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## NOTE:

Dear Students,

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



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



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



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



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

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# 1. POLITY & GOVERNANCE

## 1.1. UNIFORM CIVIL CODE

### Why in news?

Recently, the Supreme Court sought a reply from the Centre on a PIL (Public Interest Litigation) seeking gender and religion-neutral uniform grounds of succession and inheritance for citizens in the country.

#### About the PIL

- This is the fourth PIL in the last three months on issues that constitute together the **spectrum to be covered under the Uniform Civil Code (UCC)**.
  - The earlier three PILs deal with issues of uniform adoption laws, uniform divorce, maintenance and alimony law, and a uniform, gender neutral, minimum age for marriage.

#### About Uniform Civil Code (UCC)

- A UCC refers to a **single law, applicable to all citizens of India in their personal matters** such as marriage, divorce, custody, adoption and inheritance.
- A UCC is intended to **replace the system of fragmented personal laws**, which currently govern interpersonal relationships and related matters within different religious communities.
- Article 44 of the Constitution** lays down that the 'State shall endeavor to secure a Uniform Civil Code for the citizens throughout the territory of India.'
  - Article 44 is one of the **Directive Principles of State Policy**. These, as defined in Article 37, are **not justiciable** (not enforceable by any court) but the principles laid down therein are **fundamental in governance**.

#### Governance of personal laws in India

- At present different religious communities in India are currently **governed by a system of personal laws**. These laws largely focus on the following areas:
  - Marriage and divorce
  - Custody and Guardianship
  - Adoption and Maintenance
  - Succession and Inheritance
- Hindu personal law is codified in four Acts:** the Hindu Marriage Act, Hindu Succession Act, Hindu Minority and Guardianship Act, and Hindu Adoptions and Maintenance Act.
  - The term 'Hindu' also includes Sikhs, Jains and Buddhists for the purpose of these laws.
- Muslim personal law** is not codified per se and is **based on their religious texts**.
- In the Northeast, there are more than 200 tribes with their own varied customary laws. **The Constitution protects local customs in Nagaland, Meghalaya and Mizoram**. Even reformed Hindu law, in spite of codification, protects customary practices.
- Goa is, at present, the only state in India with a uniform civil code.**
  - The **Portuguese Civil Code of 1867** which continues to be implemented after India annexed Goa in 1961, **applies to all Goans, irrespective of their religious or ethnic community**.
  - However, the Portuguese Code is not a completely uniform civil code. It makes certain provisions on religious bases. The most notable example is **Hindu men being allowed bigamy if the wife fails to deliver a child** by the age of 25, or a male child by the age of 30.

Specification	Arguments in favour of UCC	Arguments against UCC
Simplify the Indian legal system	<ul style="list-style-type: none"><li><b>Simplify laws that are segregated</b> at present on the basis of religious beliefs like the Hindu code bill, Shariat law, and others.</li><li><b>Simplify the complex laws around marriage ceremonies, inheritance, succession, adoptions</b> making them one for all.</li><li><b>Same civil law will then be applicable to all citizens</b> irrespective of their faith.</li></ul>	<ul style="list-style-type: none"><li><b>Indian laws do follow a uniform code in most civil matters</b> like Indian Contract Act, Code of Civil Procedure, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act, etc.</li><li>States have made hundreds of amendments and, therefore, in certain matters, <b>there is diversity even under these secular civil laws</b>.</li><li>Therefore, a <b>UCC may not be feasible</b>.</li></ul>
Legislative power of parliament	<ul style="list-style-type: none"><li>Many judicial pronouncements of <b>higher judiciary have favoured UCC</b> in some or the other forms.</li><li><b>Parliament may make a law</b> to make these judicial pronouncements enforceable. Some prominent judgments are:<ul style="list-style-type: none"><li><b>Mohd. Ahmed Khan v. Shah Bano Begum, 1985:</b> The apex court declared that Shah Bano was entitled for</li></ul></li></ul>	<ul style="list-style-type: none"><li><b>Parliament does not have exclusive jurisdiction over personal laws:</b> If the framers of the Constitution had intended to have a Uniform Civil Code, they would have given exclusive jurisdiction to Parliament in respect of personal laws, by including this subject in the Union List.</li><li>But "<b>personal laws</b>" are mentioned in the Concurrent List.</li></ul>

	<p>maintenance even after the completion of the iddat period.</p> <ul style="list-style-type: none"> <li>○ <b>Sarla Mudgal v Union of India, 1995:</b> The apex court reiterated the need for the Parliament to frame a UCC, which would help the cause of national integration by removing contradictions based on ideologies.</li> </ul>	
<b>UCC &amp; Fundamental Rights</b>	<ul style="list-style-type: none"> <li>● <b>Gender Justice:</b> Mostly the religious or customary personal laws are biased in favour of men. Personal laws not only violate the right to life, liberty and dignity, guaranteed under <b>Article 21</b> but also reinforce patriarchal stereotypical notions. Therefore, UCC is need of the hour to bring gender equality.</li> <li>● <b>Religion and personal law are different avenues:</b> In S.R. Bommai v. Union of India, the Apex court upheld that religion is the matter of individual faith and cannot be mixed with secular activities. <b>Secular activities can be regulated by the State by enacting a law.</b></li> </ul>	<ul style="list-style-type: none"> <li>● <b>Secular state should not interfere with the personal law:</b> A UCC is seen, by many, as a contradiction to the fundamental rights guaranteed under <b>Article 25</b> (individual's fundamental right to religion), <b>Article 26(b)</b> (right of each religious denomination to "manage its own affairs in matters of religion), and <b>Article 29</b> (right to conserve distinctive culture).</li> <li>○ Article 25 is subject to "public order, health, morality" and other provisions relating to fundamental rights, but a group's freedom under Article 26 has not been subjected to other fundamental rights</li> </ul>
<b>UCC and country's diversity</b>	<ul style="list-style-type: none"> <li>● <b>Promote national integration:</b> Different laws for different religious groups breed communalism.</li> <li>● Single, secular law governing various aspects of personal matters would arouse a sense of oneness and the national spirit.</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Against the diversity of the country:</b> There has been skepticism whether there could ever be uniformity of personal laws in a democratic and diverse country like India.</li> <li>● <b>Lack of national consensus:</b> UCC still is a politically sensitive issue. There are still many organisations who advocate rights of minorities as well as many religious clerics oppose UCC.</li> </ul>

### Way ahead

- **A Evolution of consensus:** Uniform civil code cannot be imposed as it requires broad consensus. Even the debate of Constituent assembly had noted that it would be unwise to enact Uniform Civil Code ignoring strong opposition from any community. Effective Information, Education and Communication about the significance of an UCC and Article 44 would be helpful in achieving the milestone of national consensus.
- **Reform of personal laws:** In the absence of a consensus on a UCC, the best way forward for India may be to preserve the diversity of personal laws while ensuring that they do not contradict the fundamental rights.
  - **In 2018 the Law Commission of India** in a consultation paper noted that '**a UCC is neither necessary nor desirable at this stage**' in the country. However, the Commission suggests certain measures in marriage and divorce that should be uniformly accepted in the personal laws of all religions.
- An attempt should be made to enact a **model UCC embodying what is best in all personal laws**. It must be a synthesis of the good in our diverse personal laws.

### Conclusion

Ours is a secular democratic republic. Freedom of religion is the core of our culture. But religious practices, which are violative of human rights and dignity and suffocate civil and material freedom are not a mark of autonomy but oppression. Therefore, a unified code is imperative, both for protection of the oppressed and for promotion of national unity and solidarity.

## 1.2. COLLEGIUM SYSTEM

### Why in news?

Recently, the Supreme Court asked the government to **clarify on the status of 55 recommendations made by the Collegium** for judicial appointments to various High Courts.

