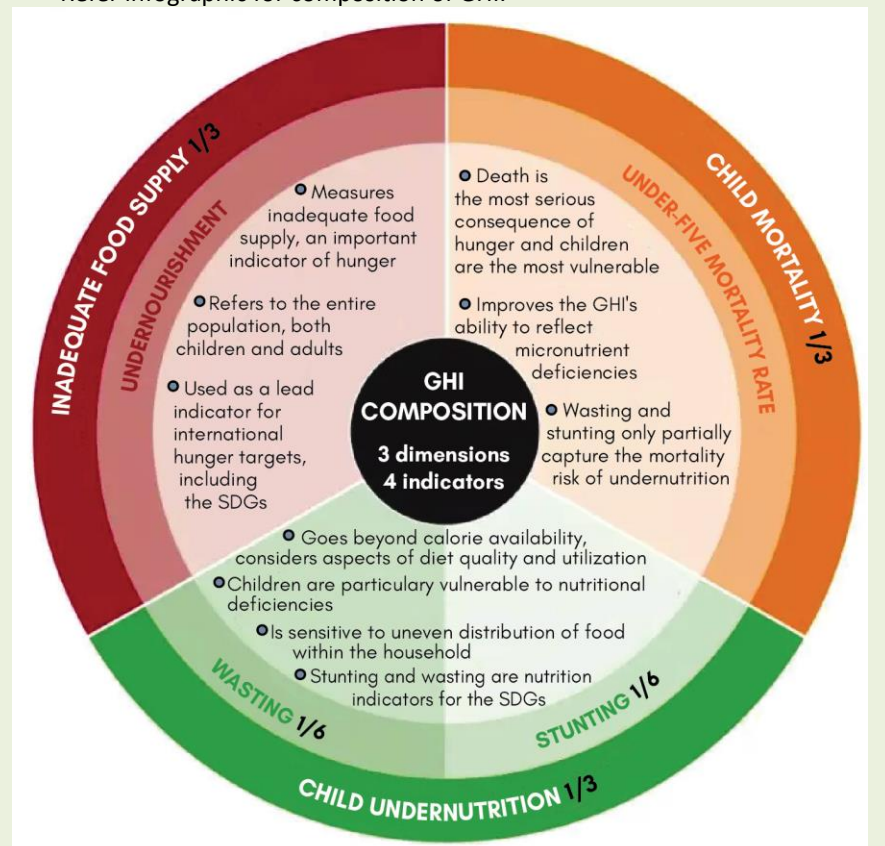
#### Why India has not been able to eradicate Hunger and malnutrition?

- **Funds related issues:** The allocation towards child nutrition in Union budget 2021-22 has **dropped by 18.5 per cent compared to 2020-21**. Further, 2020 Comptroller and Auditor General of India audit of ICDS revealed that out of Rs 1,042 crore allocated, only Rs 908 crore was **actually disbursed** to state governments.
- **Lack of monitoring:** Common Application Software (CAS) was conceptualised in 2017 for **real-time monitoring** of the nutrition of pregnant / lactating women and children. By November 2019, only **nearly half of anganwadi centres** were equipped with CAS.
  - Further, it is dysfunctional **since September 2020**, severely compromising the **administration's ability to track** the status of malnourished children.

- **Food wastage:** 40 percent of the fruits and vegetables, and **30 percent of cereals** that are produced are lost due to **inefficient supply chain management** and do not reach the consumer markets.
- **Lack of decentralization:** Centralisation of **governance, resources, decision-making, and development action** and concentration of productive assets, resources and wealth is another hurdle.

#### About Global Hunger Index (GHI)

- The GHI is a **peer-reviewed annual report**, jointly published by **Concern Worldwide and Welthungerhilfe**, designed to comprehensively measure and track **hunger at the global, regional, and country levels**.
- GHI scores are based on the values of **four component indicators**:
  - **Undernourishment:** the share of the population with **insufficient caloric intake**;
  - **Child wasting:** the share of children under age five who have **low weight for their height**, reflecting acute undernutrition;
  - **Child stunting:** the share of children under age five who have **low height for their age**, reflecting **chronic undernutrition**;
  - **Child mortality:** the mortality rate of children under age five, partly reflecting the **fatal mix of inadequate nutrition and unhealthy environments**.
- Refer infographic for composition of GHI:

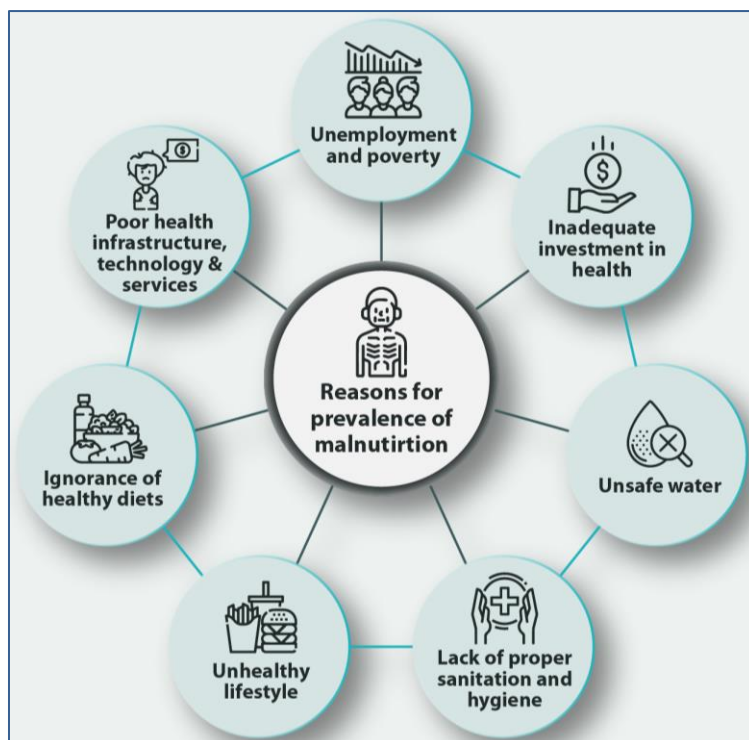


- Based on the values of the four indicators, the GHI determines hunger on a **100-point scale**, where 0 is the best possible score (no hunger) and 100 is the worst.
- Each country's GHI score is classified by **severity, from low to extremely alarming**.





- **Very few states involve local bodies in implementation** of programmes relating to health, nutrition, and hygiene.
- **Social factors:** Low status of women in Indian society, **Poor childcare practices**, such as not immediately starting breastfeeding after birth and child marriages.
  - Estimates suggest that each year, **at least 1.5 million girls under 18 get married** in India, which makes it home to the **largest number of child brides** in the world.
  - Infants born to child brides in India (married before the age of 18) have a **higher risk of malnutrition**.
- **Other Governance related issues:** Lack of adequate **political and social will**, **Lack of accountability**, Staff vacancies and **absenteeism** of field staff, Lack of disaggregated data of district level and Inefficient and ineffective implementation of, and **huge leakage** in, government's schemes.



### Impact of Hunger and malnutrition

At individual level	<ul style="list-style-type: none"> <li>● <b>Mentally</b>, cognitive function decreases and <b>physically</b>, starvation substantially affects a person's muscles, bone, skin, and internal organs.</li> <li>● A lack of sufficient nutrients also <b>weakens the immune system</b>, making people more susceptible to <b>chronic diseases</b>.</li> </ul>
On Society	<ul style="list-style-type: none"> <li>● The impacts are <b>multi-generational</b> as malnourished girls and women <b>often give birth to low birth-weight infants</b>. Thus, Undernourishment being passed on from generation to generation creates a <b>vicious circle</b></li> <li>● The reduced physical and mental capacity <b>reduces earning opportunities</b>, increasing the <b>risk of poverty</b>.</li> </ul>
On Economy	<ul style="list-style-type: none"> <li>● Studies reveal that India loses up to <b>4 per cent of its gross domestic product (GDP)</b> and up to <b>8 per cent of its productivity</b> due to child malnutrition.</li> <li>● The bane of child and maternal malnutrition is responsible for <b>15 per cent of India's total disease burden</b>.</li> </ul>

### Initiatives taken by the Government

- **Direct targeted interventions:** Government implements several schemes and programs like **Anganwadi Services, Scheme for Adolescent Girls and Pradhan Mantri Matru Vandana Yojana** under the Umbrella **Integrated Child Development Services Scheme (ICDS)** as direct targeted interventions.
- **POSHAN ABHIYAAN:** It aims to prevent and reduce prevalence of **stunting, underweight and anaemia** among children (0-6 years) and reduction in **prevalence of low birth weight** in the country by involving panchayati raj institutions/village organizations.
  - **Mission Poshan 2.0** has been announced in Budget 2021-22 to strengthen **nutritional content, delivery, outreach and outcomes** with focus on developing practices that nurture **health, wellness and immunity**.
- **Anaemia Mukh Bharat (AMB) strategy:** It was launched in 2018 with the objective of reducing anaemia prevalence among **children, adolescents and women in reproductive age group**.
- **Advisory to states/UTs:** Government has advised States/UTs to ensure that the **quality of supplementary nutrition** conforms to prescribed standards laid down under the **Food Safety and Standards Act, 2006** and regulations made thereunder.
- **Poshan Vatikas:** A programme to support development of Poshan Vatikas at Anganwadi centres to meet **dietary diversity gap leveraging traditional knowledge** in nutritional practices has also been taken up.
- **Nutrition Smart Village:** The initiative has been announced to reach out to **75 villages across India** with the objectives of promoting **nutritional awareness, education and behavioural change**, harnessing traditional knowledge and implementing nutrition-sensitive agriculture.

## Way Ahead

- **Increased budgetary allocations:** Adequate **political focus on budgetary allocation** can help to tackle the issue of malnutrition. Research suggests that **\$1 spent** on nutritional interventions in India **could generate \$34.1 to \$38.6 in public economic** returns, three times more than the global average.
- **Expanding early detection and treatment services:** There is a need to scale up the **treatment of children with wasting** and integrate it within **routine primary health-care services**, focusing on the **most vulnerable children and monitoring implementation** through national health information systems.
- **Strengthen inter-departmental convergence:** In this regard, **approach undertaken by Bangladesh** can be replicated in India. The National Plan of Action for Nutrition of Bangladesh is based on a **multi-sectoral convergence strategy** involving health, education, fisheries and livestock, environment, social protection, disaster management etc to **combat child malnutrition**.
- **Community empowerment:** There is a need to **address gaps and inefficiencies** in the present setup through **public awareness, community engagement and empowerment**. Such an intervention would assist the community in **realising their rights and entitlements**, and act as a **deterrent to inefficiencies**.
  - It will also help in developing **community-based solutions** to malnutrition, unburdening the stressed public healthcare. Studies conducted on such community-based solutions in India have found them to be **effective in alleviating the conditions of children** afflicted by severe acute malnutrition.
- **Health and nutrition awareness:** It is an imperative to run an **effective nutrition communication campaign** (in schools, public places, print and social media) that would help children in understanding how they should **respond to their nutritional needs**.
- **Judicial and civil society activism: Right to Food Campaign** (launched in March 2014), which is an informal network of individuals and organisations, is the result of **public interest litigation**. Under the campaign, organised efforts are made to **persuade State governments** to attend to the most pressing demands of society, including **proper nutrition**. More such steps are needed.
- **Learn from International experience: Thailand** has been one of the most **outstanding success stories of reducing child malnutrition** in the period 1980-1988 during which child malnutrition (underweight) rate was effectively reduced **from 50 per cent to 25 per cent**.
  - This was achieved through a **mix of interventions** including intensive growth **monitoring and nutrition education, strong supplementary feeding provision, high rates of coverage** ensured by having high human resource intensity, Iron and Vitamin supplementation and salt iodization along with primary health care.

### Related news

#### Community Kitchens Scheme

- Centre has **constituted a Group of Food Secretaries** from States along with senior officers of Central Government to **deliberate on the framework of the Community Kitchens Scheme**.
  - Earlier, Supreme Court **granted 3 weeks time to Central Government to frame a pan-India policy on community kitchens**.
- Community Kitchens are the institutions that **provide free meals and help in addressing issues of hunger and malnutrition**.

#### World Food Situation report

- The report is released by **Food and Agriculture Organization (FAO)**.
- **As per report**
  - **Global cereal trade, especially in wheat and rice, is witnessing “stronger-than-earlier-anticipated” trend**, even as production will likely drop from initial estimates this season.
  - While **global cereal production and trade are set for a record high** this season, inventories are likely to contract by over 6 million tonnes.

## 6.2.1. GLOBAL NUTRITION REPORT 2021

### Why in news?

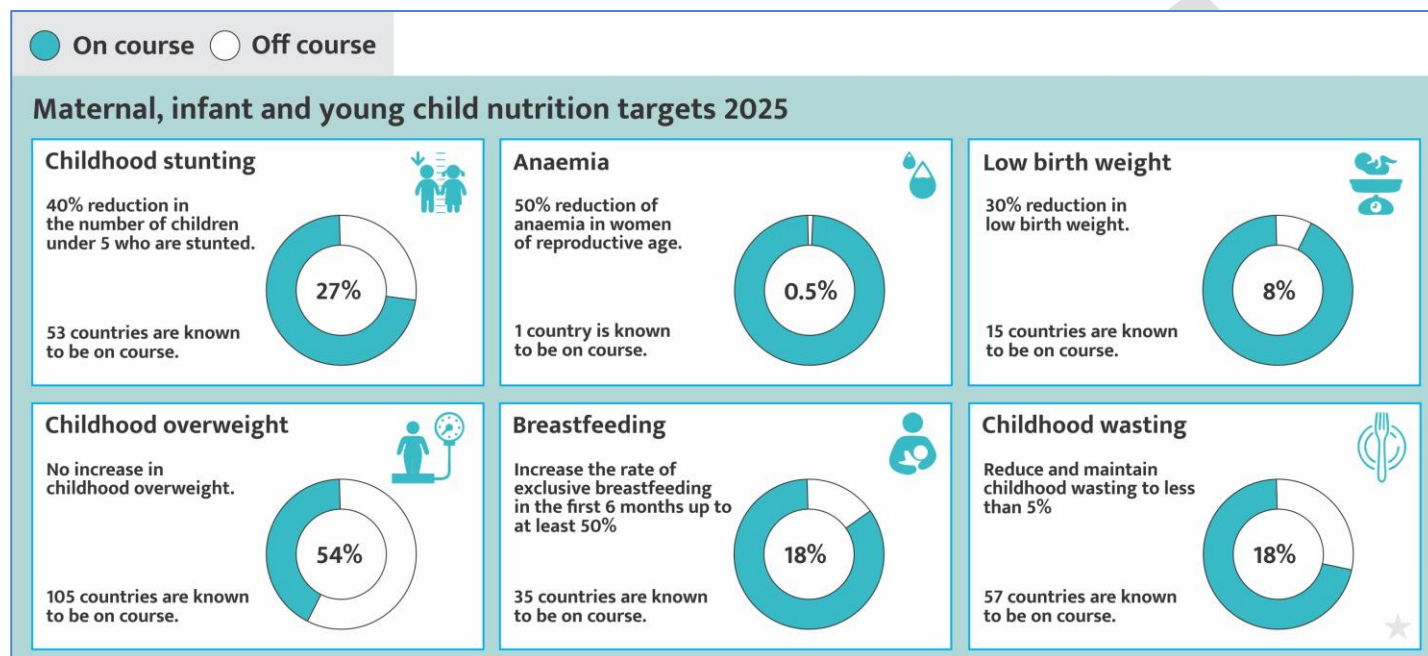
The 2021 Global Nutrition Report (GNR) reveals that the world continues to face a nutrition crisis.

### About Global Nutrition Report

- GNR is a **multi-stakeholder initiative**, consisting of a Stakeholder Group, Independent Expert Group and Report Secretariat.

- GNR was conceived following the **first Nutrition for Growth Initiative Summit (N4G) in 2013** as a mechanism for tracking the commitments made by 100 stakeholders spanning governments, aid donors, civil society, the UN and businesses.
- The GNR offers the world's most comprehensive picture of the **state of global nutrition** and **assesses the scale of the challenges** faced in the fight to tackle poor diets and malnutrition in all its forms.
  - It comes up with an **independent analysis of the best data on nutrition** which is critical for **evidence-based, timely and effective actions** to ensure we deliver on our global commitment to end poor diets.