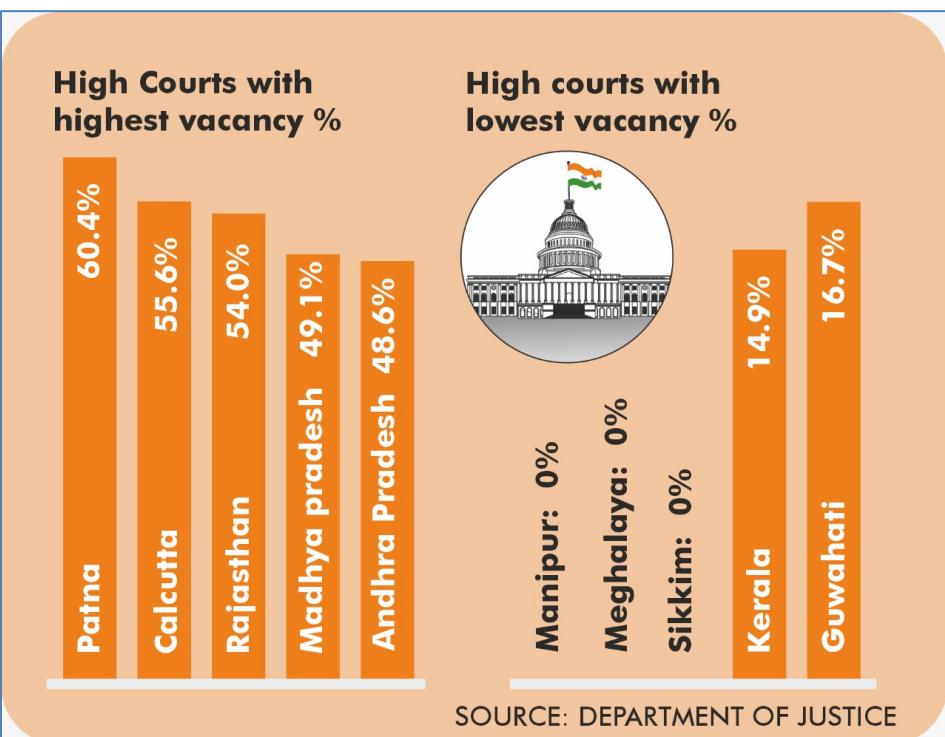
### More about news

- 44 of the pending recommendations were made to **fill vacancies** in the Calcutta, Madhya Pradesh, Guwahati, Rajasthan and Punjab High Courts.

- However, these recommendations have been pending with the government for over seven months to a year.
- The remaining 10 names have been pending with the government despite their reiteration by the Collegium.

#### System of Judges appointment in India

- **Constitutional mandate:** Constitution under Article 124 states that, the President shall make SC Judges appointments after consulting with the Chief Justice of India (CJI) and other SC and HC judges as he considers necessary.
- While for HC judges appointment President (under Article 217) should consult the CJI, Governor, and Chief Justice of the High Court concerned.
- **Collegium system:** It is a system where a committee of the Chief Justice of India, four senior judges of the Supreme Court and three members of a high court (in case of appointments in the said high courts) take decisions related to **appointments and transfer of judges** in the Supreme Court and High Courts.
  - The **three judge cases** have come from 1981 to 1998 which sets the **collegium system** for appointing judges.



Three Judges Cases	
<b>First Judges Case, 1981 or S P Gupta Case</b>	SC ruled that the recommendation made by the CJI to the President can be refused for "cogent reasons", thereby giving greater say to executive.
<b>Second Judges Case, 1993</b>	Also known as Supreme Court Advocates on Record Association (SCARA) vs Union of India. CJI only needs to consult 2 senior-most judges over judicial appointments and transfers. However, on objection raised by executive on appointment, Collegium may or may not change their recommendation, which is binding on executive.
<b>Third Judges Case, 1998</b>	CJIs should consult with 4 senior-most Supreme Court judges to form his opinion on judicial appointments and transfers.

#### Issues in Judges Appointment/Collegium system in India

- **Judges appointing judges:** It goes against the **principle of separation of powers** between executive and judiciary and **principle of check and balance** by one branch on another, which is basic structure of constitution. It shows **judicial supremacy** over the other branches.
- **Uncle Judge Syndrome:** It is observed that within the high court many of the Judges and advocates have blood relation between them.
- **Corrupt practices:** There are corrupt practices and the politics that happen within the judiciary and it shall not only be independent of political influences but also from their very own influences.

- **Closed-door affair:** A closed-door affair **without a formal and transparent system**, created apprehensions about the process of appointment.
- **Administrative burden:** The administrative burden of appointing and transferring judges without a separate secretariat or intelligence-gathering mechanism of checking personal and professional backgrounds of prospective appointees.
- **Promotion of mediocrity:** The limitation of the choice to the senior-most judges from the High Court for appointments to the Supreme Court, overlooking several talented junior judges and advocates.

#### Steps to ensure transparency in judicial appointments

- **Information disclosure in public domain:** SC collegium has taken a decision to disclose the reasons for its recommendations which **lowers the culture of secrecy** surrounding judicial appointments.
- **Database updation:** A complete and periodically updated database of potential candidates must be made accessible to the public.
- **Public Inputs:** Inputs must be sought from the public with regard to shortlisted candidates while providing immunity from laws of contempt & defamation and confidentiality to citizens.
- **Criteria for Appointment:** Eligibility criteria to judge the performance and suitability must be formulated objectively and must be made public. The reasons for appointment or non-appointment can be only understood well in the context of such a criterion.
- **Power Balance:** Law Commission, in its 2008 and 2009 reports, suggested that Parliament should pass a **law restoring the primacy of the CJI**, while ensuring that the executive played a role in making judicial appointments.
- **Involvement of all three branches of Government:** The selection process of judges has to be transparent and fair, which is only possible by involving other two branches i.e. Executive and Legislature in the process of appointments.
  - It will take into account all recorded materials on the candidates and recommends the candidate for appointment. This system would **strengthen judicial independence**.
- **Law Commission of India Report:** The **Law Commission of India** in their 230th Report has recommended that the Judges, whose kith and kin are practicing in a High Court, should not be appointed in the same High Court.
- **A complete record of video/audio** of collegium deliberations.

#### Conclusion

The **judiciary carries the trust of the people**. It is a unique **wing of constitutional governance**, with authority to review the decisions by the President, prime minister or chief ministers and legislatures both at centre and states. It is the **real guardian of the fundamental rights** of the people.

#### Related Information:

- **National Judicial Appointment Commission (NJAC): 99<sup>th</sup> Constitutional Amendment Act** created NJAC as proposed constitutional body to replace the Collegium system of appointing judges.
  - However, SC struck down the Act as it violates the **independence of judiciary** and **Principle of Separation of Powers between the executive and judiciary**, which is a basic feature of the Constitution. Thus, restoring the Collegium System of appointment of Judges.
- **Draft Memorandum of Procedure, 2016:** The government drafted a fresh set of guidelines for making appointments to the higher judiciary. However, there is **lack of agreement between government and judiciary as of now**.

#### Significance/Need of transparency in judicial appointment

- **Enhancing the Integrity:** Transparency is a cross-cutting principle that is necessary for enhancing the integrity of, as well as public confidence in the process.
- **RTI compliance:** Placing the criteria followed in making judicial appointments in the public domain will fulfil the purpose and mandate of **Section 4 of the RTI Act** and engenders public confidence in the process.
- **Promotes accountability:** Ensuring transparency in judicial appointments will **promote accountability, combat corruption**, and help to **eliminate arbitrariness** in judicial appointments.
- **Public realm:** As per Justice D.Y Chandrachud, the basis for the **selection and appointment of Judges to the Higher Judiciary must be defined** and placed in the public realm.

### 1.3. GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI (AMENDMENT) ACT (GNCTD) 2021

#### Why in news?

Recently, **Government of National Capital Territory of Delhi (Amendment) Act (GNCTD) 2021** was passed.