### Key findings



- Globally, **five out of six global maternal, infant and young children nutrition (MIYCN) targets**, on stunting, wasting, low birth weight, anaemia and childhood overweight **are difficult to meet**.
- **No country is on track to achieve the target on reducing salt intake** or to halt the rise in adult obesity.
- **The effects of the Covid-19 pandemic impacted** the fight to tackle poor diets and malnutrition.
  - An estimated additional 155 million people are being pushed into extreme poverty globally, because of the pandemic, and people who are obese or have other diet-related chronic diseases are more vulnerable to Covid-19.
- **Diets worldwide are far from being healthy** and have not improved over the last decade
- **Lower-income countries** continue to have the lowest intakes of key health-promoting foods such as fruits and vegetables and the **highest levels of underweight**, while **higher-income countries** have the highest intakes of foods with high health and environmental impacts, including red meat, processed meat and dairy, and the **highest levels of overweight and obesity**.
- **The financial costs of addressing malnutrition are rising.**

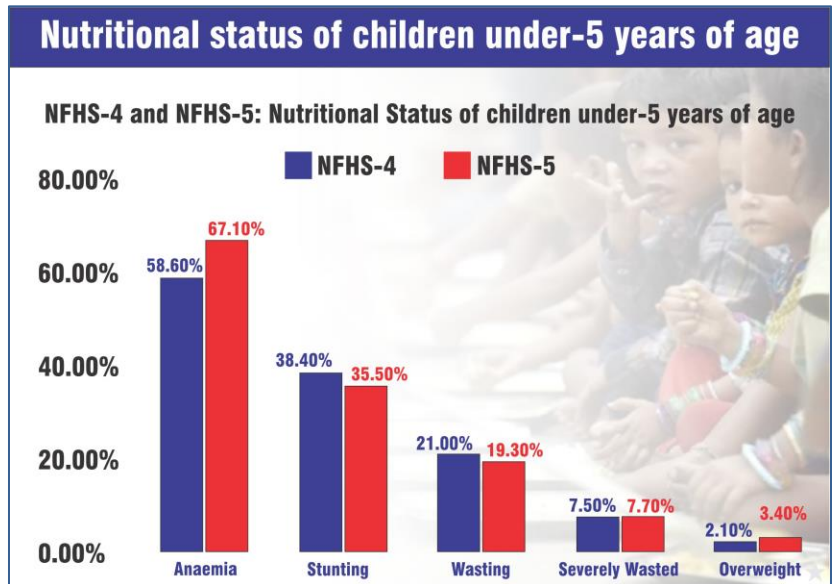
### India related findings

- There has been a **rise in anaemic Indian women** since 2016.
  - In 2016, **52.6% of Indian women were anaemic**. However, in 2020, **53% women were found to be anaemic**.
- **India is among 23 countries that have made no progress** or are worsening on reducing 'childhood wasting'.
  - Wasting refers to children whose weight is low-for-their height.
  - **Over 17% of Indian children under 5 years of age** are affected. This figure is much higher than **the average for Asia** where close to 9% children are affected.
- Around **6.2% of adult women and 3.5% of adult men are living with obesity** in India.
- **India is among 105 countries that are 'on course' to meet the target for 'childhood overweight'** and among 53 countries 'on course' to meet the target for 'exclusive breast feeding'.

- Some **58% of infants in the age group 0-5 months are exclusively breastfed** in India.
- India **does not have adequate data** on prevalence of 'low birth weight'.

#### Recommendations

- **Traditional sources of nutrition financing need to be protected**, and innovative and private financing expanded.
- **Improving efficiency and effectiveness of existing nutrition investments** can increase the impact of available resources on malnutrition.
- **Policy initiatives are urgently needed to transform food systems**, increase intake of health-promoting foods, and reduce animal-based foods, to ensure diets are healthy and sustainable for people and the planet.
- **Better data, greater accountability and systematic monitoring** are key to identifying the progress needed and ensuring we stay on track.



## 6.3. HEALTH INSURANCE FOR INDIA'S MISSING MIDDLE

#### Why in news?

NITI Aayog has recently released the report **“Health Insurance for India’s Missing Middle”**.

#### More on news

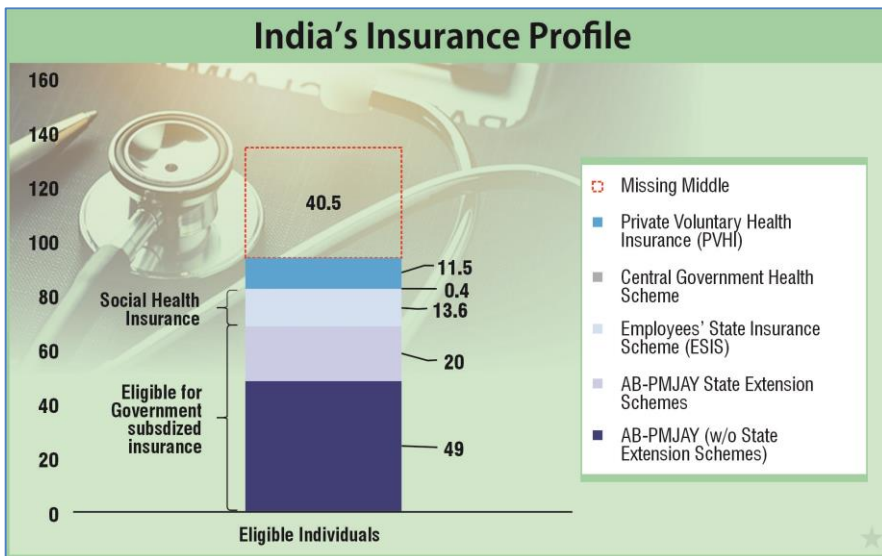
- India has a **decentralized approach to health care** and that allows **health insurance to be optional**. India has **multiple types of health insurance schemes**.
  - **Government Subsidized health insurance schemes** like Centrally Sponsored AB- PMJAY and state specific schemes such as 'Arogya Karnataka Scheme'.
  - **Social Health Insurance (SHI) Schemes** like Employee State Insurance Scheme (ESIS) run by Employee State Insurance Corporation (ESIC), Central departments such as Railways and Defence have separate schemes for their employees, and Paramilitary has large hospitals in border areas.
  - **Private voluntary health insurance (PVHI) schemes**
- Report highlights the **gap in India’s insurance coverage for 30% of India’s population, or 40 crore individuals named as the ‘missing middle’**.
  - **Missing middle** is the **non-poor segments of the population positioned between deprived poorer sections, and relatively well-off organized sector** who remain prone to impoverishing health expenditure, **despite the financial capacity to pay for contributory health insurance**.
  - It **contains multiple groups across all expenditure quintiles, in both urban and rural areas**.
  - It **predominantly constitutes the self-employed** (agriculture and non-agriculture) informal sector in rural areas, and a broad array of occupations – informal, semi-formal, and formal – in urban areas.

#### Reasons behind low & poor health insurance coverage in India

- **Low awareness:** Overall there is low awareness in India about insurance products, and thereby, even when people opt for insurance policies, they aim to pay the least premium which doesn’t provide them with adequate coverage and security.
- **Perception issues:** There is lack of education amongst the customers and **customers consider it as a cost rather a long-term asset** which may come to rescue.
- **Product design issues:** Insurance policies are more often than not **complicate and difficult to grasp**. Also there require lot of paperwork and formalities.

- **Internal roadblocks in the insurance sector:** Given the vast geographic and economic variations of India it is difficult for insurance sector to cater to these differing markets with similar policies.
- **Unavailability of branches in the rural area:** Gradually, there have been some branches in tier II and III cities; but, there are hardly any branches in the rural areas for providing health insurances. The majority of the potential market is still untouched.

**What could be done to address the pressing issues in Healthcare sector**



- **Three models, phased in at different times ensuring coverage for the missing middle population:**

- **In the short-term,** the focus should be on expanding private voluntary insurance through commercial insurers.
- **In the medium-term,** once the supply-side and utilization of PMJAY and ESIC is strengthened, their infrastructure can be leveraged to allow voluntary contributions to a PMJAY plus product, or to ESIC's existing medical benefits.
- **In the long-term,** once the low-cost voluntary contributory health insurance market is developed, expansion of PMJAY to the uncovered poorer segments of the missing middle should be considered.

- **Role of the government:** Government can help by focusing on **increasing consumer awareness** of health insurance, developing a modified, standardized health insurance product, building consumer confidence by ensuring quality of services through **swift grievance redressal**, robust auditing procedures and through Partial financing or provision of health insurance
  - Government can also help improve the product's uptake by **lowering the distribution and operational costs.**
  - The Government can offer its **data and infrastructure as public goods** to build distribution and operational efficiencies in private health insurers

#### Significance of increasing insurance coverage in India

- **Reduce Health expenditure:** Increased health insurance coverage reduces catastrophic and impoverishing health expenditure by imposing a ceiling on the maximum health expenditure incurred by an individual or household.
- **High out-of-pocket expenditure (OOPE) poses financial risk to individuals:** Relatively low health insurance coverage, and costlier provision of health services in the private sector drive India's high OOPE. Thus, insurance is an important mechanism for individuals to safeguard against catastrophic, unpredictable health expenditures, which can push households into poverty.
  - According to National Health Accounts (NHA) estimates for 2017-18, **out-of-pocket expenditure as a percentage of total health expenditure is 48.8%.**
  - Analysis from Brookings India based on NSSO surveys shows that **over 7% of India's population is pushed into poverty every year** due to healthcare costs.
- **Improved efficiency and efficacy of services:** Health insurance can improve efficiency and quality of healthcare provision.
- **Achieve Universal Health Coverage:** Expansion of health insurance coverage is a vital step, and a pathway in India's effort to achieve Universal Health Coverage (UHC).

#### Related Data

- India currently accounts for **less than 1.5% of the world's total insurance premiums** despite being the second most populous nation.
- Nearly 95 crore individuals or 21.5 crore families (70% of the population) are eligible for or covered by health insurance in India.
  - Around **20% of the population or 25 crore individuals are covered through social health insurance**, and private voluntary health insurance.
  - The actual uncovered population is **higher due to existing coverage gaps in centre's Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)** and overlap between schemes.
- The **insurance penetration** (ratio of total premium to GDP (gross domestic product)) for FY 18 stood at 3.69%
- The **insurance density** (ratio of total premium to population) for the same period was US\$ 73.

- **Role of Insurance companies** - Insurance companies in India will have to show long-term commitment to the rural sector as well, and will have to design products which are suitable for rural people. They also need to build efficient distribution mechanisms in rural areas,
  - Further, the time is ripe for insurance companies to move towards **application of technology in insurance**.
- **Other steps include:**
  - **Developing a modified, standardized health insurance product like 'Aarogya Sanjeevani'**.
    - ✓ Aarogya Sanjeevani Insurance Policy was launched by the Insurance Regulatory Development Authority of India (IRDAI) in April 2020 to cover the hospitalisation expenses of the COVID-19 patients.
  - **Expanding government subsidized health insurance through the PMJAY** scheme to a wider set of beneficiaries.

## 6.4. ALL INDIA SURVEY ON DOMESTIC WORKERS (AISDWS)

### Why in news?

Recently, the **Union Minister for Labour and Employment** flagged off the **first ever AISDWS**.

### More on news

- The survey is aimed **at estimating the number and proportion of DWs at the national and state level**, percentage distribution of domestic workers for live-in/live-out, formal/informal employment, and other socio-economic characteristics.
  - It will **plug-in the data gap** and also **aid evidence-based policy making processes**.
- The AISDWS is **part of the 5 All India Surveys** being **undertaken by the Labour Bureau**. Other four are All-India Survey are on
  - Migrant Workers
  - Employment generated in Transport Sector
  - Employment Generated by Professionals and
  - All-India Quarterly Establishment based Employment Survey (AQEES).

### About domestic workers

- Domestic worker is a person who is **employed in any household on a temporary or permanent basis to do the household work**.
- According to the estimates by the International Labour Organisation (ILO), **there are at least four million domestic servants in India**. Most of them are the migrants, women, many are minors, and belong to lowest end of Economic Spectrum.
  - Most of these are from vulnerable communities – **Adivasis, Dalits or landless OBCs**. Nearly all of them are migrant workers. And an overwhelming number are women.
- Vast majority of the **live-in domestic workers work a minimum of 15 hours a day**, seven days a week. The Part-Time workers often work in 3-4 different houses for nearly 8-10 hours every day.
- India is a **signatory to ILO's 189th convention**, known as Convention on the Domestic Workers; but has **not ratified it yet**.
  - Convention mandates that **the domestic workers be given daily and weekly rest hours**, their payment must meet **minimum wage requirement**, and that they should be allowed to choose place where they live and spend their leave.
- **Gender skewed:** The ILO says about 1 in 25 women workers in the world are domestic workers.

### Issues faced by domestic workers in India

- **Significant yet invisible contribution in the economy:** DWs are the **third-largest category** of workers after agriculture and construction. Rapid urbanisation would lead to migration of workers and a rise in the number of domestic workers.
- **Legal precarity:** The lack of data on domestic workers means that they often slip through the cracks when the government announces relief measures. Migrant domestic workers are worse off because the government does not know how to reach them even if it wished to.

- Moreover, since domestic workers are employed in homes, they are excluded from the basic laws that guarantee job safety and personal security like the Minimum Wages Act, 1948; Maternity Benefit Act, 1961; Workmen's Compensation Act, 1923; Inter-State Migrant Workers Act, 1979 and so on.
- **Poor working condition:** There are widespread reports of DWs in India being underpaid, overworked and abused by their employers. They face **discrimination and apathy at the hand of employers**. For example, most of the domestic workers are not allowed to use the washroom, have no designated place to rest (particularly if they are residing with the employer), many also face verbal, physical and sexual abuse.
- **Child Labour:** The ILO estimates that globally, as many as 7.4 million children under age of 15 work in domestic service, especially in the developing world.
- **Exploitation of vulnerability by police:** Domestic workers are often victims of suspicion. If anything goes missing in house, they are the first to be accused with threats, physical violence, police interrogation, conviction, and even dismissal.
- **Covid-19 has pushed DWs further to the margins:** For example, nearly 60% of them were not paid during the lockdown, as per a survey commissioned by Self-Employed Women's Association (SEWA). Loss of job pushed them to poverty and indebtedness which in turn also affected the uptake of food, resulting in deterioration of health and well-being of such workers.

#### Way ahead

- **Comprehensive legislation:** While the Unorganized Social Security Act, 2008, Sexual Harassment against Women at Workplace Act, 2013 and Minimum Wages Schedules notified in various states refer to domestic workers, there remains an **absence of comprehensive, uniformly applicable, national legislation that guarantees fair terms of employment** and decent working conditions for DWs.
- **Organization & Voice:** To be able to use the law effectively, domestic workers also need to organize, given that their employers are in an economically and socially superior position. Therefore, domestic workers should be organized into trade unions and to have representative voice not only in the policy making but also at workplace.
- **Ratifying ILO's 189th convention:** Ratifying States are required to take the **protective measures against violence** against such workers and are required to enforce the **minimum age** for the employment purposes.
- **Sensitisation of employer:** Sensitize and create awareness amongst the households who employ domestic workers about the contribution of the domestic workers in their homes. In this direction, the ILO has launched a campaign **"Your Work Is Important"** to generate public awareness on the value of the work undertaken by domestic workers.
- **Emulating the best global practices:** A Magna Carta for Household Helpers in the Philippines; a right to organize, coverage under the Employment Ordinance, and contracts with minimum standards required by the Immigration Department in Hong Kong; a Basic Conditions of Employment Act, 1997, with a binding mandate to protect domestic workers in South Africa among others.

## 6.5. NEWS IN SHORTS

### 6.5.1. UNION HEALTH MINISTRY RELEASES NATIONAL FAMILY HEALTH SURVEY (NFHS-5) PHASE II FINDINGS

- Main objective of successive rounds of the NFHS is **to provide reliable and comparable data relating to health and family welfare** and other emerging issues.
  - NFHS-5 includes some **new focal areas, such as death registration, pre-school education, expanded domains of child immunization, menstrual hygiene, frequency of alcohol and tobacco use etc.**

#### Key highlights of the survey (All India level)

Indicator	NFHS (2019-21)	NFHS (2015-16)
<ul style="list-style-type: none"> <li>● <b>Total Fertility Rates (TFR) (an average number of children per women)</b> <ul style="list-style-type: none"> <li>○ TFR of about 2.1 children per woman is called replacement-level fertility, considered essential to keep population growth in check.</li> </ul> </li> </ul>	2.0	2.2
<ul style="list-style-type: none"> <li>● <b>Sex ratio of the total population (females per 1,000 males)</b> <ul style="list-style-type: none"> <li>○ This is the first time, in any NFHS or Census, that the sex ratio is skewed in favour of women.</li> </ul> </li> </ul>	1,020	991

<ul style="list-style-type: none"> <li>• <b>Neonatal mortality rate</b> <ul style="list-style-type: none"> <li>○ Number of deaths among all live births during the first 28 days of life expressed per 1000 live births.</li> </ul> </li> </ul>	24.9	29.5
<ul style="list-style-type: none"> <li>• <b>Infant mortality rate (per 1,000 live births)</b> <ul style="list-style-type: none"> <li>○ Infant mortality is the death of an infant before his or her first birthday and Infant mortality rate is the number of infant deaths for every 1,000 live births.</li> </ul> </li> </ul>	35.2	40.7
<ul style="list-style-type: none"> <li>• <b>Under-five mortality rate (per 1,000 live births)</b> <ul style="list-style-type: none"> <li>○ It is the probability of a child born in a specific year or period dying before reaching the age of five.</li> </ul> </li> </ul>	41.9	49.7
• <b>Women age 20-24 years married before age 18 years (%)</b>	23.3%	26.8%
• <b>Institutional births</b>	88.6%	78.9%
• <b>Children under 5 years who are stunted (height-for-age)</b>	35.5%	38.4%
• <b>Children under 5 years who are wasted (weight-for-height)</b>	19.3%	21%
• <b>Children under 5 years who are underweight (weight-for-age)</b>	32.1%	35.8%

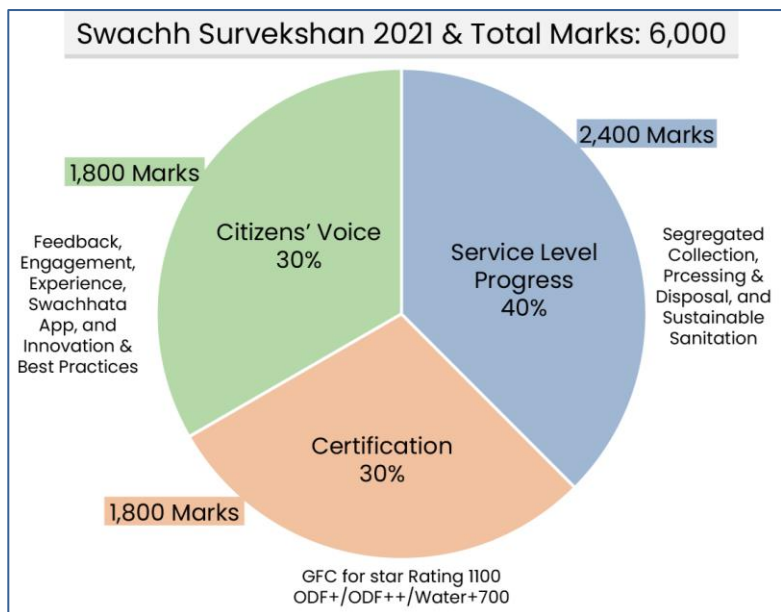
### 6.5.2. THE NATIONAL HEALTH ACCOUNTS (NHA) ESTIMATES FOR INDIA FOR 2017-18 IS RELEASED

- This is the **fifth** consecutive NHA report produced by **National Health Systems Resource Centre**, designated as National Health Accounts Technical Secretariat in 2014 by the Health Ministry.
  - The NHA estimates are prepared by using an **accounting framework based on the internationally accepted System of Health Accounts 2011**, provided by the **World Health Organization**.
- **Key trends**

Specification	2013-14	2017-18
<b>Out-of-pocket expenditure (OOPE)</b> as a share of total health expenditure (THE)	64.2%	48.8%
Share of <b>Government health expenditure in the total GDP</b> of the country	1.15%	1.35%
Share of <b>Government Health Expenditure in THE</b>	28.6%	40.8%
<b>Government health expenditure in per capita terms</b>	₹1,042	<b>₹1,753</b>
Share of <b>primary healthcare</b> in current Government health expenditure	51.1%	<b>54.7%</b>
External/ Donor Funding for health as per cent of THE	0.3%	<b>2.3%</b>
<ul style="list-style-type: none"> <li>• <b>Other findings</b> <ul style="list-style-type: none"> <li>○ <b>Primary and secondary care accounts for more than 80%</b> of the current Government health expenditure.</li> <li>○ The <b>share of social security expenditure on health</b>, which includes the social health insurance programme, Government financed health insurance schemes, and medical reimbursements made to Government employees, <b>has increased</b>.</li> </ul> </li> </ul>		

### 6.5.3. SWACHH SURVEKSHAN 2021 REPORT RELEASED BY MINISTRY OF HOUSING AND URBAN AFFAIRS (MOHUA)

- SS is an **annual survey of cleanliness, hygiene and sanitation in cities** and towns across India under Swachh Bharat Mission-Urban (SBM-U).
  - It is conducted by **MoHUA with Quality Council of India (QCI)** as its implementation partner.
  - The objective of the survey is to encourage **large scale citizen participation, ensure sustainability of initiatives** taken towards garbage free cities (GFC) and open defecation free cities (ODF) among others.
  - First Survekshan was done in 2016.
- With the participation of 4,320 cities, **the 6th edition of SS has become the world's largest urban cleanliness survey**.
  - Survey was divided into 3 major parts - (Refer infographic)







- **Key Findings**

- **Indore won title of 'Cleanest City' for fifth consecutive time** followed by Surat and Vijayawada in the 'more than 1 lakh population' category.
- **Varanasi emerged as 'Best Ganga Town'** while **Ahmedabad Cantonment won title of 'India's Cleanest Cantonment'**,
- Additionally, under **PrerakDaaur Samman**, a new performance category introduced under **Swachh Survekshan 2021**, five cities – Indore, Surat, Navi Mumbai, New Delhi Municipal Council and Tirupati were categorized as 'Divya' (Platinum).

#### 6.5.4. INITIATIVE ON CREATING LAKHPATI SHG WOMEN

- **Ministry of Rural Development** launched an initiative on creating LAKHPATI SHG women, to enable rural SHG women to **earn at least Rs.1 lakh per annum**.
- For the realization of this ambitious goal, the Ministry has envisioned **livelihood support to 25 million rural SHG women in the next 2 years**.
  - This will be achieved through **well-planned interventions to diversify livelihood activities** at the household level ranging from Agriculture and allied, Livestock, NTFP (Non-timber Forest Products) etc.

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





## 7.1. 5G TECHNOLOGY

### Why in News?

Reliance Jio, Bharti Airtel and Vodafone Idea received a six-month extension from the Department of Telecommunications (DoT) to conduct 5G trials till May 2022.

### About 5G technologies

- 5G (the fifth generation of cellular networks) is designed to improve network connections by **addressing the legacy issues of speed, latency and utility**, which the earlier/ current generation of mobile networks could not address.
- It will also have an **enhanced throughput to handle more simultaneous connections** at a time than current-generation networks.
- 5G **mainly works in 3 bands**, namely low, mid and high frequency spectrum.
- 5G has the **potential to add between 0.35 to 0.5 percent to the GDP of India**.

3G vs 4G vs 5G vs 6G					
		3G	4G	5G	6G
	Deployment	2004-06	2006-10	2020	2028-2030
	Bandwidth	2 mbps	200 mbps	>1 gbps	1 tbps
	Latency	100-150 millisecond	20-30 millisecond	<10 millisecond	<1 microsecond
	Average Speed	144 kbps	25 mbps	200-400 mbps	About 50 times faster than 5G

Spectrum	Uses/Advantage	Limitations
<b>Low band</b>	<ul style="list-style-type: none"> <li>• Great promise in terms of coverage and speed of internet and data exchange, the maximum speed is limited to 100 Mbps (Megabits per second).</li> <li>• For commercial cellphone users who may not have specific demands for very high speed internet.</li> </ul>	<ul style="list-style-type: none"> <li>• May not be optimal for specialised needs of the industry.</li> </ul>
<b>Mid-band</b>	<ul style="list-style-type: none"> <li>• Higher speeds compared to the low band.</li> <li>• May be used by industries and specialised factory units for building captive networks.</li> </ul>	<ul style="list-style-type: none"> <li>• In terms of coverage area and penetration of signals.</li> </ul>
<b>High-band</b>	<ul style="list-style-type: none"> <li>• Offers the highest speed (as high as 20 Gbps (giga bits per second)) of all the three bands.</li> </ul>	<ul style="list-style-type: none"> <li>• Extremely limited coverage and signal penetration strength.</li> </ul>

## Opportunities that come with 5G



### Advancing Societies

- Smarter electricity grids for greatly reduced carbon emissions
- More connected vehicles, sharing data to prevent road collisions
- Faster deployment of emergency services in case of accidents
- Connected sensors that can detect and give early warning regarding natural disaster
- Drones becoming a key tool to accelerate and support emergency situation response
- Smooth remote access to specialist for consultation and patient diagnosis



### Transforming Industries

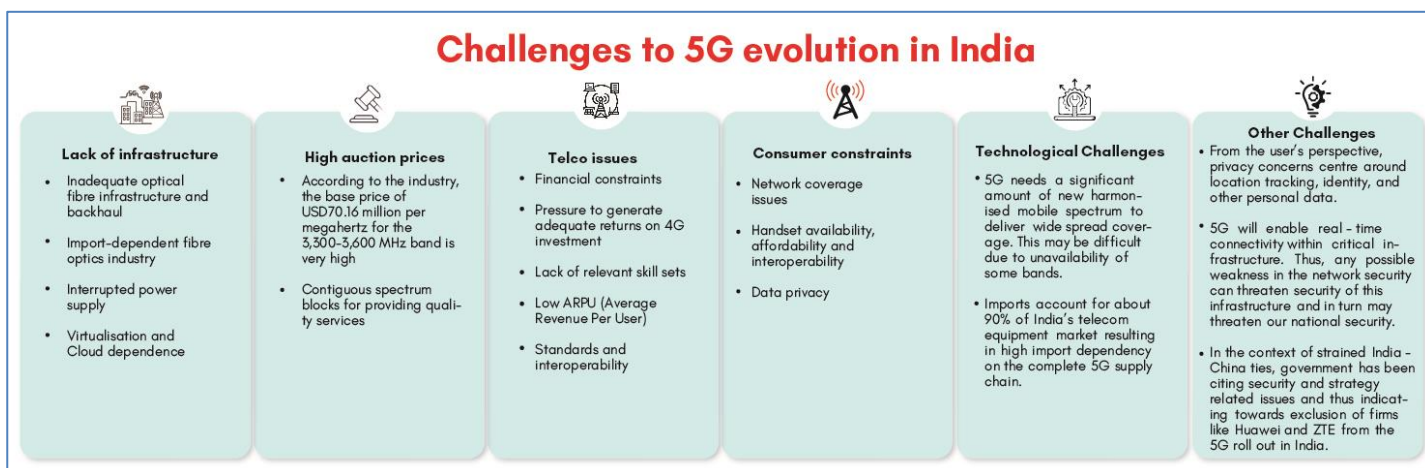
- 5G is the foundation for flexible, efficient and responsible business.
- Production lines autonomously reacting to supply and demand
- Digital replicas that can warn about real machinery faults ahead of time
- Logistic networks autonomously routing goods based on real-world conditions
- Full traceability down to the individual item at warehouses and ports
- Remote access to powerful robots and vehicles for improved safety in risky environments
- Increased use of IoT in agriculture to efficiently grow crops



### Elevating Experiences

- Greater realism in VR, AR and extended reality (XR) with lighter devices
- Delivering sensory experiences, like touch through devices
- More engaging methods of teaching through immersive content
- Immersive virtual meetings to boost remote team productivity
- Stable and reliable connectivity in crowded spaces
- New angles and interactions for live and remote event spectators

## Challenges to 5G evolution in India



### 5G and Quad

- Quad provides an ideal test bed for a shared 5G risk and resilience framework that can be expanded to the broader Indo-Pacific.
- Risks identified**
  - Technical Risk:** from 5G architecture and protocols.
  - Supply Chain and Connectedness Risk:** disruptions due to natural and man-made causes, including conflict, but also geopolitical pressures, complex supply chain interdependencies, and national powers to control national suppliers.
  - Capability and Capacity Risk:** to address insufficient institutional capability and capacity, including in terms of expertise, institutional relationships, and personnel, to monitor and manage 5G security risks.
- Approaches Quad countries have taken to secure their 5G deployments:**
  - Blocking High Risk Vendors:** Quad members decided to exclude Chinese vendors (Huawei and ZTE) from their national 5G networks build-out because of growing geopolitical tensions and profound mistrust towards China.
  - Mitigating third-party supply chain risk:** Changes in government procurement authorities and policies, in the form of strict cyber and supply chain security requirements, are the measures Quad countries have applied.
  - Providing Financial Incentives to Industry** for Secure 5G Deployments.
  - Strengthening International Cooperation:** Japan and India for instance signed a Memorandum of Understanding (MoU) on ICT cooperation in January 2021, covering 5G technologies and telecom security, among other issue areas.
  - Imposed cybersecurity obligations on their telecommunications providers,** for example, through regulatory telecommunications and critical infrastructure protection authorities.

### Way Forward

#### Steps taken by Government

- A 5G High Level Forum was set up in 2017** to articulate the Vision for 5G in India and to recommend policy initiatives and action plans to realize this vision.
- Cellular Operators Association of India (COAI) has formed the 5G India Forum (5GIF)** that is expected to serve as a national initiative where all stakeholders, private and public, small and large, can meet and discuss the challenges of making 5G a reality in India.
- 'Building an End-to-End 5G Test Bed'** programme that envisages close collaboration between the universities and startups and create an ecosystem that closely resembles a real-world 5G deployment.
- National Digital Communication Policy-2018 (NDCP-2018)** also lays out the following objectives with respect to 5G services in India:
  - Enabling Hi-speed internet, Internet of Things and M2M (Machine to machine)** by rollout of several 5G technologies.
  - Enhancing the backhaul capacity** to support the development of next generation networks.

## Key Interventions Required Government and Regulation



### Streamlining regulations to facilitate development

Focus to be on standardising permit procedures, creating a single window mechanism, supportive investment policy, incentivising infrastructure development



### Provide policy flexibility to encourage innovation

Application and use of case labs can be encouraged to test interoperability for new applications, foster innovation and develop locally tailored solution



### Release sufficient and affordable spectrum

Spectrum pricing fee can be reduced from three-eight per cent considering high debt level, competitive structure and poor profitability of the industry



### Ease financial stress on stakeholders

Steps should be taken to reduce the tax burden, cut down costs (cut licence fee from eight per cent to six per cent) and provide leverage to the industry

## Industry



Infrastructure investment



Interoperability between devices



Enhanced data privacy and security



Reskilling and up skilling



Focus on Innovation and monetisation



Network virtualisation



Periodic Discussions with regulators



Cost and Infrastructure sharing

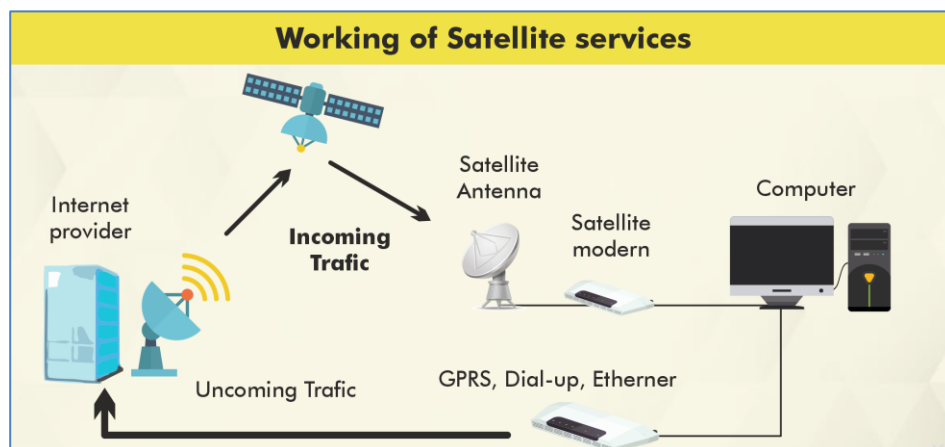
## 7.2. SATELLITE INTERNET SERVICES

### Why in News?

Recently, the government issued a public advisory to stop Starlink Internet Services from offering satellite-based services in India and asked citizens not to subscribe to it as it is not licensed in India.

### More on News

- For commercial launch of Satellite Internet Services a company needs GMPCS (global mobile personal



communication by satellite) license, with **Department of Telecommunications**, Government of India as the licensor under **Section 4 of the Indian Telegraph Act of 1885**.

- **GMPCS is a personal communication system providing transnational, regional or global coverage** from a constellation of satellites accessible with small and easily transportable terminals.

### What is Satellite Internet Service?

- Satellite Internet Services is a **wireless internet connection** which uses satellites in space to get an internet signal from the Internet Service Provider (ISP) to users.
- It operates using two way satellites like **VSAT (Very Small Aperture Terminal)** or telecommunication satellites to liaison between ISPs and Users with satellite dishes.
- These can be the geostationary satellites or satellites in **Low Earth Orbit (LEO)**; in 500-2000 km by **Starlink (SpaceX)**, **Kupier (Amazon)** and **OneWeb**.
- It is **different from satellite television** as Internet signals have to go **both ways** with a much **greater amount of bandwidth** to move all that data.
- Likely to be **commercially available in 2022**, it can play an important role in creating a '**Digital India**' through internet services to unconnected areas like **rural and hilly terrains**.
- The other types of **internet services** in India includes- **Digital Subscriber Line (DSL)**, **fixed wireless internet**, **wireless cellular networks (e.g. 4G, 5G)**, **Fiber optic cables** etc.