#### Need of the Law

- 2021 Act **amends GNCTD Act, 1991** and gives certain powers and responsibilities of the Legislative Assembly and the Lieutenant Governor (LG), in line with the constitutional scheme of governance of NCT.
  - It promotes **harmonious relations between the legislature and the executive.**
- The Centre stated that there **was no structural mechanism within the 1991 Act** to ensure time-bound implementation of the rules.
  - Also, the **law gives no clarity about what proposal or matters need** to be taken up with the LG before issuing any order.
  - The Centre has also stated that this amendment has been brought **to give effect to the "interpretation made by Hon'ble Supreme Court** in Government of NCT of Delhi v. Union of India (UoI) 2018."

#### About the 2021 Act

Specification	GNCTD (Amendment) Act, 2021	Govt of NCT of Delhi Vs UoI, 2018
Meaning of "government"	<ul style="list-style-type: none"> <li>• The term "government" in any law made by the Legislative Assembly shall mean the L-G.</li> </ul>	<ul style="list-style-type: none"> <li>• The L-G would be bound by the aid and advice of the Council of Ministers (CoM) in matters that were not directly under the control of the L-G.</li> </ul>
L-G's concurrence on executive orders	<ul style="list-style-type: none"> <li>• The L-G's opinion shall be obtained <b>before the government takes any executive action</b> based on decisions taken by the Cabinet or any individual minister.</li> </ul>	<ul style="list-style-type: none"> <li>• Barring police, public order and land the L-G's concurrence is not required on other issues.</li> <li>• However, the decisions of the CoM will have to be communicated to the L-G.</li> <li>• Requiring prior concurrence of the Lieutenant Governor would absolutely negate the ideals of representative governance and democracy conceived for the NCT of Delhi by Article 239AA of the Constitution.</li> </ul>
Elected government's rulemaking	<ul style="list-style-type: none"> <li>• Legislative Assembly shall <b>not make any rule to enable itself or its Committees to consider the matters of day-to-day administration</b> of the Capital or conduct inquiries in relation to the administrative decisions.</li> <li>• <b>Any of the rule made in contravention of this provision, before the commencement of the GNCTD Act, 2021, shall be 'void'.</b></li> </ul>	
LG's assent to Bills passed by the Legislative Assembly	<ul style="list-style-type: none"> <li>• The L-G will <b>not assent to and pass on to the President</b> for consideration any Bill which "incidentally covers any of the matters which falls outside the purview of the powers conferred on the Legislative Assembly".                     <ul style="list-style-type: none"> <li>○ The L-G has the power to refer any matter, over which there is a disagreement with the elected government, to the President under Article 239AA (4).</li> </ul> </li> </ul>	

#### ARTICLE 239AA

- **69th Amendment 1991** inserted the Article 239AA in the Constitution. It granted special status to Delhi among Union Territories (UTs) by providing Legislative Assembly and a Council of Ministers responsible to such Assembly.
- **Public order, Police and Land** in NCT of Delhi fall within the domain of Union Government.
- For remaining matters of State List or Concurrent List, in so far as **any such matter** is applicable to UTs, the Legislative Assembly shall have power to make laws for NCT of Delhi.

## EVOLUTION OF ADMINISTRATION OF DELHI GOVERNMENT

**States Reorganisation Act, 1956** Delhi became a UT to be administered by an Administrator appointed by the President

Delhi made a Part C State

1950

1951

1956

1966

1991

**Legislative Assembly (LA)** was created with an elected CM

**69th Constitutional Amendment Act** Based on the recommendation of **Balakrishnan Committee report** and **GNCTD Act, 1991** passed

**Delhi Administration Act, 1966**

Provided for a limited representative Government in Delhi through a **Metropolitan Council**.

### Issues with the Act

- **Enormous powers to LG:** There is tendency of centralisation of power in this Act as it favours vesting real powers in the nominated LG rather than in the representative government.
- **Undermines representative form of government:** The LG, who will be the government, is under no obligation to implement any law passed by the assembly or carry out the directions of the house as he is not responsible to the assembly.
- **Against Co-operative Federalism:** The Act not only negates cooperative federalism but also upturns the fundamental principles laid down by the Supreme Court in 2018.
- **Against the SC Verdict:** In **People's Union for Civil Liberties (2002)** case, SC held that the legislature has no power to negate the decision of the court. It can only change the basis on which the decision has been taken by the court and make a general law.
- **Legislative misadventure:** The elected government of Delhi will wait endlessly for the LG's opinion without being able to execute their decision. Thus, the government will become non-functional.
- **Hasty passage of the Act:** The Act has been passed in haste without being referred to the Select committee.

### Way Forward

- **Consensus based approach:** The Act could be referred to a **select committee** and not passed in haste like the Farm Bills. Evolving consensus in such matters would be consistent both with federalism as well as the high principles laid down by the Supreme Court.
- **Mixed balance for Delhi:** **Real and substantive power** lies with the elected representatives in a democracy and they owe responsibility to the legislature.

### Significance of the Law

- It ensures **complete synchronisation between the Union government and the Government of NCT of Delhi** and there is no encroachment in legislative matters.
- **NCT deserves smooth functioning** and cannot be subject to misadventures arising from the ambiguities in the roles and responsibilities of its stakeholders.
- It provides a **constructive rules-based framework for stakeholders** within the government of Delhi to work in tandem with the Union government.

### Related information

#### Puducherry Case

- Earlier, CM of Puducherry **has protested against continual interference of the LG** in the daily affairs of the Puducherry government and running an alleged parallel administration.
- The Madras HC, quashing the clarification of Central Government of 2017, ruled that the **LG must work on the aid and advice of the Council of Ministers** and not interfere in the day-to-day affairs of the government.
- **Article 239A** allows Parliament to create a law for Puducherry and thus Parliament enacted **Government of Union Territories Act, 1963** which governs Puducherry vests the legislative assembly with the power to make laws on **any of the matters** enumerated in the **State List or the Concurrent List**.

- A **mixed balance** has to be struck considering the special status of the Delhi and **fundamental concerns** as Delhi being the National Capital.
- **Uphold democratic and other principles:** Act must uphold the principles of **participative democracy, cooperative federalism, collective responsibility** to the House and, above all, constitutional morality.

## 1.4. RIGHT TO INFORMATION

### Why in news?

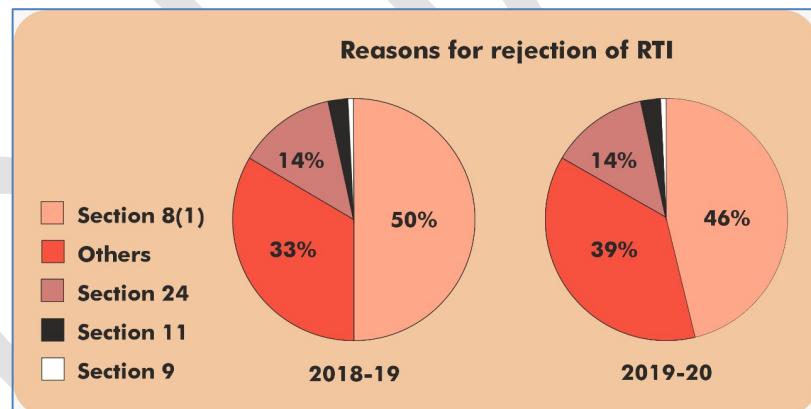
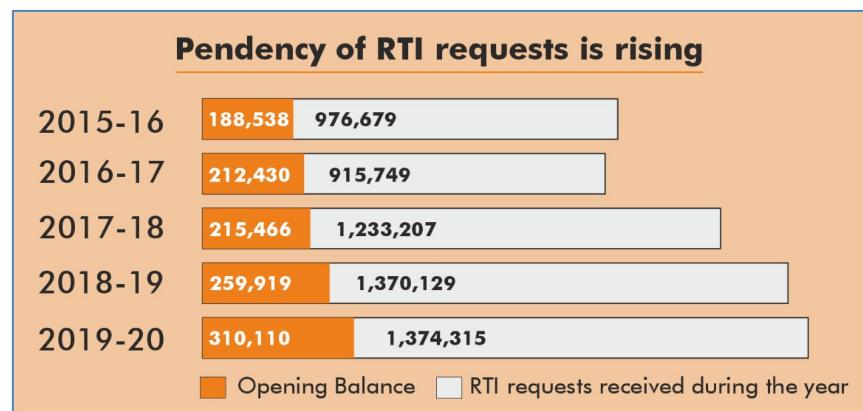
Central Information Commission (CIC) recently released its **annual report** (for 2019-20) that covers **more than 2,000 public authorities** across the Central government as well as the union territories.