Benefits of Satellite Internet Services	Challenges in Satellite Internet Services
<ul style="list-style-type: none"> <li>• <b>Cheap and easy internet</b> option for rural areas, hilly terrains, and islands for <b>Last Mile connectivity</b>.</li> <li>• <b>Faster than DSL connection</b> with continuously improving technology with present speeds reaching around <b>100 mbps</b>.</li> <li>• Can play a <b>significant role in emergency or disaster recovery</b> due to limited ground infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Low Speed and High Latency*</b> in comparison to fiber optic cables. <ul style="list-style-type: none"> <li>○ Latency, also known as ping time, <b>refers to how long it takes a single piece of information</b> to make a round trip back and forth over a satellite connection.</li> </ul> </li> <li>• <b>High Cost</b> as compared to wireless cellular networks and others,</li> <li>• <b>Limitations of Bandwidth</b> with <b>high impact of weather aberrations</b>,</li> <li>• <b>Potential to damage spacecrafts/satellites</b> or interrupt <b>higher satellites frequency</b> because of its large satellite network need,</li> <li>• <b>Potential to increase space junk</b></li> <li>• <b>Not compatible for VPN Services</b>. <ul style="list-style-type: none"> <li>○ A VPN <b>gives online privacy and anonymity</b> by creating a private network from a public internet connection.</li> </ul> </li> </ul>

## 7.3. LASER INTERFEROMETER GRAVITATIONAL-WAVE OBSERVATORY (LIGO) PROJECT

### Why in News?

**Hingoli revenue department (Maharashtra)** has handed over land for Laser Interferometer Gravitational-Wave Observatory (LIGO) project for **setting up a laboratory** along with some other related infrastructure.

### More on News

- In 2016, **central government had given approval to LIGO-India** (a Joint India-US detector) for research on gravitational waves.
  - Major operations required for **LIGO India has been distributed among the four lead institutions**: Directorate of Construction Services and Estate Management (Mumbai), Raja Ramanna Center for Advanced Technology (Indore), the Institute for Plasma Research (Gandhinagar), and the Inter-University Centre for Astronomy and Astrophysics (Pune).
- Technology being developed includes **design and fabrication of ultra stable laser, quantum measurement techniques**, handling of complex control system for enforcing precision control, large-scale ultra-high vacuum technology, **data analysis and machine learning**.
- Project will be funded by **Department of Atomic Energy (DAE) and Department of Science and Technology (DST)**.

#### General Theory of Relativity

- It holds that what we perceive as the force of **gravity arises from the curvature or warping of space and time**.
- The more massive an object, the more it warps the space around it.

## About LIGO

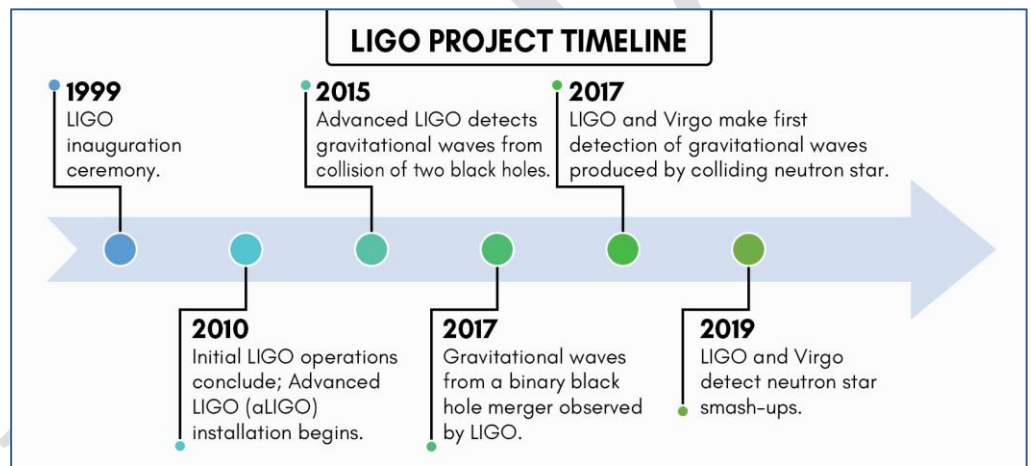
- It was **designed for direct detection of gravitational waves** predicted by Einstein's General Theory of Relativity.
- It is **being operated at two sites in US** (Washington and Louisiana).
  - Also, there are **3 LIGO's sisters' facilities**: Virgo in Italy, GEO600 in Germany and KAGRA (Kamioka Gravitational-wave Detector) in Japan and **LIGO- India**.
- Data LIGO collects may have **far-reaching effects on many areas of physics including gravitation, relativity, astrophysics, cosmology, particle physics**, and nuclear physics.
- **LIGO use laser interferometry** to measure the minute ripples in space-time caused by passing gravitational waves from cataclysmic cosmic events such as colliding neutron stars or black holes, or by supernovae.
  - Interferometers are **investigative tools that work by merging two or more sources of light** to create an interference pattern, which can be measured and analyzed.
  - They are **often used to make very small measurements** that are not achievable any other way.

### Significance of LIGO- India

- It will enable scientists to locate **GW sources over the entire sky**. Right now, there is huge uncertainty in determining where in the sky the disturbance came from.
- **Will raise the visibility and appeal of experimental science in India** and will be helpful to **attract students** and inspire them to pursue technical careers.
- Physical measurements required for GW detection involve **cutting edge technologies that have many non-military applications**.

- **It is different from other observatories as**

- **LIGO is blind**: Unlike optical or radio telescopes, LIGO does not see electromagnetic radiation (e.g., visible light, radio waves, microwaves) as gravitational waves are not part of the electromagnetic spectrum.
- **LIGO isn't round** and can't point to specific locations in space: Since LIGO doesn't need to collect light from stars, it doesn't need to be round or dish-shaped.



## Significance of detection of Gravitational Waves by LIGO

- **Information that Gravitational waves can provide**
  - Gravitational waves will provide a **test of Einstein's theory of general relativity under extreme conditions of gravity** where it has never before been tested.
  - They will also give more **information about the unimaginably dense form of matter that makes up neutron stars**.
  - Gravitational waves will also **tell us about how many objects like black holes and neutron stars exist** in the Universe.
  - They will give us insight into **what happens during some of the Universe's most violent explosions**.

### About Gravitational Waves

- They are '**ripples**' in **space-time** travelling at speed of light caused by some of most violent and energetic processes in Universe.
- They carry with them **information about their cataclysmic origins, as well as invaluable clues to nature of gravity itself**.
- **They are created when**
  - objects move at very high speeds,
  - a star explodes asymmetrically (called a supernova),
  - two big stars orbit each other,
  - two black holes orbit each other and merge

- **Different types of gravitational waves are**
  - **Continuous gravitational waves:** thought to be produced by a single spinning massive object like a **neutron star**.
  - **Compact binary inspiral gravitational waves:** produced by orbiting pairs of massive and dense ("compact") objects like white dwarf stars, black holes, and neutron stars.
  - **Stochastic Gravitational Waves:** are smallest and most difficult gravitational waves to detect and are passing by from all over the Universe all the time and are mixed together at random.

## 7.4. NEWS IN SHORTS

### 7.4.1. INTERNET PROTOCOL VERSION 6 (IPV6)

- Recently, DoT fixed 30 June 2022 as **deadline for complete transition to IPv6 for government organisations** and December 2022 for internet service providers
- IPv6 is the most recent version of the Internet Protocol (IP) **to provide an identification and location system for computers on networks and routes traffic** across the Internet known as IP address.
  - IP is a set of requirements **for addressing and routing data** on the Internet.
  - An IP address is a **unique identifier assigned to a device or domain** that connects to the Internet.
- As compared to IPv4, it is **fast, more secure and offers 340 undecillion unique address spaces** through its 128 bit address scheme.

IPv4	IPv6
Deployed 1981	Deployed 1998
32-bit IP address	128-bit IP address
4.3 billion addresses Addresses must be reused and masked	7.9x10 <sup>28</sup> addresses Every device can have a unique address
Numeric dot-decimal notation 192.168.5.18	Alphanumeric hexadecimal notation 50b2:6400:0000:0000:6c3a:b17d:0000:10a9 (Simplified - 50b2:6400::6c3a:b17d:0:10a9)
DHCP or manual configuration	Supports autoconfiguration

### 7.4.2. GEOGRAPHICAL INFORMATION SYSTEM (GIS) PLANS FOR AROUND 75% GRAM PANCHAYATS (GPS) COMPLETED

- Ministry of Rural Development has **completed GIS plans for 2 lakh GPs out of 2.69 lakh GPs** under MGNREGA using remote sensing technology **based on ridge to valley approach**.
- GIS is a **computer-based tool for mapping and analyzing geographic terrain** and offers scientific choices of development works suitable to the area.
  - It **integrates common database operations** such as query and statistical analysis **with the unique visualization and geographic analysis** benefits offered by maps.
- Under MGNREGA, **GIS solutions are used for asset related data** (Watershed locations, Farm ponds, check

dams, road layer etc) **along with better understanding of their impact/ outcome**.

- **Scope of work under MGNREGA GIS includes**
  - **Geo-referencing** of satellite images and scanned images.
  - **GIS Mapping:** Creation of Digital data (Assets) for pan rural India for specified works.
  - **Geotagging of images** and integrating with respective assets.
- **Other initiatives taken to facilitate GP level planning of MGNREGA activities**
  - **Yuktdhara Geospatial Planning portal** to help other Ministries to see geographical location of planned assets on a map.
  - **Climate Resilience Information System and Planning (CRISP-M) tool** to enable the local communities to understand the climate change impact.

#### About Ridge to valley approach

- It seeks to **detain, divert, store and use available rainwater**.
- This allows **better management of water flowing from the ridge to the valley** and ensures conservation of rainwater, which in turn, bring agricultural and economical stability.

### 7.4.3. DRAFT NOTIFICATION ON FOOD SAFETY & STANDARDS (GENETICALLY MODIFIED OR GENETICALLY ENGINEERED FOODS) REGULATIONS, 2021

- **New regulations are proposed by Food Safety and Standards Authority of India (FSSAI)** under the Food Safety and Standards Act (2006) **and will apply to:**
  - **Genetically Modified Organisms (GMOs)** or **Genetically Engineered Organisms (GEOs)** or **Living Modified Organisms (LMOs)** intended for direct use as food or for processing;
    - ✓ GMOs/GEOs/LMOs mean **any living organism that possesses a novel combination of genetic material** obtained through use of modern biotechnology.

- **Food or Processed food** containing Genetically Modified ingredients (GEI) produced from but not containing LMOs or GEOs or GMOs.
- **Key provisions of draft regulations**
  - **Prior Approval from FSSAI for manufacture, storage, distribution, sale and import** etc. of any food or food ingredient derived from GMOs.
  - **If GMOs or GEOs contain LMOs**, it requires **prior approval from Genetic Engineering Appraisal Committee** to get FSSAI approval and direct approval from FSSAI if no LMOs.
  - Specifies the **requirements for Food Laboratories to be designated for GM foods testing**.
  - **Labelling Standards for GM foods** if GEI is 1% or more.

#### Related News

- Earlier FSSAI notified draft **Food Safety and Standards (Vegan Food) Regulations 2021** which includes following key provisions:
  - **Define plant-based food products** or what constitutes vegan food,
  - **Introduce new vegan food logo** to identify such products,
  - **No animal testing of vegan food** to ensure 100% animal-free and vegan-friendly products.

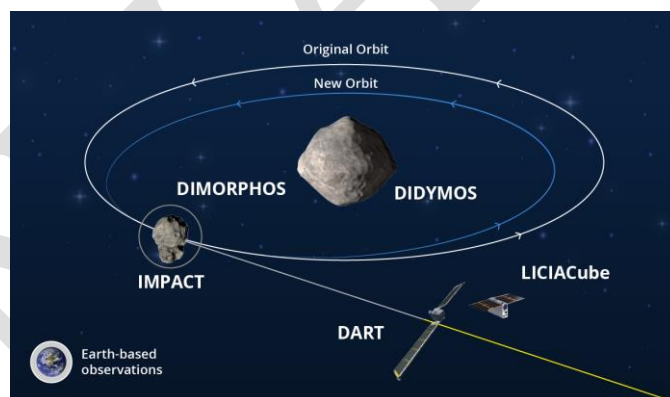
#### 7.4.4. ISRO PREVENTS COLLISION OF CHANDRAYAAN-2 ORBITER AND WITH NASA'S LUNAR RECONNAISSANCE ORBITER (LRO)

- A **collision avoidance manoeuvre (CAM)** was performed by Indian Space Research Organisation (ISRO) after data showed that **closest approach distance would be only about 3 km around Lunar North pole sparking tensions of possible collisions**.
  - It is common for satellites in Earth Orbit to undergo CAMs to mitigate collision risk due to space objects **including space debris and operational spacecraft**.
  - However, this is the **first time such a critically close conjunction was experienced for a space exploration mission of ISRO**.
- **About Chandrayaan-2**
  - Mission was **launched in 2019 with the aims of studying all areas of the Moon** combining exosphere, the surface as well as the sub-surface of the moon in a single mission.
  - Chandrayaan-2 **comprised an Orbiter, Lander (Vikram) and Rover (Pragyan)** to explore the unexplored South Pole of the Moon.
  - Though mission **spacecraft failed its soft landing on the Moon's surface, its Orbiter** (which forms a significant chunk of the mission) **continues to successfully collect and relay** crucial insights about the Moon to date.

- **LRO is a NASA's Robotic spacecraft** currently orbiting the moon in an eccentric polar mapping orbit.

#### 7.4.5. DOUBLE ASTEROID REDIRECTION TEST (DART) MISSION

- It is **NASA's first planetary defense test mission** was launched recently.
- Aim of the mission is **to test the newly developed technology that would allow a spacecraft to crash into an asteroid** and change its course.
  - Mission will test the new technology **to be prepared in case an asteroid heads towards Earth** in the future.
- The **target of the spacecraft is a small moonlet called Dimorphos** (that orbits a larger asteroid named Didymos).
  - Moonlet is a **small natural or artificial satellite**.



#### 7.4.6. NEW EXOPLANET-TOI 1789B OR HD 82139

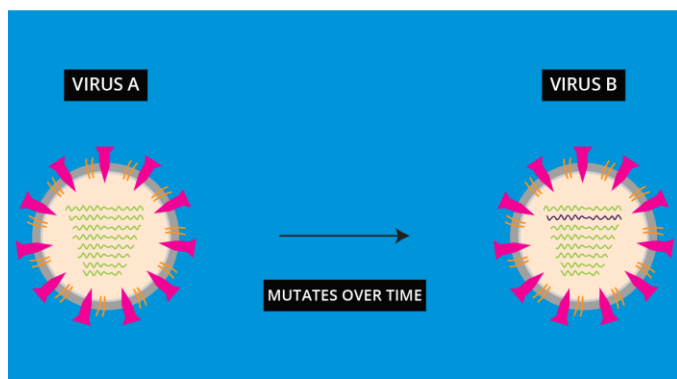
- Ahmedabad-based Physical Research Laboratory (PRL), has discovered a new exoplanet with a mass **of 1.5 times that of Sun** and located 725 light years away.
  - An exoplanet is **any planet beyond our solar system**. Most orbit other stars, but free-floating exoplanets, called rogue planets, orbit the galactic center and are untethered to any star.
- This is second such **exoplanet known as TOI 1789b or HD 82139b**.
  - The first such exoplanet **K2-236b**, was discovered in 2018.
- Such close-in exoplanets around stars **with masses between 0.25 to a few Jupiter mass** are called "**Hot-Jupiters**".

#### 7.4.7. WHO DESIGNATES NEW CORONAVIRUS STRAIN AS 'VARIANT OF CONCERN', NAMES IT 'OMICRON'

- This Variant, **B.1.1.529** was first reported from **South Africa** and is being considered potentially more dangerous than the Delta variant.



- It comes with a “**very unusual constellation**” of **mutation** and can even infect fully vaccinated people.
- **Viruses, like all living things, go through mutations** throughout their lifespan.
  - A mutation is a **subtle change in the genes of the virus** using host body itself.
  - This may make the **virus more unstable and more vulnerable**.
- At times **mutation may result in major changes in the structure of a virus**.
  - In this case, virus could be difficult to detect with existing tests, respond differently to treatments and **become unrecognizable to antibodies developed after an infection or vaccination**.