### Key Highlights of the report

- **Progressive reduction in Rejections:** The rejection rate of applications of the RTI fell to 4.3% (from 8.4% in 2014-15) which is the **lowest rejection percentage observed** since inception of the Commission
- **Disparity in rejection rate across ministries:** While the rejection rate fell from 20.2% in 2014-15 to 12.48% for the ministry of finance in 2019-20, it **rose from 13.9% to 20.46% for the Ministry of Home Affairs.**
  - The **Agriculture Ministry's rejection rate doubled** from 2% in 2018-19 to 4% in 2019-20.
- **Increase in rejections under 'others' category:** About 39% of these rejections did not include any valid reason, as they did not invoke one of the permissible exemption clauses in the RTI Act. This is an **increase from the 33%** seen in the previous year. (Refer infographics).
  - Of the permissible grounds for rejection, **Section 8(1) (j)** saw the highest use. **Section 8(1) (j)** permits **denial of access to personal information** if disclosure is likely to cause unwarranted invasion of the privacy of the individual concerned
- **Increase in the number of First appeals and Second appeals:** A total of 152,354 first appeals were filed in 2019-20, whereas, in 2014-15, the corresponding number was 110,095. Number of Second Appeals/Complaints Registered during reporting year was 22,243.
  - First appeals are usually filed based on **unsatisfactory response** from the concerned authority.
  - An information seeker can file a second appeal before the CIC against the order of FAA (First Appellate Authority), if he is not satisfied or does not receive an order from FAA within the specified time.

### Hurdles in implementation of RTI

- **Low Public awareness:** According to PWC study, **only 15% of the respondents** were aware of the RTI Act and awareness level is **low among the disadvantaged communities** such as women, rural population and OBC/SC/ST category.
  - **Section 26** of RTI Act states that Government may organize educational programmes to advance the understanding of the public regarding their rights under the Act.
  - **Article 19(1)(a) and Article 21, by implication,** guarantee to the citizens of India the right to know everything done by public functionaries.
- **Constraints faced in filing applications includes:**
  - Non-availability of **User Guides** for information seekers.
  - Non-availability of **standard application form**.



- **Non-friendly attitude** of the PIOs (Public information officers).
- **Inadequate efforts** to receive applications through electronic means.
- **Poor quality of information provided:** Due to lack of infrastructure and adequate processes to comply with the RTI Act, the information provided is either **incomplete or lacks the substantial data**.
- **Constraints faced in inspection of records:** Under the Act, the **information is to be provided in the form requested** unless it would disproportionately divert the resources of the public authority. Low awareness of this provision can be linked to inadequate training of officials.
- **Failure to provide information within 30 days (as mandated under Act):** Currently there exist **inadequate measures and processes to view the adherence levels of this important provision of the Act**.
  - Public officials faced challenge due to inadequate record management procedures which is further aggravated due to **lack of enabling infrastructure** (computers, scanners, internet connectivity, photocopiers etc.)
- **Inadequately trained PIOs and First Appellate Authority (FAA):** There is **lack of in-depth understanding of the RTI Act** apart from **lack of awareness of key judgements** in this regard.
  - This assumes importance in light of **evolutionary nature** of RTI act resulting in **addition of new dimensions routinely**.
  - The training of PIOs is a big challenge primarily due to **huge number of PIOs to be trained, frequent transfers of and huge constraint with respect to the availability of training resources**.

#### Salient features of the Right to Information (RTI) Act

- **Public Authority:** Section 2(h) defines 'Public Authority' as any authority or body established or constituted by or under Constitution or any other law made by Parliament or State Legislature and notification issued by government.
- **Right to Information:** As per Section 2(j) RTI means the rights of a citizen to seek any information accessible under the Act, which is held by or under control of any Public Authority.
- **Exemption from Disclosure of Information:** Sections 8, 9, 10, 11 and 24 enlist limitations on disclosure of certain information.
  - Section 8(1) provides following Exemption for information:
    - a) disclosure of which would **prejudicially affect the sovereignty and integrity of India**.
    - b) **expressly forbidden to be published by any court of law or tribunal**.
    - c) disclosure of which would cause a **breach of privilege of Parliament** or the State Legislature;
    - d) **commercial confidence**, trade secrets or intellectual property.
    - e) available to a person in his **fiduciary relationship**
    - f) received in **confidence from foreign government**
    - g) disclosure of which would **endanger the life or physical safety** of any person
    - h) **impede the process of investigation**
    - i) **cabinet papers** including records of deliberations of the Council of Ministers, Secretaries and other officers.
  - **Section 9:** whose copyright is not held by the state.
  - **Section 24:** exempts information related to security and intelligence organisations.

#### Steps to overcome these hurdles

- **User friendly application process:** Appropriate Governments and the Public Authorities need to design the RTI process keeping in view the **needs and convenience** of the citizens.
- **Usage of digital technology:** The records are required to be **catalogued and indexed** in a manner that the entire data is available through a **centralized system** using **advanced technology like Big Data**.

RTI (AMENDMENT) ACT, 2019		
The Act seeks to empower the central govt on deciding salaries, and other terms of service of information commissioners.		
RTI Act, 2005	RTI(Amendment) Act, 2019	
Term	Quantum of salary	Deductions in salary
CHIEF information commissioner (CIC) and information commissioners will have a tenure of five years	CIC pay equivalent to CECs , Central ICs and state CIC to election commissioners and state ICs to chief secretary	IF such officials are receiving pension or other retirement benefits , their salaries will be reduced by an amount equal to the pension
CENTRE will notify the tenure of all information commissioners (ICs) at state and central level	SALARIES and allowances of these officers will be determined by the Central government	THESE provisions have been removed

- **Investment in infrastructure:** The **ARC report** had mentioned that Government of India may allocate **1% of the funds of the ‘Flagship Programmes’** for a period of five years for improving the infrastructure requirements.
- **Need an external agency for training:** Potential of **non-profit organizations** to carry out the trainings in official/ un-official capacities can be tapped by appropriate Government and Training Institutes.

## 1.5. AADHAAR

### Why in news?

The Supreme Court termed the cancellation of around three crore ration cards by the Centre due to non-linking with Aadhaar card as too serious and sought response from the government on the issue.

### More about news

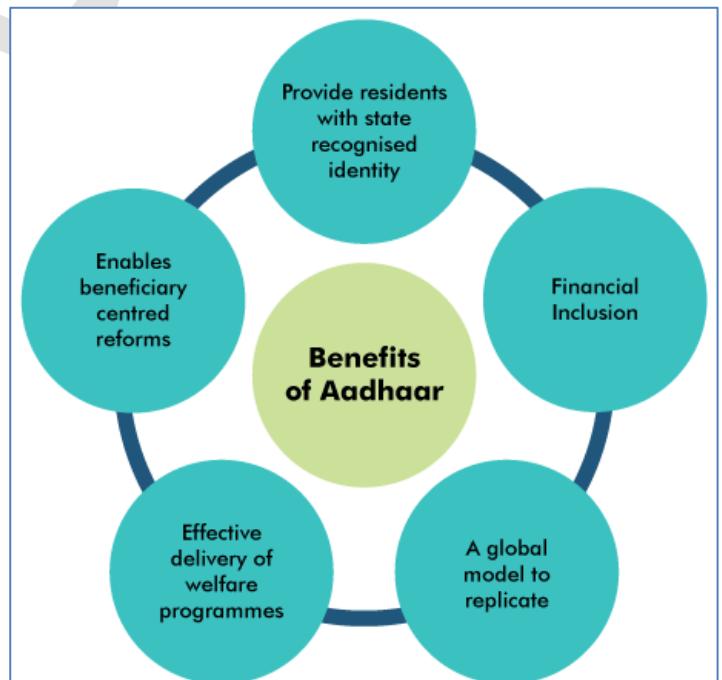
- The Supreme Court made this remark while hearing a plea that claimed that the **technological system based on iris identification, thumb prints, non-possession of Aadhaar, non-functioning of the internet in rural and remote areas, etc., led to largescale cancellation of ration cards** without notice to the family concerned.

### About Aadhaar

- Aadhaar was **first launched in 2010** as an architect for biometric authentication.
- The Aadhaar number is a **12-digit unique identity number assigned to all Indian residents** issued by the Unique Identification Authority of India (UIDAI).
- Its uniqueness is supposed to be guaranteed by the **use of biometrics** (fingerprints, iris). Besides, UIDAI also collects **some demographic information**.
- An **Aadhaar card is not a proof of citizenship**—but citizens are required to provide it to receive welfare payments and social services.
  - It has so far empowered more than 125.79 crore residents with unique digital identity.
- In 2016, Aadhaar was given **legal backing** with the passage of Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 also known as Aadhaar Act, 2016.
  - The act also provided **for mandatory use of Aadhaar in welfare programme delivery**.
- In 2018, the Supreme Court **upheld the Constitutional validity of the Aadhaar Act but with certain caveats**.
  - It also allowed the **mandatory linking of Aadhaar for filing tax returns and accessing welfare schemes** but removed the requirement for bank accounts and SIM cards.
  - **It also struck down section 57** of the Aadhaar Act, which allowed corporations and individuals to ask for Aadhaar in exchange for goods and services.
  - The court also demanded that the Central Government **pass a strong data protection law as soon as possible**.

**Aadhar: where's it required and where's it not**

- |  |
|--|
| Welfare schemes (PDS, LPG, <input checked="" type="checkbox"/> MGNREGA etc.) |
| I – T returns <input checked="" type="checkbox"/>                            |
| Linking to PAN card <input checked="" type="checkbox"/>                      |
| Bank accounts <input checked="" type="checkbox"/>                            |
| SIM cards <input checked="" type="checkbox"/>                                |
| Private companies <input checked="" type="checkbox"/>                        |
| School admissions <input checked="" type="checkbox"/>                        |
| NEET , UGC, CBSE <input checked="" type="checkbox"/>                         |



### Challenges associated with Aadhaar

- **Vulnerability as a substitute for Photo-ID:** Aadhaar was meant to be used for biometric authentication wherein a person’s fingerprint or iris scan is matched with their Aadhaar number against a central database.

When it is used simply as a photo-ID, it becomes more vulnerable to being duplicated or faked because it lacks any traditional security features that are present in other photo-IDs such as a microchip, hologram, or an official seal.

- **Privacy Issues:** Aadhaar suffers from a myriad of security issues and the system has repeatedly proven to be vulnerable to both internal leaks and external abuse of the data. In 2017, the personal details of nearly 15 lakh pensioners were publicly displayed on the website of the Jharkhand government; the website of the central government's flagship Swachh Bharat Mission was found leaking Aadhaar details of its beneficiaries.
- **Threat to national security:** There have been instances of Bangladeshi citizens holding Indian passports via Aadhaar. Since Aadhaar has been made mandatory for tax returns etc. all the officials of security agencies of India like Intelligence Bureau, Research and Analysis Wing (RAW) had to register themselves under the Aadhaar. This makes the Aadhaar data of extreme interest for various non-state actors particularly in the age when no data is immune from hacking or illegal access.
- **Denial of services to the most marginalized:** Mandatory Aadhar seeding has led to exclusion of genuine beneficiaries who live in remote areas and are among the most marginalised.
  - For example, a study conducted in Jharkhand in 2017 suggests that there have been starvation deaths because of the denial of benefits and subsidies. Also, there are reports that show failures in authentication having led to delays in the disbursal of benefits.

#### Way ahead

- **Legislative reforms:** Supreme Court of India in Justice K S Puttaswamy and Anr. Vs. Union of India and Ors., held that the right to privacy is a fundamental right and is granted protection under Article 21 of the Constitution. Therefore, legislative reform is needed for keeping the Privacy of individuals, which also has a huge bearing on national security, intact. Following legislative reforms are needed in this direction
  - **Enacting Personal Data Protection Bill, 2019:** This bill is based on the recommendations of Justice B.N. Srikrishna. It is currently being examined by the Joint Parliamentary Committee. It seeks to revamp India's current data protection scheme which is governed by the Information Technology Act, 2000.
  - **Amending Aadhaar Act, 2016:** The UIDAI is not under any legal obligation to inform Aadhaar users when a crime related to their personal data occurs. And the victims cannot approach a court directly because under Section 47 (1) of the Aadhaar Act, the UIDAI has the exclusive power to make complaints in case of any violation or breach of privacy. Doing away with these legal shortcomings would make the grievance redressal robust.
- **Dealing with ghost Aadhaar card:** There is a need to ensure quality control on information input into Central Identities Data Repository (CIDR) maintained by the UIDAI.
- **Mechanism for alternative identification:** Aadhaar and Other Laws (Amendment) Act, 2019 has the provision for prevention of denial of services for refusing to or being unable to undergo authentication. Therefore, the central and State governments should allow alternative identification. The question of fraud can still be addressed by the use of other verification cards and by decentralised disbursal of services at the panchayat level.
- **Make the use of Aadhaar easier:** There is a need to double down on the unfinished agenda of ensuring that Aadhaar works for everyone. It must be ensured that marginalised groups are enrolled, the process to update records is made simpler, the grievance redress systems are strengthened, and exclusions due to Aadhaar are eliminated.

## 1.6. LOCAL RESERVATION IN PRIVATE SECTOR

#### Why in News?

Recently, **Haryana State Employment of Local Candidates Act, 2020** was passed reserving 75% of private sector jobs for people of the state.

#### More on News

- **The Act requires private companies to set aside 75% of jobs** with salary up to Rs.50000 a month for locals i.e. those domiciled in Haryana.
  - It is applicable to **all companies, societies, trusts, firms or any person employing 10 or more persons for a period of 10 years.**
  - Further **10% of recruitment should be from the district** where the company is located.

- The law empowers the **district administration to enforce the new regulations through inspections**.
- Haryana will become **2nd State** after **Andhra Pradesh** to have 75% reservation for locals **based on Domicile** (under the Andhra Pradesh Employment of Local Candidates in the Industries / Factories Act, 2019).
- Many other states like Karnataka (100%), Maharashtra (80%) and Madhya Pradesh (70%) have also **proposed** such reservations for locals in the last few years.

#### Benefits of such Law

- **Address Rising Unemployment:** Across India, especially post Covid-19, the unemployment has further increased with Haryana having the highest unemployment.
  - E.g., According to the **Centre for Monitoring Indian Economy (CMIE)**, the unemployment rate in Haryana was **26.4 percent** in February 2021. It was more than **three times** the national figure.
- **Agrarian Distress:** With great stress in the agriculture sector across India the local people want to move away from it and seek local jobs.
- **Check ill practices of corporations:** It keeps a check on the **selective discrimination** in the recruitment or retrenching of the existing local workforce to avoid strong labour unions in companies.
- **Development-induced Displacement:** With local landowners being displaced from private land by industrialization, the local reservation demands gain strength.
- **Curb Influx of large Migrants:** As per 2011 Census, the net in-migration for Haryana during 2002-2011 was eight lakh persons, which was the fourth highest amongst states in the country (after Maharashtra, Gujarat, and Delhi).
- **Address problems of Slums:** The influx of a large number of migrants competing for low-paid jobs places a significant impact on local infrastructure and housing, often leading to proliferation of slums.