WHO Classification of COVID-19 variants	
<b>Variant of Concern</b>	<ul style="list-style-type: none"> <li>● It is a variant that results in <b>rise in transmissibility, increase in fatality</b> and a significant <b>decrease in effectiveness of vaccines</b>, therapy and other health measures.</li> <li>● The <b>Alpha, Beta, Gamma and Delta</b> variants fall under it.</li> </ul>
<b>Variant of Interest</b>	<ul style="list-style-type: none"> <li>● It is a variant with a genetic capability that <b>affects characteristics of virus such as disease severity, immune escape, transmissibility and diagnostic escape</b>, and causes a <b>consequential volume of community transmission</b>.</li> <li>● The <b>Eta, Iota, Kappa and Lambda</b> fall under it.</li> </ul>
<b>Variants Under</b>	<ul style="list-style-type: none"> <li>● It is a <b>variant with genetic changes that are suspected to affect virus</b></li> </ul>



<b>Monitoring (VUM)</b>	<p><b>characteristics</b> but evidence of phenotypic or epidemiological impact is currently unclear.</p> <ul style="list-style-type: none"> <li>● It may pose a <b>future risk</b>.</li> </ul>
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#### 7.4.8. ZYCOV-D, THE WORLD'S FIRST NEEDLE-FREE COVID-19 VACCINE

- This is world's **first needle-free plasmid DNA vaccine**, administer in first two layers of the skin using a needle-free applicator.
  - This same technology is used in diabetic patent for insulin.
- It is a three-dose vaccine administered in the interval of **0-28-56 days**.
- **Plasmid DNA vaccine**
  - A piece of **DNA encoding the antigen** (part of the disease-causing pathogen that induces an immunity response from our bodies) is inserted into a **bacterial plasmid**.
  - This **DNA plasmids carrying the antigen are injected** into the muscle. Once the DNA gets inside our cells, they start producing antigens, which triggers an immune response.
  - DNA vaccines can be easily manufactured, are **inexpensive and safer**.

#### 7.4.9. WOLBACHIA BACTERIA

- Recently, an Indonesian research showed **reduction in dengue cases** (as much as 77%) **after breeding dengue mosquitoes with Wolbachia Bacteria**.
- **Wolbachia are common bacteria that occur naturally in almost 60% of insect species**, including some mosquitoes, fruit flies, moths, dragonflies and butterflies. **Wolbachia are safe for humans**.
- **Wolbachia does not occur naturally in Aedes aegypti mosquito species** that spreads dengue and other diseases such as chikungunya, Zika and yellow fever.
  - When **Aedes aegypti** mosquitoes carry Wolbachia, **bacteria compete with viruses like dengue, Zika etc and makes it harder for viruses to reproduce** inside the mosquitoes.

 <b>SMART QUIZ</b>	<p>You can scan this QR code to practice the Smart Quiz of Science &amp; Technology at our open test online platform for testing your understanding and recalling of the concepts.</p>	
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# 8. CULTURE

## 8.1. DECOLONISATION OF MINDS

### Why in news?

Addressing a Constitution Day event, the Prime Minister said that **colonial mindset** is trying to put obstacles in the path of growth of developing nations like India.

### About colonial mindset or colonization of minds and its process

A 'colonial mentality', or 'the colonized mind', can be understood as the one exhibits a **preference or desirability for whiteness** and cultural values, behaviors, physical appearances, and objects **from or derivative of the 'West'** (i.e., Western Europe or the USA). This is accompanied with **disdain or undesirability for anything coming from the non-'West'**.

- The **characteristics** of the phenomenon of colonization of minds are described below:
  - The intervention of an **external source, the 'colonizer'** in the **mental sphere** of a subject or group of subjects i.e., **the 'colonized'**;
  - This intervention affects **central aspects of the mind's structure**, mode of operation, and contents;
  - Its effects are **long-lasting** and not easily removable;
  - There is a **marked asymmetry** of power between the parties involved;
  - The parties can be **aware or unaware of their role** of colonizer or colonized; and both can participate in the process **voluntarily or involuntarily**.
- Colonization of the mind is a process **slower than the economic and political takeover** of power because of the traditions and history of particular populations that make them **resist actively or passively** this mental takeover. Thus there are **sites identified** through which colonization of minds takes place.
- Most commonly, these are **rewritten histories, language and education policies and cultural texts** that may be literary, cinematic, and so on. The **superiority of the 'master' is however, internalised**, especially, with the systematic **erosion of the agency of the subject** in the economic, political and social domains.

### English Language: For colonization of the body politic as well as the minds

- Thomas Babington, better known as **Lord Macaulay** (the man who brought the English language and British education to India) believed that a **single shelf of a good European library was worth the whole native literature** of India and Arabia.
- He envisaged creation of "a class of persons, Indian in blood and colour, but **English in taste, in opinions, in morals, and in intellect**".
- English thus became a means for a small number of British nationals (in 1900 it was only around 1,30,000 in India) to rule over **300 million plus Indian subjects**.

### What can be the potential effects of colonization of minds?

- **Colonial culture in official apparatus:** Even after seven decades of independence, the legacy of the British continues in **almost all sectors of governance:** from judiciary to policing, military practices and even in Parliament, the look, feel, protocol and practices still gives a glimpse of the **colonial regime**.
  - The **durwans attired in colonial dress code** with long turbans standing in upright position **alongside the Speaker and Chairman** is a legacy of the British that is being continued till date. Similarly, the Judges in India are still referred to as **'My Lord', 'Your Honour'**.
  - **Indian military bands** cherish ending ceremonies with the Christian hymn **"Abide with Me"**, introduced **to the country by Britain**.
  - Our **education system**, both at the school and university level, is **dominated by colonial narratives**. English is considered a **decisive determinant of a child's progress** up the ladder of formal education.
- **Alienation from local culture:** By condemning indigenous culture, in terms of its **music, names, dance, marriage, inheritance system**, and discouraging their knowledge in schools, it alienates people from their cultural roots and introduces a **sense of inferiority**.
- **Societal discrimination:** Colonisation of minds results in **admiration for the colonizer's culture** and a dislike not only for the indigenous culture but also **against persons who have physical characteristics associated with the indigenous culture** or those holding **indigenous values**.

- **Deleterious effects on a person's psychological functioning and self-concept:** Internalized shame of a person's culture due to colonisation of minds increases the experience of **anxiety and depression**. This is because the adoption of colonial values is coupled with the **condemnation of the self**.
  - The condemnation is in the sense that the person is met with disappointment when he/she is **unable to become like the colonizer** despite repeated attempts.
  - **Torn between the indigenous culture and the colonizer's cultural values**, the person is left with feelings of **self-hatred and shame, adversely affecting his self-esteem**.

The detrimental effect that colonization of minds has individual and societal level has a negative impact on cultural growth, social cohesion, and overall development. The only way to move past this is decolonization of the minds.

#### What exactly is Decolonization of minds?

- Decolonization of the mind means **deconstructing the thoughts, preferences and values** that derive from a **colonial way of thinking**.
- It is about "**cultural, psychological, and economic freedom**" for Indigenous people with the goal of achieving **Indigenous sovereignty** i.e., the right and ability of Indigenous people to **practice self-determination over their land, cultures, and political and economic systems**.

Decolonization is not merely an event that **took place when and where formal colonial rule came to an end**, but rather a process of challenging the **cultural legacies of colonialism** in broader fields of history, aesthetics, and culture.

#### How can we work towards decolonization of minds?

- **Critique of modernity of the West: Gandhiji** realized that the **decolonization of the mind was not possible without a critique of modernity understood in its current form**. This breaks open the idea that **modernity is not synonymous with Westernization**.
  - Gandhiji's idea of swaraj also reflected an attitude towards bringing about a decolonisation of the mind by establishing **one's rule over one's self** rather than just having a self-government.
  - **His 'Hind Swaraj' shouldn't be seen simply as a political manifesto but should also be treated as a manual to initiate the process of decolonization**.
- **Reforming educational framework:** Since it is the schools and universities where the colonial narratives get adopted and perpetuated instead of being contested, without **reforming the current framework**, we cannot escape the highly complicated web of colonisation.
- **Resurrecting the culture of original thought:** The resurrection of a culture of original thought requires not just a **radical critique of the present research methodologies** but also a questioning of what should **actually qualify as research work**.
  - This demands greater value to be attached to **original works and also new frameworks for mapping the legitimacy** of such works (which includes putting up a challenge to the culture of citations being considered as a **sign of authenticity** of the work).
- **Revisiting and rethinking the key historical underpinnings:** The decolonization of the mind has its roots in ideologies stemming from events of the past. In this context, it becomes important to revisit this past from multiple perspectives to remove any potential biases.
  - For example, the idea of superiority of English has its basis in the idea of superiority of western culture (which we have perceived through historical literature). Changing the historical perception changes the basis of superiority from its root.

#### Case in Point: Rhodes Must Fall Movement

- It began with student protests at the University of Cape Town (UCT) in 2015, with **demands to decolonize higher education in South Africa**. From Cape Town the movement spread to other campuses and cities **outside and within Europe**, notably the University of Oxford in Britain.
- Despite differences in social and political contexts, the Rhodes Must Fall Movement in **both Cape Town and Oxford** gathered momentum around a **call to decolonize** through:
  - Changing or removing iconography, monuments and other **material legacies** of colonialism in and around the universities,
  - A call for more **black South African academics** (in the case of UCT) and more **racial diversity** (in the case of Oxford); and
  - Inclusion of **more non-Western authors, approaches and topics** in order to decolonize curricula and allow a broader representation of epistemologies.

- **Encouraging immersion in local culture:** Many a times, the colonization of the mind is a result of ignorance of local culture and literature. Systematic exposure to the richness of the local culture could encourage a competing thought process which subsequently drives decolonization of the mind.

## Conclusion

Decolonisation is a **slow, conscious and rigorous process, to free the mind** from the shackles of our colonised selves, and allow fluidity of the intellect beyond the **contours of our dwarfed and compartmentalised imaginations**. In this regard, elements of **Rhodes Must Fall Movement (2015)** suggests a suitable way forward.

## 8.2. JANJATIYA GAURAV DIVAS

### Why in News?

Recently, Union Cabinet decided to **declare November 15 as 'Janjatiya Gaurav Divas' to mark the birth anniversary of Birsa Munda** and honour the contributions of Scheduled Tribes to Indian history and culture.

### More on News

- The day will be celebrated every year and would **recognize the efforts of the tribals for preservation of cultural heritage and promotion of Indian values** of valour, hospitality and national pride.
- India's freedom struggle was **strengthened by several movements by tribal communities such as Santhals, Tamars, Kols, Bhils, Khasis and Mizos** to name a few.
- Tribal movements in different regions of the country against the British colonial rule **got linked with the national freedom struggle** and inspired Indians all over the country.

### Major Tribal movements in India

- Tribal movements can be analysed better if categorised into mainland tribal revolts and frontier tribal revolts concentrated mainly in the north-eastern part of India.
  - **Mainland Tribal Revolt**
    - ✓ **Land settlements of the British affected the joint ownership tradition** among the tribals and disrupted their social fabric.
    - ✓ As agriculture was extended in a settled form by the Company government, the **tribals lost their land, and there was an influx of non-tribals to these areas**.
    - ✓ **Shifting cultivation in forests was curbed** and this added to the tribals' problems.
    - ✓ The **government further extended its control over the forest areas** by setting up reserved forests and restricting timber use and grazing.
    - ✓ **Exploitation by the police, traders and money-lenders** (most of them 'outsiders') aggravated the tribals' sufferings.
    - ✓ With the expansion of colonialism, **Christian missionaries came to these regions** and their efforts interfered with the traditional customs of the tribals
  - **Movements of the tribes of the north-eastern frontier**
    - ✓ Their revolts were often **in favour of political autonomy within the Indian Union or complete independence**.

### About Birsa Munda

- Birsa Munda, also known as Bhagwan Birsa Munda or DhartiAaba, was born in **Munda tribe at Khunti district of Chotanagpur Plateau region (Jharkhand)**.
- After initial conversion to Christianity and education from missionary school, soon he realised the **exploitation of local tribes from British and Zamindars, also known as Dikus or outsiders**.
- Birsa wanted to **reform the tribal society and so, he urged them to let go of beliefs in witchcraft** and instead, stressed on the importance of prayer, **staying away from alcohol**, having faith in God and observing a code of conduct.
  - Based on these, **he started the faith of 'Birsait'**. This was a threat to Christian missionaries who were converting the tribals.
- Birsa started a **movement called 'Ulgulan', or 'The Great Tumult'** against the exploitation and discrimination against tribals by the local authorities.
  - It results into passing of Chotanagpur Tenancy (CNT) Act, 1908.
  - The CNT Act provided for the **creation and maintenance of land record**. It also creates a special tenure category of "Mundari Khuntkattidar" (considered to be the original settler of the land among Mundas) and **restricted the transfer of tribal land to non tribals**.
- Birsa Munda also actively **opposed Beth Begari system**, a type of system applied on tribals and meant 'forced labour'.
- **Munda died of cholera on June 9, 1900**. Although it was said that he did not show symptoms of cholera while he was in jail, the British government had declared that he died of cholera.

- ✓ These movements were **not forest-based or agrarian revolts** as these tribals were generally in control of land and forest area.
- ✓ The frontier tribal **revolts under the British continued for a longer time** than the non-frontier tribal movement.

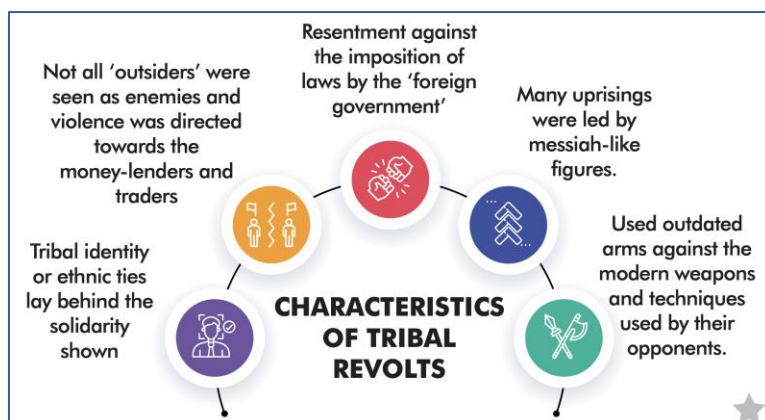
**\*For a brief understanding of the major tribal revolts, please refer to the Appendix I at the end of the document.**

### Issues with Tribal Movements in India

- The **tribal uprisings were doomed from the beginning**, given the outdated arms they fought with as against the modern weapons and techniques used by their opponents.
- Most of the **revolts were localized in nature** and lacked all India participation.
- The **revolts were poorly organised** with little coordination.

### Conclusion

The revolutionary movements and struggles organized by the tribal communities were marked by their immense courage and supreme sacrifice. However, the public at large is not much aware about these tribal heroes. Declaration of Janjatiya Gaurav Divas acknowledges the legacy of these revolts and the glorious history and cultural heritage of tribal communities. It will help to inspire generations to preserve this cultural heritage and national pride.

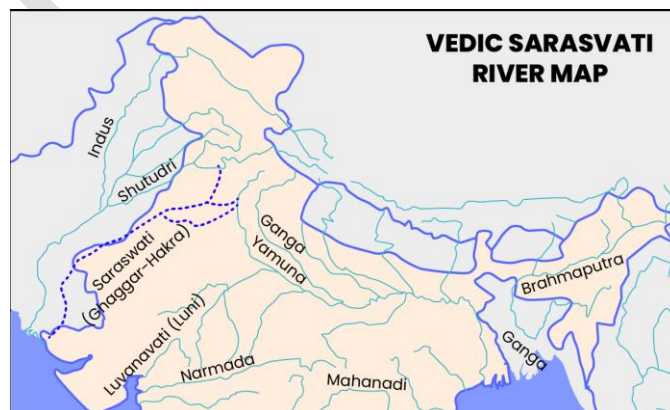


## 8.3. NEWS IN SHORTS

### 8.3.1. HARYANA: ALONG THE LOST SARASWATI TRAIL, A 1,600-YR-OLD SITE OF 'CONTINUED HABITATION'

- The archaeological site has been discovered near Haryana's **Sandhai village (Yamunanagar district)** with its ties to lost habitations along the legendary Saraswati river.
  - The **Saraswati**, a mythical river mentioned in ancient Hindu scriptures, is believed to be **existed over 5,000 years ago** but disappeared underground because of **earthquakes and other geographical developments**.
- **Key findings**
  - **Evidence of habitation:** Bricks, earthenware and remains of a statue.
  - **Religious evidence:** Nagara-style temple of stones, scriptural evidence of a pillar apart from material related to the base of a construction.
- **Time period**
  - **Indo-Sasanian (Iranians) coins** of Sri-ha type which belong to the 7th century in this region.
  - The **artefacts** found here look like the **post Gupta empire to the Gurjara-Pratihara period (8th-9th Century AD)**.
  - This **site may be between the Kushanera to the Gurjara- Pratihara period**. However, some bricks apparently belong to the Kushan period.

- The **“actual chronology of the site will be known after clearance of the vegetation** from the site as currently the area is under forest.



### 8.3.2. SRINAGAR JOINS UNESCO CREATIVE CITIES NETWORK (UCCN) UNDER THE CRAFTS AND FOLK ARTS CATEGORY

- **Srinagar** is the homeland to various decorative and renowned arts and crafts like **Paper making, Kashmiri Shawl, Kashmiri Silk, Art of Woodwork, Kashmiri Carpets, Silverware work** etc.
  - It is situated in **the centre of the Kashmir Valley on the banks of the Jhelum River**.
- By joining the Network, **cities commit to sharing their best practices and developing partnerships** involving the public and private sectors as well as civil society to

strengthen creation, production, distribution and dissemination of cultural activities, goods and services.