#### Issues with such Laws in actual Implementation

- **Constitutional and legal hurdles:** The **Andhra Pradesh High Court** in May 2020, on the question of 75% private reservation in state observed that quota for locals in private jobs may be **unconstitutional**. The case is currently pending, but it raises important questions on such reservation as against the Constitution Provisions like:
  - **Articles 15** (prohibiting the state from discriminating against any citizen on grounds of religion, race, caste, sex, **place of birth**);
  - **Article 16** (prohibiting the state from discriminating against any citizen in the matters of employment only of religion, race, caste, sex, descent, **place of birth**, residence or any of them).
    - ✓ Article 16 (3) allows, **in principle**, to make any law with residence qualifications necessary for public employment, including the domicile-based preferential treatment but the power lies in **Parliament alone**. So, a state law providing for reservation based on domicile may not be constitutional;
  - **Article 19 (1)**, all citizens have a fundamental right to the right to move freely in the country and reside and settle in any part of it. Also, the right to practice any profession, or to carry on any occupation, trade or business as a fundamental right.
  - It may violate the guidelines laid down by the **Supreme Court in the Indra Sawhney (1992) and M Nagaraj (2006) case** which underscored that reservation cannot exceed beyond 50% unless there are "extraordinary reasons" to justify why this ceiling has to be breached.

Indra Sawhney Case 1992 judgment	Nagaraj Case (2006) Judgement
<ul style="list-style-type: none"> <li>• Upheld the 27% quota for the OBCs.</li> <li>• Reservation should not cross the 50% limit.</li> <li>• Creamy layer must be eliminated from the Backward Classes.</li> <li>• No reservation in the promotions.</li> </ul>	<ul style="list-style-type: none"> <li>• Upheld the constitutional validity of reservations for SCs and STs to include promotions with 3 conditions given below               <ol style="list-style-type: none"> <li>1. Quantifiable data on the backwardness of SC &amp; ST</li> <li>2. The facts about their inadequate representation</li> <li>3. The overall administrative efficiency</li> </ol> </li> </ul>

- **Unease in doing Business:** It exposes companies to gather data on employee domicile, regular reporting to authorities and claim exemption from authorities every time if no local labour is available or after crossing 25% outside limit.
  - This can impact the ease of doing business by **promoting corruption and create a barrier in hiring the best talent.**
- **Impact company operations:** New laws can be detrimental to private sector efficiency. The labour-intensive industries where India is already losing to Southeast nations are likely to suffer more.
  - Also, cities like Gurugram, home to many MNCs and considered as the IT/ITeS sector and startups hub are likely to suffer most.
- **Covid-19 recovery:** It can further prolong the ongoing COVID-19 pandemic recovery for companies by increasing the costs of businesses on several fronts, including training of local candidates and displacement of the present non-local workforce.
- **Against ideas of One nation One market or Unity:** It divides Indian states based on ‘sons-of-the-soil’, opening a Pandora’s box for similar policies by others and damages the unity of India. It can make attracting foreign investments difficult as well.

#### Way Forward

- **Incentive's route:** State may after analysis come out with a percentage and **provide for associated incentives** to industries for employing local people.
  - Governments should provide **incentives to industries** for more investments and create an enabling environment for it.
- **Employ when there is less availability:** Provisions can be made to **employ persons from outside in instances wherein the required talent is not available locally.**
- **Focus on education and skilling:** There is need to raise the **standard of education and skilling youth** alongside the necessary **structural reforms** to create an Atma Nirbhar Bharat rather than myopic race for private sector reservation.
- **Need to tackle the core issues of unemployment:** By more job creation and industrialization rather than such moves.
- **Need to promote labor intensive industries:** To make use of the labor surplus in the country.

## 1.7. URBAN LOCAL BODIES (ULBS) REFORMS

#### Why in news?

Recently, Ministry of Housing and Urban Affairs announced the release of the final rankings of the **Municipal Performance Index (MPI) 2020**.

#### About MPI

- It is an **effort to assess and analyze the performance of Indian municipalities** based on their defined set of functions from provision of basic public services to more complex domains like urban planning.
  - Also, citizens can better understand their local government administration, which in turn builds transparency and generates trust among key stakeholders.
- **Indore** topped the index in municipalities with **million-plus population**, while **New Delhi** in cities with **less than a million people**. (refer rank table)
- Report mentions that cities with **more financial autonomy** fare better in service and governance delivery, but it varies by state municipal laws,
  - **Only 20 cities out of the 111 cities surveyed have the power to borrow and invest funds** without state approval, which is seen as a blow to the 74th Constitutional Amendment Act (CAA).

Municipal Performance Index	
Ranking of municipality with million-plus population	Ranking of municipality with less than million plus population
TOP 10	TOP 10
1 Indore	1 New Delhi MC
2 Surat	2 Tirupati
3 Bhopal	3 Gandhinagar
4 Pimpri Chinchwad	4 Karnal
5 Pune	5 Salem
6 Ahmedabad	6 Tiruppur
7 Raipur	7 Bilaspur
8 Greater Mumbai	8 Udaipur
9 Visakhapatnam	9 Jhansi
10 Vadodara	10 Tirunelveli

- 95% of them are able to raise only less than five per cent of their earnings and borrowings through alternate sources of financing, excluding state and central grants.
- To achieve financial autonomy of municipalities, the report suggested amending the Constitution to further **fiscal decentralization**.
- Report also suggested for creating a **five-year mayoral term across India**, and consolidating planning, development, housing, water, and environment activities to report to municipalities rather than state governments.

#### Related news

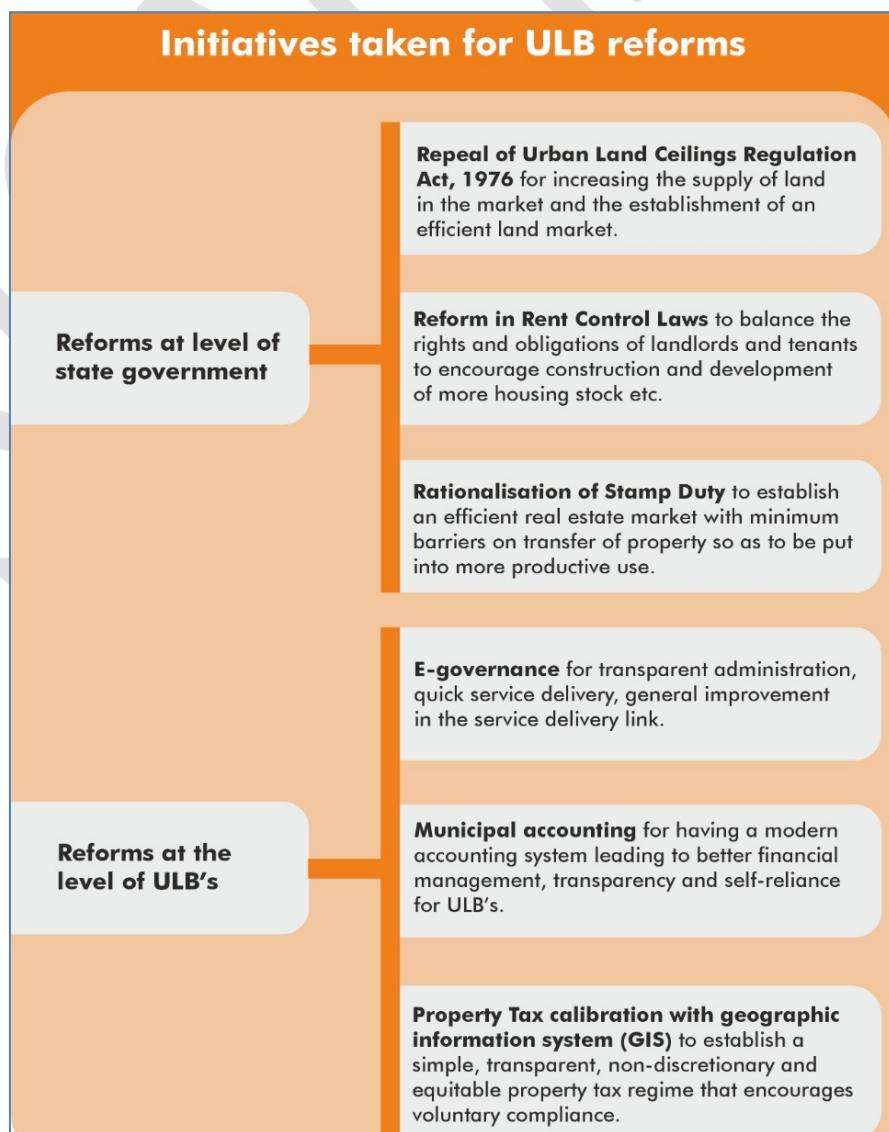
- **Andhra Pradesh, Madhya Pradesh, Manipur, Rajasthan, Telangana and Goa** are six states to complete ULB reforms stipulated by the Department of Expenditure, Ministry of Finance as following:
  - Implementation of One Nation One Ration Card System
  - Ease of doing business reform
  - Urban Local body/ utility reforms
  - Power Sector reforms
- These reforms in ULBs are aimed at **financial strengthening of ULBs** in the States and to enable them to **provide better public health and sanitation services to citizens**.
- These six states are eligible to mobilize additional financial resources i.e., **1% of Gross State Domestic Product (GSDP)** (half of enhanced the borrowing limit 2% of GSDP) **through Open Market Borrowings**.

- The **Municipal Performance Index framework** covers 20 varied sectors as given follow:

1. Education	8. Expenditure Management	15. Plan Implementation
2. Health	9. Fiscal Responsibility	16. Plan Enforcement
3. Water & Wastewater	10. Fiscal Decentralization	17. Transparency & Accountability
4. Sanitation	11. Digital Governance	18. Human Resource
5. Registration & Permits	12. Digital Access	19. Participation
6. Infrastructure	13. Digital Literacy	20. Effectiveness
7. Revenue Management	14. Plan Preparation	

#### About urban local bodies

- **Urban Local bodies** are institutions constituted for **local self-government** urban areas through their elected representatives.
- **74th Constitutional Amendment Act** added a new part IX-A entitled and **Twelfth Schedule** containing 18 functional items for functioning of Urban local bodies.
  - The act provides for constitution of **State Election Commission** to conduct elections of urban local bodies and **State Finance Commission** to deal with financial affairs.
  - The act also provides for **autonomous municipal bodies and devolution of powers** to these bodies to perform functions enumerated in the Twelfth Schedule and to prepare plans for economic development.



## Need of reforms in urban local bodies

- **Financial scarcity and corruption:** The urban local bodies are **facing acute scarcity of finance**. Some urban local bodies **do not collect enough taxes** and do not realize the full potential of property tax.
  - Also, ULB's are suffering from **corruption, favoritism and nepotism**, which makes their functioning inefficient.
- **Irregular elections:** Due to **postponement and irregular elections** of urban local bodies have been suffering in their governance, **defeating the goal of decentralized governance**.
- **Urban planning and state's control:** In most of cases **urban planning is done at the state government level and ULB's have little role in it**. Also, excessive control of State's over ULB's restricting the functioning of ULB's.
- **Lack of coordination and poor governance:** Lack of coordination **among centre, state, and urban local bodies lead to poor implementation of urban policies**, administrative inefficiency and poor urban governance.

## Further reforms needed in urban local bodies

- **Governance:** Elections to ULBs should not be delayed beyond six months. Power of delimitation of wards for ULB elections should be with SECs and not state governments.
- **Capacity building:** Need of capacity building through training of elected representatives and Peer Experience and Reflective Learning programmes.
- **Finances:** Municipal bodies should be encouraged to borrow without Government Guarantees and specifying municipal bonds under the 'priority sector' category for investment/lending purposes
- **Encouraging PPP:** The areas where public funds are available, private sector efficiencies can be inducted in management, enhancing the available funding and to bridge the financial gap; the areas where public funds are not available, projects can be developed and implemented through leveraging private sector funds.

## 1.8. EASE OF LIVING INDEX 2020

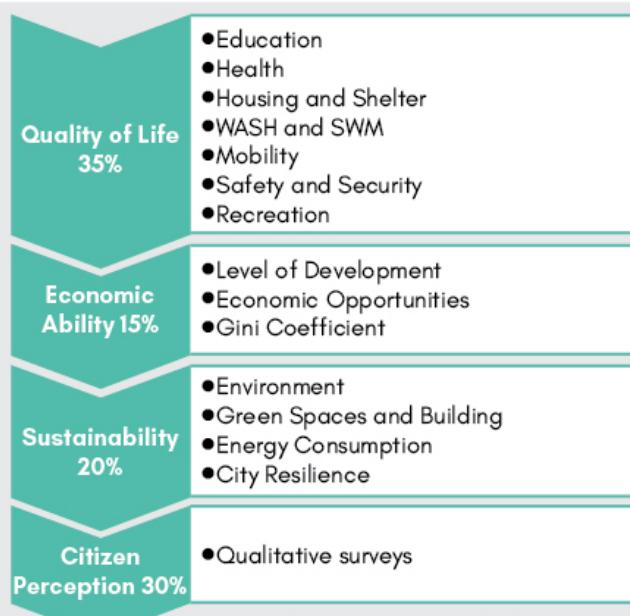
### Why in news?

Recently, Ministry of Housing and Urban Affairs (MoHUA) released the Ease of Living Index (EoLI) 2020.

### About EoLI

- It is an assessment tool by the MoHUA that **evaluates the quality of life and the impact of various initiatives for urban development in the city**.
- EoLI 2020 report aims to **measure the well-being of Indian citizens** in 111 cities, across the pillars of **Quality of Life, Economic-ability, Sustainability and Citizen Perception Survey** (refer infographic).
  - **Citizen Perception Survey** is the residents' view on the services provided by city administration.
- 2020 rankings were announced for cities with a population of **more than a million, and cities with less than a million people** with total of 32.2 lakh citizens from 111 cities.
- EoLI 2020 ranks **Bengaluru at top and Srinagar at bottom (49<sup>th</sup>)** among Million plus population cities, while **Shimla at top and Muzaffarpur at bottom (62<sup>nd</sup>)** among Less than million population cities.
- **Objectives of EoLI**
  - **Assess and compare the outcomes** achieved from various urban policies and schemes.
  - **Obtain the perception of citizens** about their view of the services provided by the city administration.
  - **Generate information** to guide evidence-based policy making.

### PILLARS OF EASE OF LIVING INDEX AND WEIGHTAGE



\* Gini Coefficient measures the degree of income equality in a population.

- **Catalyze action** to achieve broader developmental outcomes including the Sustainable Development Goals.
- **EoLI is very significant as it accelerates India's urban development outcomes, guide evidence-based policymaking by identifying gaps and promotes healthy competition among cities.**

## 1.9. PUBLIC INTENT DATA

### Why in News?

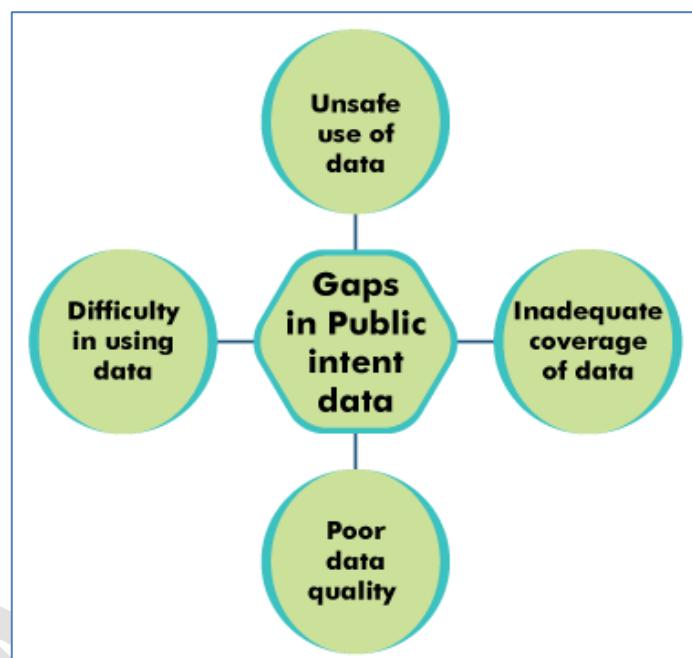
Recently, the World Bank's World Development Report has highlighted the **concept of Public Intent Data**.