- **From India other cities in UCCN includes**
  - **Jaipur** (Crafts and Folk Arts).
  - **Varanasi and Chennai** (Music).
  - **Mumbai** (Film).
  - **Hyderabad** (Gastronomy).
- UCCN was created in 2004 to **promote cooperation with and among cities** that have identified creativity as a strategic factor for sustainable urban development.
  - These cities work together towards a common objective: **placing creativity and cultural industries at the heart of their development plans at the local level** and cooperating actively at the international level.
- UNESCO is responsible for **coordinating international cooperation in education, science, culture and communication**.
  - It was established in 1946 and is based in **Paris**.

- ✓ **Padma Vibhushan** for exceptional and distinguished service;
- ✓ **Padma Bhushan** for distinguished service of a high order; and
- ✓ **Padma Shri** for distinguished service.
- The award seeks to **recognize achievements in all fields of activities or disciplines** where an element of public service is involved.
- They are conferred on the **recommendations made by the Padma Awards Committee**, which is constituted by the Prime Minister every year.
  - ✓ Even **self-nomination** can be made.

### 8.3.4. DARJEELING TOY TRAIN

- More than two decades after the **Darjeeling Himalayan Railway (DHR) was designated a UNESCO World Heritage Site**, India has registered the two logos of the iconic 'Toy Train' internationally as its intellectual property.
  - The use of these logos anywhere in the world will now **require written permission from India and the payment of a fee**.
- This will put the **Darjeeling Toy Train's 'Iron Sherpa' blue steam locomotives of the Darjeeling heritage train** on the same pedestal as the legendary transalpine Rhaetian Railway in Switzerland.

### 8.3.5. BEST TOURISM VILLAGES (BTV) BY UNWTO

- BTV is a **global initiative to highlight those villages where tourism preserves cultures and traditions**, celebrates diversity, provides opportunities and safeguards biodiversity.
  - It aims to **support villages to enhance their rural tourism potential** through training and access to opportunities for improvement.
- **Pochampally Village (Telangana) was selected as one of the BTV** by United Nations World Tourism Organisation (UNWTO).
  - Pochampally is **often referred to as Silk City of India** for the exquisite sarees woven through Ikat style.
    - ✓ **Pochampally Ikat received GI Status** in 2004.
  - **Acharya Vinobha Bhave launched Bhoodan Movement** from Pochampally in 1951.



### 8.3.3. PADMA AWARDS PRESENTED BY THE PRESIDENT

- These awards were **instituted in the year 1954 and announced every year on the occasion of Republic Day** except for brief interruption(s) during the years 1978 and 1979 and 1993 to 1997.
  - The award is given in **three categories**, namely,

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# 9. ETHICS

## 9.1. ETHICS AND CLIMATE CHANGE

### Introduction

After two long weeks of negotiations at COP26, the United Nations Climate Talks, the Glasgow Climate Pact was signed. But both leaders and experts were not satisfied with the promises made. The prevalent gaps in the climate negotiations and the gravity of the issues can be gauged by the opinion of world leaders:

	<p>“Small steps will no longer do. The biggest steps need to be taken by those with the biggest boots.”</p> <p>- Finland President Sauli Niinisto</p>
<p>“Every year the problems are getting worse. We are at the limits. If I may use a strong word, I would say that we are at the limits of suicide.”</p>	<p>- Pope Francis</p> 
	<p>“Failure to provide the critical finance and that of loss and damage is measured in lives and livelihoods in our communities. This is immoral and it is unjust.”</p> <p>- Barbadian Prime Minister Mia Mottley</p>
<p>“I urge you to instruct your negotiators to choose the path of compromise and consensus. Bold climate action is in the national interest of every single country represented at this conference. The time for brinkmanship is over.”</p>	<p>- UN Secretary General Ban ki-moon</p> 
	<p>“For Honduras, climate change is a matter of life and death. The figures don’t add up ... we are not all equally responsible.</p> <p>- Honduras President Juan Hernandez</p>
<p>“The aim of the summit was “a binding U.N. framework” and a binding review mechanism to close the gap between the impact on global warming of promised measures and the work required to limit rising temperatures.”</p>	<p>- German Chancellor Angela Merkel</p> 
	<p>“Climate justice demands that the little carbon space we still have, developing countries should have enough room to grow.”</p> <p>- Prime Minister Narendra Modi</p>

Climate change is always perceived as an environmental or physical problem, but the solution of this problem lies in unknotting an array of ethical issues.

### How is Climate Change an ethical issue?

Multiple stakeholders with varied interests have shared a global common for a long time. This has made climate change an issue of ethics and justice on several fronts-

- **Who should take the responsibility?:** It is a problem that is being caused by some people and nations in one part of the world who are putting other people and nations at great risk in another part of the world who have often done little to cause the problem. For instance, the North- South debate on the responsibility of climate change.
- **Who will protect the worst affected?:** The possible harms to those at most risk are not mere inconveniences but potential catastrophic harms to life, health, and natural resources on which life depends.
- **Should efforts be based on ability?:** Climate change is a problem about which many of those people most at risk can do little to protect themselves. Therefore, the best hope for them is if developed nations do the heavy lifting.
- **Pursuing National interest or climate justice?:** A global solution to climate change requires all nations and peoples to limit their greenhouse gas (GHG) emissions to their fair share of safe global emissions. But this fair share may not be in their national interests like economic development.

- **What is our intergenerational obligation?:** With Climate Change, we as a generation impose risks on future generations. This presses the issue of how to balance the rights' claims of those alive today against the rights' claims of future generations.

There is no certain answer to these ethical dilemmas. But what is certain is that without navigating these ethical questions, it would be very difficult to arrive at any collective action.

### **Climate Change Negotiations (CCNs) and its ethics**

The discussions under the Climate Change Negotiations (CCNs) have churned out some principles of climate action which help answer the above questions –

- **Common but differentiated responsibility (CBDR)/Ability to pay:** The principle balances, on the one hand, the need for all states to take responsibility for global environmental problems and, on the other hand, the need to recognize the wide differences in levels of economic development between states.
  - For instance, Canada's and Mexico's emission targets would be different despite having similar emission levels. This would be due to the gulf in their development levels.
- **Idea of equal per capita emissions:** The principle states that everyone has an equal claim to the atmosphere implying that everyone should have an equal share of the available emissions permits.
- **Polluter pays principle:** The idea states that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment.
- **Beneficiary pays principle:** It states that those who gain an advantage by disadvantaging others have a duty to rectify that disadvantage.
  - For example, a driver who uses gasoline has benefitted from generating GHG emissions, but he pollutes the environment and hence he has a duty towards reduction of pollution.

These principles have helped the discussion move forward. But translation of these principles into practice has been limited.

### **Are our current climate policies just?: Bringing Glasgow Climate Pact under the scanner**

Just climate policies or **Climate Justice** relates the effects of climate change to concepts of justice, particularly environmental justice and social justice and by examining issues such as equality, human rights; collective rights, and the historical responsibilities for climate.

The COP 26 asked the national governments to come next year with tougher pledges, made pledges in newer areas and completed the rules on carbon trading. But these **incremental changes may not be enough to ensure climate justice** because-

- **The Pact is not enough to keep temperatures below 1.5 degrees:** By not targeting the 1.5-degree mark, we are allowing permanent damage that endangers our human rights and breaches our obligation to the future generations.
- **The Pact fails to deliver on loss and damage:** The failure to agree on loss and damage leaves the most vulnerable states and communities to bear the brunt of climate change. The developed and wealthier states have again shied away from their historical responsibilities.
- **The complexity and urgency of phasing out fossil fuels isn't properly addressed:** The pact talks about phasing out fossil fuels but fails to comment on timeline and does not incorporate equitable phasing out between developed and developing countries.

The COP 26, like many of its predecessors did not fulfill the expectations from it. The lack of consensus among the countries stems from the fact that there is no mutual agreement on what principles will act as a base for climate actions.

### **How can we make Climate Change policies more ethical and just?**

In order to help Member States and other stakeholders to make appropriate decisions and implement effective policies **UNESCO adopted a Declaration of Ethical Principles in relation to Climate Change-**

- **Prevention of harm:** To better anticipate the consequences of climate change and implement responsible and effective policies to mitigate and adapt to climate change.



- **Precautionary approach:** To not postpone the adoption of measures to prevent or mitigate the adverse effects of climate change on the grounds of a lack of definitive scientific evidence.
- **Equity and justice:** Respond to climate change in a way that benefits all, in the spirit of justice and equity.
  - Allow those who are unjustly affected by climate change (due to insufficient measures or inadequate policies) to access judicial and administrative proceedings, including redress and remedy.
- **Sustainable development:** Adopt new paths for development that make it possible to sustainably preserve our ecosystems, while building a more just and responsible society that is more resilient to climate change.
  - **Special attention** must be paid to areas where the **humanitarian consequences of climate change can be dramatic**, such as food, energy, water insecurity, the oceans, desertification, land degradation and natural disasters.
- **Solidarity:** Support, individually and collectively, the people and groups most vulnerable to climate change and natural disasters, particularly in the Least Developed Countries (LDCs) and Small Island Developing States (SIDS).
  - Strengthen timely co-operative action in various areas, including technology development and transfer, knowledge-sharing and capacity-building.
- **Scientific knowledge and integrity in decision-making:** Strengthen the interface between science and policy to optimally aid decision-making and the implementation of relevant long-term strategies, including risk prediction.
  - Promote the independence of science and widely disseminate its findings to as many people as possible, for the benefit of all.

Internalization and implementation of these principles is the collective responsibility of all nations. The urgency of their implementation is aptly described by the statement of Palau President Surangel Wipps Jr. on Climate Change- "**Leaders of the G20, we are drowning and our only hope is the life-ring you are holding. You must act now. We must act together.**"



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# 10. SCHEMES IN NEWS

## 10.1. PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

### Why in news?

Cabinet Committee on Economic Affairs has approved the continuation of Pradhan Mantri Gram Sadak Yojana (PMGSY) for completion of balance road and bridge works till 2022.

### About PMGSY

Objectives	Key Features
<ul style="list-style-type: none"> <li>To provide connectivity, by way of a single all-weather road to eligible unconnected habitations in the rural areas.</li> <li>To uplift the socio-economic condition of the rural population.</li> </ul>	<ul style="list-style-type: none"> <li><b>Programme Unit</b> <ul style="list-style-type: none"> <li>Unit taken for the scheme is <b>Habitation and not Revenue Village/Panchayat</b>.</li> <li>Habitation with population size 500+ in plain areas.</li> <li>250+ in North-East and Himalayan states</li> <li>100+ in Left Wing Extremism Affected Areas</li> </ul> </li> <li><b>Planning and maintenance of roads</b> <ul style="list-style-type: none"> <li>The preparation of the District Rural Roads Plan as well as the Core Network are <b>placed before the Panchayati Raj Institutions (PRIs) for approval</b>.</li> <li>Roads constructed under the PMGSY are <b>maintained by PRIs</b> also.</li> </ul> </li> <li><b>Technical standards:</b> The roads under the PMGSY are designed and executed as per the standards laid down the <b>Indian Roads Congress</b>.</li> <li><b>Promotion of Green Technology:</b> like Cold Mix Technology, use of fly ash and geo textiles, Zycosoil Nanotechnology, use of copper slag etc.           <ul style="list-style-type: none"> <li>Locally available materials are used in road construction in order to promote cost-effective and fast construction.</li> </ul> </li> <li><b>3-Tier Quality assurance mechanism</b> <ul style="list-style-type: none"> <li>Concerned Executive Engineer is the first tier</li> <li>At state-level, an independent agency is required to verify road quality.</li> <li>At National-level, <b>National Rural Roads Development Agency</b> (under Ministry of Rural Development) inspects the road works.</li> </ul> </li> </ul> <p><b>Achievements under PMGSY</b></p> <ul style="list-style-type: none"> <li><b>Under PMGSY-II</b> consolidation of 50,000 Km of existing rural road network was envisaged.           <ul style="list-style-type: none"> <li>Only 4,240 Km road length is balance.</li> </ul> </li> <li><b>Under Road Connectivity Project for Left Wing Extremism Affected Areas (launched in 2016)</b> <ul style="list-style-type: none"> <li>Road and bridge work to be taken up under the scheme have been identified by the <b>Ministry of Home Affairs in consultation with states and security forces</b>.</li> <li><b>4,490 Km road length (out of identified 5,412 Km road length)</b> has already been completed. Balance works to be completed by <b>2023</b>.</li> </ul> </li> </ul>

## 10.2. DAIRY SAHAKAR SCHEME

### Why in news?

Recently, Union Ministry of Cooperation launches the "Dairy Sahakar" scheme at Anand, Gujarat

Objectives	Salient Features
<ul style="list-style-type: none"> <li>It aims for realization of the vision 'from cooperation to prosperity' and <b>supplement the existing efforts to strengthen the dairy sector</b> in India within the overall objectives of <b>"Doubling the farmers income"</b> and <b>"Atmanirbhar Bharat"</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Under "Dairy Sahakar", with an outlay of ₹5,000 crore, the dairy sector would get loans through National Cooperative Development Corporation (NCDC).           <ul style="list-style-type: none"> <li>NCDC is an <b>apex level statutory autonomous institution set up by the Government of India under an Act of the Parliament in 1963</b> exclusively for cooperatives at primary, district, apex / multi-state and national level.</li> <li><b>NCDC is under the administrative control of Ministry of Cooperation</b>.</li> </ul> </li> <li>Financial support will be extended by NCDC to <b>eligible cooperatives</b> for activities such as <b>bovine development, milk procurement, processing, quality assurance, value addition etc.</b></li> </ul>

- Financial support by NCDC will **also cover supporting activities and services**, such as, renewable energy, ICT, manufacturing of cattle feed / feed supplements, R&D, PET bottle/packaging material manufacturing, manufacturing of dairy equipment and machinery, dairy related maintenance services, manufacturing of veterinary drugs, etc.
- **Convergence:** There will also be a **convergence with various schemes** of Government of India and / or of State Government/UT Administration/ Development agencies/ bilateral/multilateral assistance/ CSR
- **Project Cost:** There is **no minimum or maximum cap on project cost** in case of viable proposals by eligible cooperative societies directly or through State Govt/UT with financial and operational performance as per NCDC guidelines.
  - The project cost includes infrastructure, margin money and working capital.
- **Loan Period:** The period of loan will **normally be 5 to 8 years, including 1 to 3 years of moratorium on repayment of principal**, depending on type of project and revenue streams.

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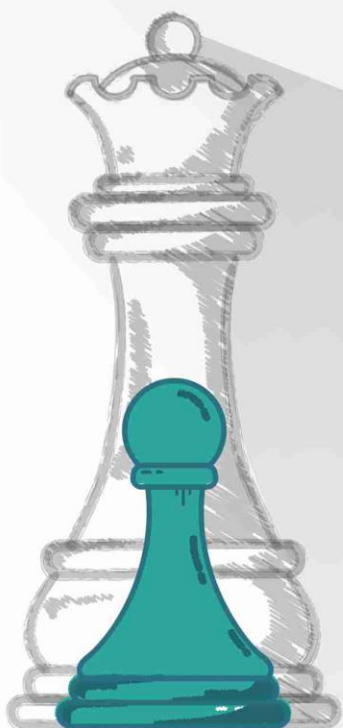


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# 11. APPENDIX I: TRIBAL REVOLTS

## MAINLAND TRIBAL REVOLT

Name	Place of Origin	Events	Outcome
<p>Pahariyas (1778)</p> 	Raj Mahal Hills	<ul style="list-style-type: none"> <li>▶ <b>British expansion on their territory</b> led to an uprising by the martial Pahariyas.</li> </ul>	▶ British were forced to usher in peace by declaring their territory as damni-kol area.
<p>Chuar Uprising (also called Revolt of the Jungle Mahal)</p> 	In Midnapore district between 1776 – 1772 and 1795 – 1816.	<ul style="list-style-type: none"> <li>▶ <b>Famine, enhanced land revenue demands and economic distress</b> forced Chuar tribesmen to take up arms.</li> <li>▶ The most significant uprising was under Durjan Singh in 1798.</li> </ul>	▶ The revolt was brutally suppressed by the British.
<p>Kol Uprising (1831)</p> 	At Chhotanagpur	<ul style="list-style-type: none"> <li>▶ <b>Large-scale transfers of land from Kol headmen to outsiders</b> like Hindu, Sikh and Muslim farmers and money-lenders.</li> <li>▶ <b>British judicial and revenue policies</b> affected traditional social conditions of the Kols.</li> <li>▶ <b>Famous leader: Buddho Bhagat</b></li> </ul>	▶ British were forced to usher in peace by declaring their territory as damni-kol area.
<p>Ho and Munda Uprisings (1820-1837)</p> 	Singhbhum	<ul style="list-style-type: none"> <li>▶ The <b>Raja of Parahat organised Ho tribals</b> to revolt against occupation.</li> <li>▶ Later in 1831, they joined Mundas to protest against new farming revenue policy and entry of Bengalis.</li> </ul>	▶ The revolt was extinguished in 1832, but Ho operations continued till 1837.
<p>Santhal Rebellion (1855-56)</p> 	Rajmahal Hills	<ul style="list-style-type: none"> <li>▶ <b>Money-lenders with support of police and zamindars</b> subjected peasants to oppressive exactions and dispossession of lands.</li> <li>▶ <b>Under Sidhu and Kanhu, two brothers, the Santhals proclaimed an end to Company rule</b>, and declared the area between Bhagalpur and Rajmahal as autonomous.</li> </ul>	▶ Prolonged military action by Warren Hastings to control the revolt.
<p>Khond Uprising (1837-1856)</p> 	Odisha to Srikakulam and Visakhapatnam	<ul style="list-style-type: none"> <li>▶ <b>Chakra Bisoi, a young raja, led the Khonds</b> to oppose the suppression of human sacrifice, new taxes, and the entry of zamindars into their areas.</li> <li>▶ Another revolt was triggered in 1914 in the Orissa region by the hope that foreign rule would end and they could gain an autonomous government.</li> </ul>	▶ Later with Chakra Bisoi's disappearance, the uprising came to an end.

Name	Place of Origin	Events	Outcome
<b>Koya Revolts</b> (1803,1840,1845 ,1858,1861,1862) and (1879-80) 	Eastern Godavari Track	<ul style="list-style-type: none"> <li>▶ Their complaints were oppression by police and moneylenders, new regulations and denial of their customary rights over forest areas.</li> </ul>	<ul style="list-style-type: none"> <li>▶ British were forced to usher in peace by declaring their territory as damni-kol area.</li> </ul>
<b>Bhil Revolts</b> (1817-19) 	Lived in the Western Ghats and controlled the mountain passes between the north and the Deccan	<ul style="list-style-type: none"> <li>▶ Revolted as they had to face famine, <b>economic distress and misgovernment.</b></li> <li>▶ Bhils revolted again in 1825, 1831 and in 1846.</li> <li>▶ Govind Guru helped the Bhils of south Rajasthan to organise themselves to fight for a Bhil Raj by 1913.</li> </ul>	<ul style="list-style-type: none"> <li>▶ British used both force and conciliatory efforts to control the uprising.</li> </ul>
<b>Koli Risings</b> (1829, 1839 and 1844-48) 	Neighbourhood of Bhils	<ul style="list-style-type: none"> <li>▶ <b>Resented the imposition of Company's rule</b> which brought with it large-scale unemployment for them and the dismantling of their forts.</li> </ul>	
<b>Ramosi Risings</b> 	Hill tribes of the Western Ghats	<ul style="list-style-type: none"> <li>▶ <b>Had not reconciled to British rule</b> and the British pattern of administration.</li> <li>▶ They resented the policy of annexation.</li> <li>▶ They <b>rose under Chittur Singh in 1822</b> and plundered the country around Satara.</li> </ul>	<ul style="list-style-type: none"> <li>▶ A superior British force restored order in the area. Generally the British followed a pacifist policy towards the Ramosis.</li> </ul>
<b>Munda Revolt</b> (1899-1900) 	Chhotanagpur	<ul style="list-style-type: none"> <li>▶ The rebellion began as a religious movement but gathered political force for fight against feudal, zamindari tenures, and exploitation by money-lenders.</li> </ul>	<ul style="list-style-type: none"> <li>▶ British armed forces were then deployed at Chhotanagpur.</li> <li>▶ Birsa was captured and imprisoned.</li> </ul>
<b>Other revolts</b> 	<ul style="list-style-type: none"> <li>▶ <b>Naikada Movement</b> (1860s; Madhya Pradesh and Gujarat); against British and caste Hindus.</li> <li>▶ <b>Kharwar Rebellion</b> by the Kharwars (1870s; Bihar); against revenue settlement activities.</li> <li>▶ <b>Bastar Revolt</b> (1910; Jagdalpur); against new feudal and forest levies.</li> <li>▶ <b>Tana Bhagat Movements</b> among the Mundas and Oraon tribes led by Jatra Bhagat, Balram Bhagat (1914-1915; Chottanagpur); against interference of outsiders; began as Sanskritisation movement.</li> <li>▶ <b>Rampa Revolts led by Alluri Sitarama Raju</b> of the Koyas (1916, 1922-1924; Rampa region in Andhra Pradesh); against British interference.</li> <li>▶ <b>Gond Uprising</b> (1940s) to bring together the believers of Gonddharma</li> </ul>		

# TRIBAL MOVEMENTS OF THE NORTH-EAST

Name	Place of Origin	Events	Outcome
<b>Ahom Revolt (1828)</b> 	Assam	<ul style="list-style-type: none"> <li>▶ British did not fulfil their promise to withdraw after First Burma War (1824-26).</li> <li>▶ Rebellion sparked <b>under the leadership of Gombhar Konwar</b> in</li> </ul>	▶ Uprising was suppressed by the Company by dividing the kingdom.
<b>Khasi Uprising (1833)</b> 	Garo and Jaintia Hills	<ul style="list-style-type: none"> <li>▶ British wanted to develop a road which led to influx of labourers from outside.</li> <li>▶ The tribes organized themselves under Tirath Singh.</li> </ul>	▶ English military suppressed the revolt.
<b>Other Major Movements</b> 	<ul style="list-style-type: none"> <li>▶ <b>Singphos' Rebellion</b> (1830s; Assam)</li> <li>▶ <b>Kukis' Revolt</b> (1917-19; Manipur); against British policies of recruiting labour during the first World War.</li> <li>▶ <b>Revolts in Tripura</b>; against hike in house tax rates and against settlement of outsiders in the region (1863, 1942-43, 1920's).</li> <li>▶ <b>Zeliangsong Movement</b> (1920s; Manipur); led by the Zemi, Liangmei and Rongmei tribes;</li> <li>▶ <b>Naga movement</b> (1905-31; Manipur); led by Jadonang; against British rule and for setting up of a Naga raj.</li> <li>▶ <b>Heraka Cult</b> (1930s; Manipur); <b>led by Gaidinliu</b>; the movement was suppressed but Kabui Naga Association was formed in 1946.</li> </ul>		

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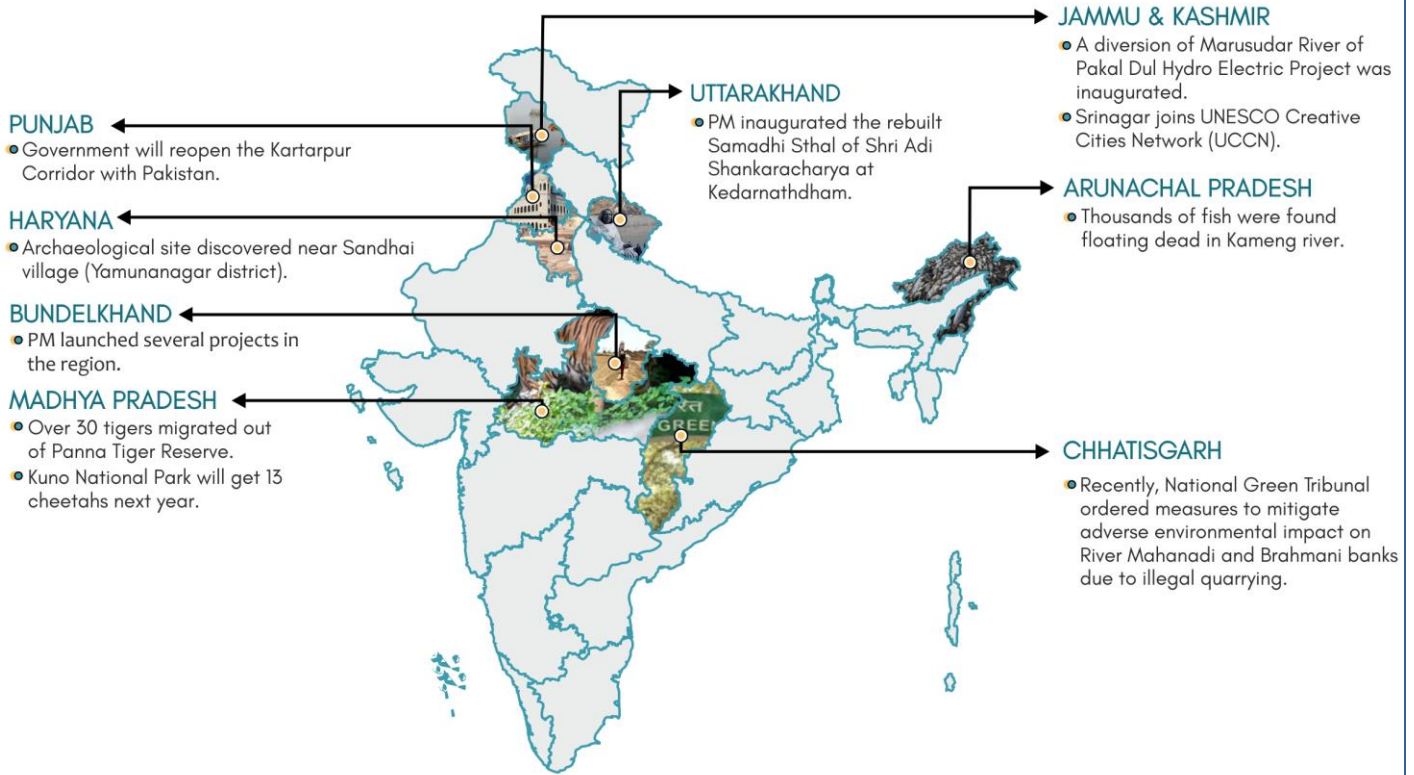
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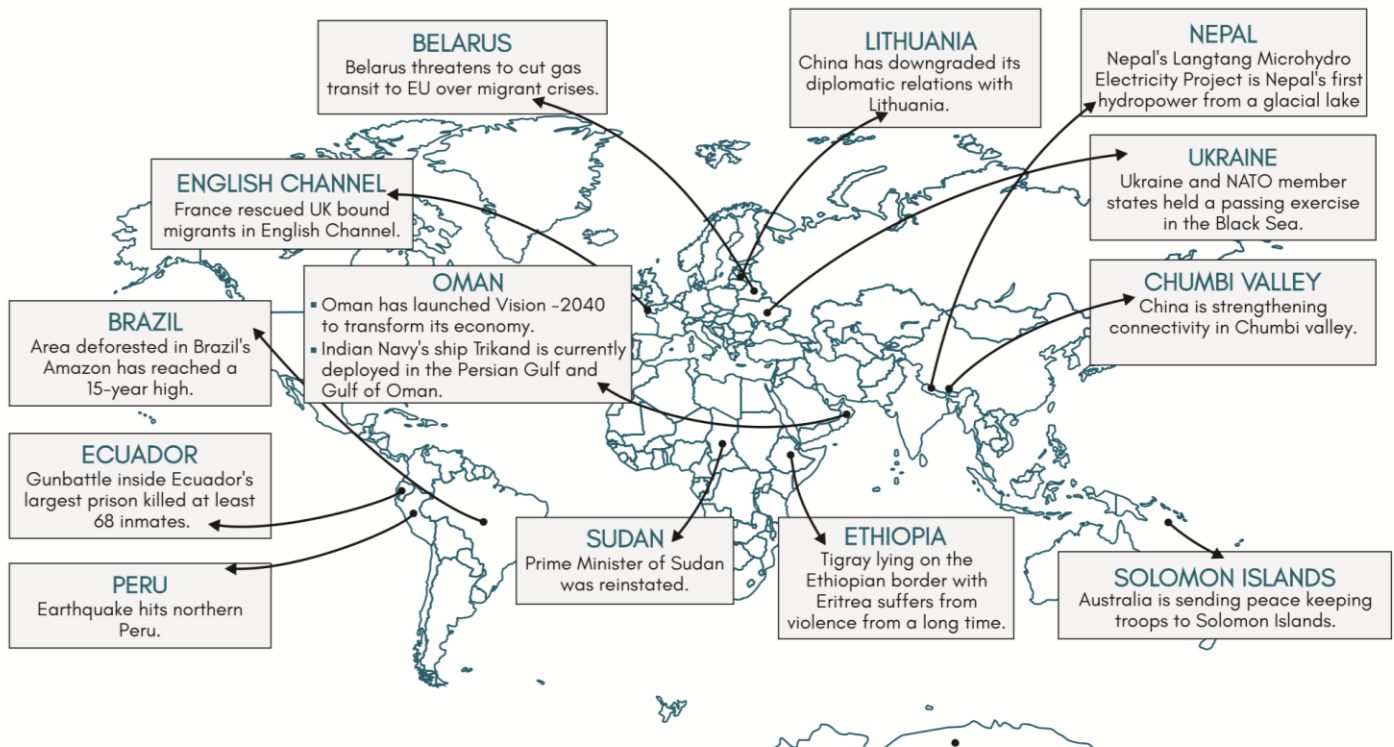
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## Personalities in News

Personality	About	Ethical Values Exhibited by the personality
 <p>Rani Kamalapati</p>	<ul style="list-style-type: none"> <li>Rani Kamalapati was a <b>Gond Queen</b> and daughter of Raja Kirpal Singh of Salkanpur (Sehore). <ul style="list-style-type: none"> <li>Gond are one of the <b>largest tribal communities in India</b>, spread across Madhya Pradesh, Maharashtra, Chhattisgarh, Andhra Pradesh, Telangana, Bihar and Odisha.</li> </ul> </li> <li>She was <b>married to Nizam Shah of Ginnorgarh</b>, son of Suraj Singh Shah, who built Kamalapati Palace of Bhopal in her name.</li> <li>She was a <b>skillful warrior and fought battles</b> along with her father and husband and ruled the then Ginnorgarh till her <b>death in 1723</b>.</li> </ul>	<ul style="list-style-type: none"> <li><b>Valour</b> <ul style="list-style-type: none"> <li>She fought for honour against powerful Afghan warlord when he wanted to annex her for marriage.</li> </ul> </li> </ul>
 <p>Devasahayam Pillai</p>	<ul style="list-style-type: none"> <li>18<sup>th</sup> Century, Devasahayam Pillai (Blessed Lazarus) will be granted a <b>sainthood by the Vatican Roman-Catholic church</b>.</li> <li>He will be the first <b>layperson (a non-ordained member of a Church) from India to attain sainthood</b>.</li> <li>He became a Catholic in 1745, a few years after coming into contact with a captain from the Dutch East India Company while serving the royal house of Travancore.</li> <li>Pillai took the <b>Christian name Lazarus</b>, but later came to be known as Devasahayam (God's help).</li> <li>He was preacher of equality of all people despite caste differences.</li> </ul>	<ul style="list-style-type: none"> <li><b>Conviction of belief</b> <ul style="list-style-type: none"> <li>He sacrificed his life for his beliefs about the equality of humankind and his struggle to end caste based distinctions.</li> </ul> </li> </ul>
 <p>Onake Obava</p>	<ul style="list-style-type: none"> <li>'Onake' Obava is hailed as a woman who fought the forces of Hyder Ali in Chitradurga Fort, which was ruled by Madakari Nayaka in the 18<sup>th</sup> century.</li> <li>Folklore has it that she fought using an 'onake' or pestle (a wooden long club meant for pounding paddy grains).</li> <li>She is <b>celebrated in Karnataka</b> along with Abbakka Rani, Keladi Chennamma and Kittur Chennamma, as the foremost women warriors and patriots.</li> </ul>	<ul style="list-style-type: none"> <li><b>Valour</b> <ul style="list-style-type: none"> <li>She single handedly halted the army of advancing enemies and later lead her army to victory against Hyder Ali.</li> </ul> </li> </ul>
 <p>Madan Mohan Malviya</p>	<ul style="list-style-type: none"> <li>Born at Prayagraj (earlier Allahabad), he was a famed <b>freedom fighter and educationist</b>, famously known as Mahamana.</li> <li><b>Role in Indian National Congress (INC):</b> was INC President in 24<sup>th</sup> (1909) and 33<sup>rd</sup> (1918) Session at Lahore and Delhi respectively. <ul style="list-style-type: none"> <li>Was President in 1932 and 1933 as well but due to his arrest, he could not preside.</li> </ul> </li> <li><b>Major contribution and achievements</b> <ul style="list-style-type: none"> <li>Worked as an editor of the <b>Hindustan</b> and started <b>Abhyudaya</b> (Hindi weekly) in 1907, <b>Maryada</b> (Hindi monthly) in 1910 and <b>The Leader</b> (English Daily) in 1909.</li> <li>Founded <b>Hindu Mahasabha</b> in 1906 and served as a member of the <b>Imperial Legislative Council</b>.</li> <li>In 1916, he founded <b>Banaras Hindu University</b>.</li> <li>Honoured with <b>Bharat Ratna</b> (posthumously) in 2015.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Commitment and Patriotism</b> <ul style="list-style-type: none"> <li>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.</li> <li>He left his high-earning job for the sake of nation and started working for political cause of national awakening and independence.</li> </ul> </li> </ul>
 <p>Birsa Munda</p>	<ul style="list-style-type: none"> <li>Birsa Munda, also known as <b>Bhagwan Birsa Munda</b> or Dharti Aaba, was born in <b>Munda tribe</b> at Khunti district of Chotanagpur Plateau region (Jharkhand).</li> <li>After initial conversion to Christianity and education from a missionary school, soon he realised the <b>exploitation of local tribes by British and Zamindars</b>, also known as Dikus or outsiders.</li> <li>He fought for the <b>identity and rights of the tribal people</b> and started <b>Birsait sect</b> to end religious conversions and mobilised the tribal community against the British, 'Munda Rebellion'.</li> <li>This helped in the <b>Chhotanagpur Tenancy Act of 1908</b>, recognising tribal Khuntkatti rights and banned bethbegari.</li> </ul>	<ul style="list-style-type: none"> <li><b>Fortitude and Vision</b> <ul style="list-style-type: none"> <li>He was a visionary who played a crucial role in the liberation of his community.</li> <li>He was an Indian tribal freedom fighter who showed extraordinary courage by leading the revolts of his tribesman against the Britishers and powerful landlords.</li> </ul> </li> </ul>
 <p>Pandurang Mahadev Bapat</p>	<ul style="list-style-type: none"> <li>Popularly known as '<b>Senapati Bapat</b>,' he is famous figure of the <b>Indian Independence movement</b>.</li> <li>Born on 12 November 1880, Bapat was raised in a lower-middle-class Chitwapan Brahmin family in the <b>Parner town of Ahmednagar district, Maharashtra</b>.</li> <li>Bapat was called '<b>senapati</b>' or 'commander' for his leadership during the <b>Mulshi satyagraha</b> (world's first anti-dam movement) in 1921 leading to "first recorded organised struggle against the forced displacement" of farmers.</li> <li>In 1904, after passing out of college, he earned a scholarship and left for England to study at Heriot-Watt College in Edinburgh.</li> </ul>	<ul style="list-style-type: none"> <li><b>Patriotic zeal</b> <ul style="list-style-type: none"> <li>Throughout his life he involved himself in revolutionary and nationalist acts against the Britishers.</li> </ul> </li> </ul>
 <p>Salim Ali</p>	<ul style="list-style-type: none"> <li>12<sup>th</sup> November is the 125<sup>th</sup> Birth Anniversary of Salim Ali popularly known as "<b>Birdman of India</b>".</li> <li>Contrary to <b>Gandhian Idea of Ahimsa (Non-Killing)</b>, Salim Ali had took practical and pragmatic approach for long-term conservation (killing birds for research).</li> <li>Played a crucial role in the <b>setting up of the Bharatpur Bird Sanctuary (Rajasthan)</b>, and conservation of <b>Silent Valley National Park (Kerala)</b>.</li> <li>He was associated with <b>Bombay Natural History Society</b> (Mumbai based non-government for conservation and pan-India wildlife research)</li> <li>Published '<b>The Book of Indian Birds</b>'. Later on, wrote '<b>Handbook of The Birds of India and Pakistan</b>'- most comprehensive documentation of birds of the subcontinent.</li> <li>Got <b>Padma Vibhushan</b> in 1976.</li> <li>First non-British to receive the <b>Gold Medal of the British Ornithologists' Union</b> in 1967.</li> </ul>	<ul style="list-style-type: none"> <li><b>Conservation and Naturalism</b> <ul style="list-style-type: none"> <li>He received an international award of ₹5 lakh for his contribution in protecting nature. Instead of keeping the money, he donated all the money to Bombay Natural History Society.</li> </ul> </li> </ul>



 <p><b>Rani Kamalapati</b></p>	<ul style="list-style-type: none"> <li>The Rani Gaidinliu Tribal Freedom Fighters Museum was inaugurated in Manipur</li> <li>Rani Gaidinliu was born in Rongmei tribe of Manipur, she joined the freedom struggle when she was 13.</li> <li>She was at the forefront of Heraka movement, which aimed at revival of Naga tribal religion and establishment of self-rule of Nagas. (Similar to Non-cooperation Movement). <ul style="list-style-type: none"> <li>She was arrested in 1932 and was released only after India's Independence in 1947.</li> </ul> </li> <li>Jawaharlal Nehru described Gaidinliu as the "daughter of the hills" and gave her the title of 'Rani' for her courage.</li> </ul>	<ul style="list-style-type: none"> <li><b>Courage</b> <ul style="list-style-type: none"> <li>She showed extraordinary courage by becoming the leader of a self - rule movements by her community.</li> </ul> </li> </ul>
 <p><b>Chaudhary Harmohan Singh Yadav</b></p>	<ul style="list-style-type: none"> <li>He was an educationist, social worker, independence activist and a politician.</li> <li>In 1991, he received Shaurya Chakra for his exceptional gallantry and fearlessness during 1984 anti-Sikh riots.</li> <li><b>Important values:</b> <ul style="list-style-type: none"> <li><b>Communal harmony:</b> He saved countless lives during 1984 anti-Sikh riots.</li> <li><b>Simplicity and an inspiration for public service:</b> He strove to bring happiness in the lives of the people, particularly those living on the margins and the farmers.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Simplicity and Public service</b> <ul style="list-style-type: none"> <li>He worked for the rights of common people particularly the marginalised ones like peasants and labourers.</li> </ul> </li> </ul>
 <p><b>Dr. Verghese Kurien</b></p>	<ul style="list-style-type: none"> <li>National Milk Day has been observed across India since 2014 on November 26 in memory of the father of the white revolution, Dr. Verghese Kurien.</li> <li>He transformed India into the largest milk producer in the world from a milk-deficient country.</li> <li>He was honoured with Padma Vibhushan, World Food Prize, Ramon Magsaysay Award, etc.</li> <li><b>Values:</b> Leadership, dedication.</li> <li><b>Significant contribution:</b> <ul style="list-style-type: none"> <li>Led the Operation Flood,</li> <li>Established the National Dairy Development Board (NDDB),</li> <li>Founded the Institute of Rural Management Anand (IRMA) in 1979</li> <li>Managed the Delhi Milk Scheme.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Practical idealism</b> <ul style="list-style-type: none"> <li>His efforts and vision single handedly revived the tradition of cooperatives for millions of families in Gujarat and gave them a sustainable source of livelihood for generations to come.</li> </ul> </li> </ul>
 <p><b>Babasaheb Purandare</b></p>	<ul style="list-style-type: none"> <li>He was an eminent historian and author popularly known as Shiv Shahir (Shivaji's Bard) for his work on the history of Chhatrapati Shivaji Maharaj.</li> <li>He wrote several books on him and as a theatre personality, he directed 'Jaanta Raja', a popular play on Shivaji Maharaj life and leadership.</li> <li>He was awarded with Padma Vibhushan in 2019.</li> </ul>	<ul style="list-style-type: none"> <li><b>Creativity and Pride</b> <ul style="list-style-type: none"> <li>His plays made a great impression in the minds of people as they connected them to their culture and their illustrious past.</li> </ul> </li> </ul>
 <p><b>Krishnammal Jagannathan</b></p>	<ul style="list-style-type: none"> <li>She was awarded the Padma Bhushan recently.</li> <li><b>Values:</b> Follower of Gandhian principles (non-violence, Satyagraha, Sarvodya etc.) fight against social fought injustice.</li> <li><b>Significant contribution</b> <ul style="list-style-type: none"> <li>She has worked alongside Mahatma Gandhi and Vinoba Bhave for the causes of social equality and empowerment.</li> <li>She founded Land for Tillers' Freedom (LAFTI), an organization to purchase the land from the landlords and distribute it equitably among the landless dalits.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Crusader of social justice</b> <ul style="list-style-type: none"> <li>She tirelessly worked for economic and social empowerment of oppressed communities in the society.</li> </ul> </li> </ul>
 <p><b>Dr. Narinder Singh Kapany</b></p>	<ul style="list-style-type: none"> <li>The President has posthumously conferred the Padma Vibhushan, the second-highest civilian award in India, to Dr. Narinder Singh Kapany.</li> <li>He is considered as the "father of fibre optics".</li> <li>He was the first to transmit images through fiber optics back in 1954 and laid the foundation for high speed internet technology.</li> <li>He worked in fields of lasers, biomedical instrumentation, solar energy and pollution monitoring.</li> <li>He received 'The Excellence 2000 Award' from the USA Pan-Asian American Chamber of Commerce in 1998.</li> <li>He was a fellow of British Royal Academy of Engineering, the Optical Society of America and the American Association for the Advancement of Science.</li> </ul>	<ul style="list-style-type: none"> <li><b>Pioneering innovation</b> <ul style="list-style-type: none"> <li>His contribution is vital in the development of data communication as he pioneered the use of fibre optics for transmitting information.</li> </ul> </li> </ul>
 <p><b>Tulasi Gowda</b></p>	<ul style="list-style-type: none"> <li>Environmentalist Tulasi Gowda was conferred with the Padma Shri Award recently.</li> <li>She belongs to Halakki tribe in Karnataka and is also known as the "Encyclopedia of Forest" due to her vast knowledge of diverse species of plants and herbs.</li> <li>She has planted over 30,000 saplings in her lifetime.</li> </ul>	<ul style="list-style-type: none"> <li><b>Naturalism</b> <ul style="list-style-type: none"> <li>She made conserving nature and its flora-fauna as her foremost passion.</li> </ul> </li> </ul>
 <p><b>Nripendra Misra</b></p>	<ul style="list-style-type: none"> <li>He is a retired IAS officer who was awarded Padma Bhushan award for 2021.</li> <li><b>Values:</b> Impeccable integrity and hard work, result-oriented, decisive, efficient and tough taskmaster.</li> <li><b>Significant Contribution</b> <ul style="list-style-type: none"> <li>Served as the Principal Secretary to the PM.</li> <li>Received Order of the Rising Sun, Gold and Silver Star in recognition of his contributions to strengthening the economic relationship between Japan and India.</li> <li>Appointed chairman of Ram Mandir construction committee.</li> <li>Worked as Chairperson of Telecom Regulatory Authority of India (TRAI).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Impeccable integrity and Hard work</b> <ul style="list-style-type: none"> <li>All through his career, he proved to be result-oriented, decisive, efficient and tough taskmaster.</li> </ul> </li> </ul>

 <p>Harekala Hajabba</p>	<ul style="list-style-type: none"> <li>• He is an orange vendor from Mangaluru (Karnataka) who was conferred with the Padma Shri Award recently.</li> <li>• Popular as Akshara Santa (Letter Saint), Hajabba saved money from his earnings to build a school for underprivileged children in his village Harekala-Newpadpu.</li> </ul>	<ul style="list-style-type: none"> <li>• Public consciousness <ul style="list-style-type: none"> <li>▶ His desire was to create a better world for disadvantaged children, he devoted his savings for the cause of educating them.</li> </ul> </li> </ul>
 <p>Rahibai Popere</p>	<ul style="list-style-type: none"> <li>• Rahibai Popere received Padma Shri for her work that has helped save hundreds of landraces (wild varieties of commonly grown crops) at the village level.</li> <li>• She is popularly known as 'Seed-mother' and signifies that with proper agricultural practices, landraces can give better yield with lower input costs.</li> <li>• Despite lack in formal school education and belonging to tribal community, she has a sense of compassion and community service. <ul style="list-style-type: none"> <li>▫ Motto of her life is to spread awareness about organic farming, agro-biodiversity and wild food resources</li> </ul> </li> <li>• She has in-situ conservation centre, hyacinth bean diversity centre, kitchen garden.</li> <li>• She is associated with BAIF Development Research Foundation (NGO) a Core Support Group of Department of Science &amp; Technology (DST).</li> </ul>	<ul style="list-style-type: none"> <li>• Wisdom and Care <ul style="list-style-type: none"> <li>▶ Governed by her desire to save the ecology of her region, she devoted her life in preserving and nurturing the rare wild crop species that would have gone extinct otherwise.</li> </ul> </li> </ul>

# CSAT

# कलासेस

# 2022

ENGLISH MEDIUM  
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हिन्दी माध्यम  
22 December

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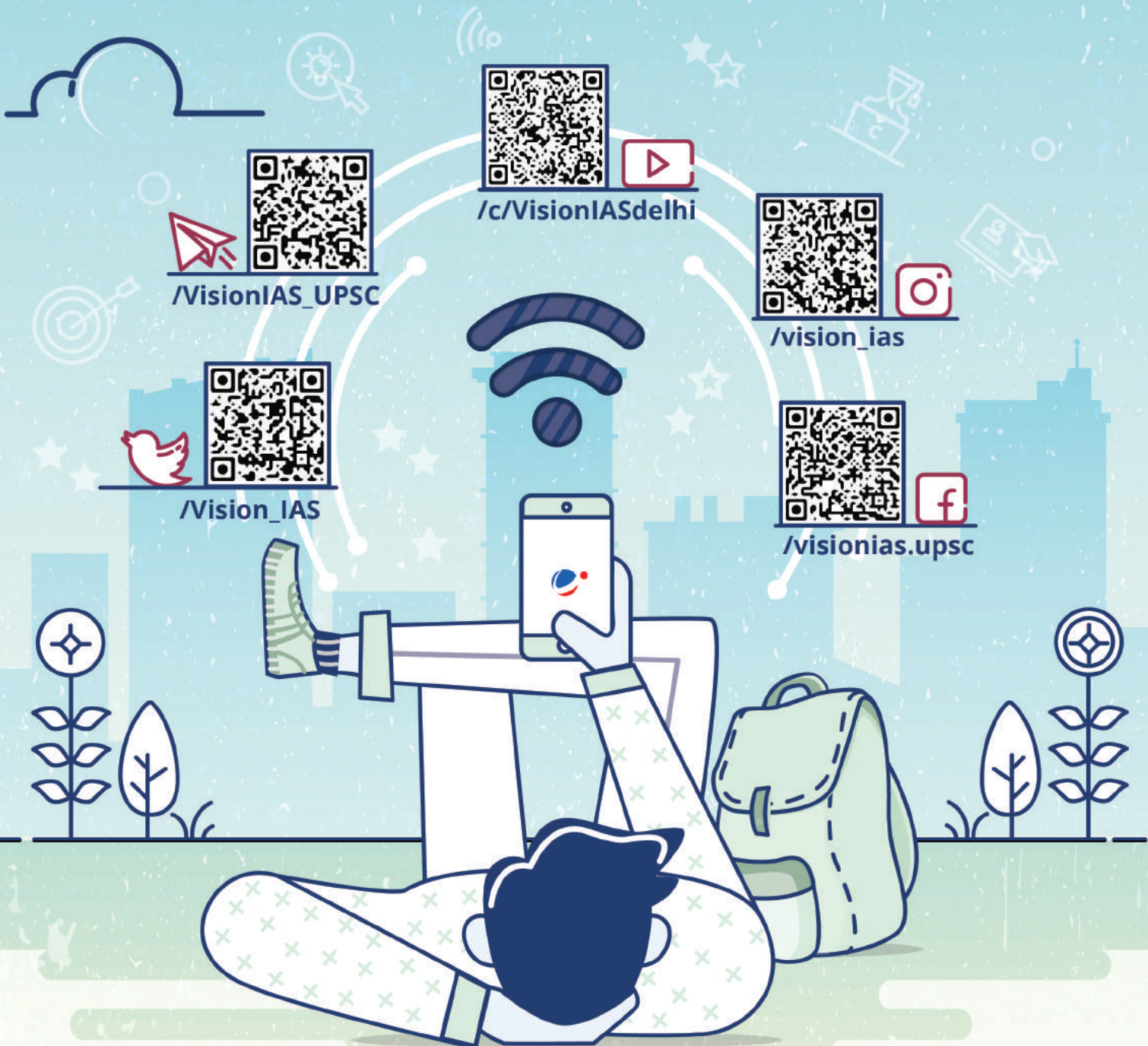
कक्षाएं भी उपलब्ध



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# 10 IN TOP 10 SELECTIONS IN CSE 2020

from various programs of *Vision IAS*



**1**  
AIR

**SHUBHAM KUMAR**  
(GS FOUNDATION BATCH  
CLASSROOM STUDENT)



**2**  
AIR

**JAGRATI AWASTHI**  
(ALL INDIA  
TEST SERIES)



**3**  
AIR

**ANKITA JAIN**  
(ALL INDIA  
TEST SERIES)



**4**  
AIR

**YASH  
JALUKA**  
(ABHYAAS  
TEST SERIES)



**5**  
AIR

**MAMTA  
YADAV**  
(ALL INDIA  
TEST SERIES)



**6**  
AIR

**MEERA  
K**  
(ALL INDIA  
TEST SERIES)



**7**  
AIR

**PRAVEEN  
KUMAR**  
(ALL INDIA TEST SERIES,  
ESSAY TEST, ABHYAAS, PDP)



**8**  
AIR

**JIVANI KARTIK  
NAGJIBHAI**  
(GS FOUNDATION BATCH  
CLASSROOM STUDENT)



**9**  
AIR

**APALA  
MISHRA**  
(ABHYAAS  
TEST SERIES)



**10**  
AIR

**SATYAM  
GANDHI**  
(ALL INDIA TEST  
SERIES, EASSY TEST)



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