### More about the Report

- The report has been released by World Bank in 2021 and is titled '**World Development Report 2021: Data for Better lives.**'
- Report explores the potential of data for public good. It presents **how public intent data can play a transformative role in the public sector.**

### What is Public Intent Data?

- Public intent data is data **collected with the intent of serving the public good** by informing the design, execution, monitoring, and evaluation of public policy, or through other activities.
- This data acts as a **prerequisite for many government functions and can improve societal well-being** by enhancing service delivery, prioritizing scarce resources, holding governments accountable, and empowering individuals.



## TYPES OF PUBLIC INTENT DATA

### Administrative data

Such as birth, marriage, and death records and data from identification systems; population, health, education, and tax records etc

### Censuses

To systematically enumerate and record information about an entire population of interest

### Sample surveys

Draw on a smaller, representative sample of the entire population

### Citizen-generated and machine generated data

### Geospatial data

Relate multiple layers of information based on their geographic locale.

### Why harnessing Public Intent Data is important?

- **Improving service delivery**
  - Improving livelihoods by increasing **access to government services**.
  - Availability of large data set can lead to a **better emergency response** when disasters hit.
- **Prioritizing scarce resources**
  - **Granular data (tied to an individual or a specific location)** can be used to target resources and foster inclusion. For example, creation of micro-containment zones during COVID-19.
  - Monitoring the progress on key indicators and deliverables such as Sustainable Development Goals (SDGs).
- **Holding governments accountable and empowering individuals**
  - Demand for data (by individuals and Civil Society Organizations) can encourage transparency and indirectly provide tools for the society to hold Governments accountable.

- Empower individuals to make better choices as availability of data refines decision making. For example, easy access of candidate's data to voters.

### Challenges and associated suggestions provided by the report vis-à-vis public intent data

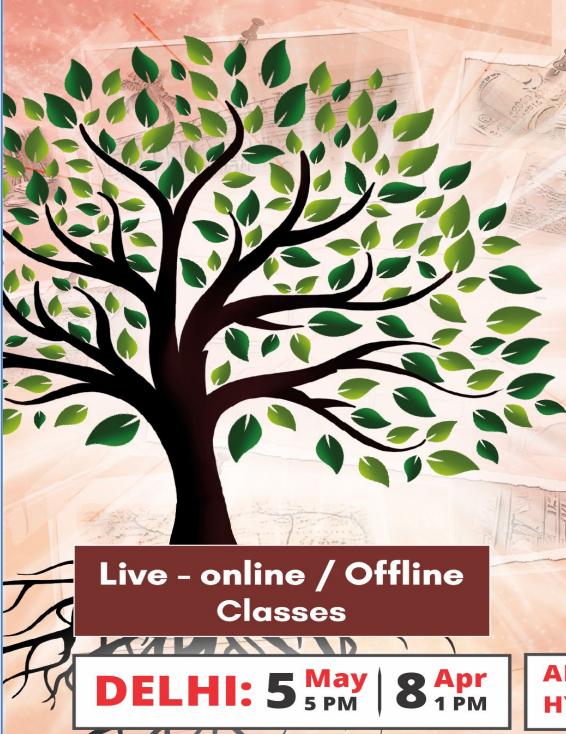
	Challenges	Way forward
Financing	<ul style="list-style-type: none"> <li>Deficiencies in financing because of underinvestment by governments, absence of a guiding benchmark on how much governments should spend, underinvestment by donors etc.</li> </ul>	<ul style="list-style-type: none"> <li>Establish a target for the government expenditure on the national statistical system.</li> <li>Data-producing ministries and other government agencies could each receive a designated budget line for the production, processing, management, and safe sharing of the administrative data they produce.</li> </ul>
Technical Capacity	<ul style="list-style-type: none"> <li>Deficiencies in technical capacity due to lack of qualified staff, proper staff renumeration, and career incentives, lack of technology, software, and infrastructure etc.</li> </ul>	<ul style="list-style-type: none"> <li>Investing in human capital for production of public intent data to promote demand and bolster the credibility of and trust in public intent data producers.</li> <li>Advanced education on statistics should be enhanced to meet policy makers' demands.</li> </ul>
Governance	<ul style="list-style-type: none"> <li>Deficiencies in governance due to barrier in legal framework governing data production and data exchanges.</li> </ul>	<ul style="list-style-type: none"> <li>Safeguarding against the politicization of data by making de-identified public intent datasets publicly available and accessible.</li> <li>Building capabilities within technical units of ministries in the use of analytical tools to foster a better culture of open data.</li> </ul>
Data demand	<ul style="list-style-type: none"> <li>Deficiencies in data demand due to low levels of data literacy, Lack of incentives for and interest in data use, lack of infrastructure to access and use the data etc.</li> </ul>	<ul style="list-style-type: none"> <li>Greater data literacy among the citizenry at large and government decision-makers.</li> <li>Engaging proactively with and listening to stakeholders in government, academia, the private sector, CSOs, and the media.</li> </ul>



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## 2. INTERNATIONAL RELATIONS

### 2.1. INDIA-BANGLADESH

#### Why in news?

The year 2021 marks the **golden jubilee (50 years)** of **1971 India-Pakistan war** that led to the liberation of Bangladesh.

#### Various facets of relationship and areas of cooperation

- **Trade relations:** Bangladesh is India's biggest trading partner in South Asia.
  - To address trade imbalance India has offered duty free access to multiple Bangladeshi products and is developing 10 Integrated Check Post with state-of-the-art facilities.
- **Development Partnership:** Bangladesh is one of the biggest beneficiaries of India's line of credit (US\$ 8 billion). In last 8 years in various sectors like road, railways, shipping and ports.
  - Small Development Projects (SDPs) constitute an active pillar of India's development assistance. The Government of India has funded 55 SDPs including academic buildings, cultural centers and orphanages etc. in Bangladesh.
- **Foreign Policy:** Bangladesh is at the centre of India's flagship '**Neighborhood First**' and '**Act East**' policies and has been crucial in ensuring peace and stability in India's northeast region.
- **Humanitarian assistance:** India has always responded first in Bangladesh's times of crises, whether in the aftermath of natural disasters like cyclone Sidr (2007), or amidst health emergencies such as the ongoing Covid-19 pandemic (in the form of PPE kits, medicines etc.).
- **Military cooperation:** The armed forces from both sides regularly conduct joint drills like **exercise Sampriti and Milan**. India has extended \$500 million line of credit to Bangladesh for defence imports from India.
- **Security:** Indo-Bangladesh security and intelligence cooperation have resulted into curbing of anti-India terror camps and militancy in Northeastern region. Cooperation has also been effective in curbing militancy in Bangladesh.
- **Multilateral cooperation:** Both countries are members of SAARC, BIMSTEC, the Indian Ocean Rim Association and the Commonwealth. Recently, Bangladesh backed India's election to the UN Security Council.
- **Connectivity:**
  - Both the governments are restoring the pre- 1965 rail links and other connectivity links that existed between India and Bangladesh. For E.g., **railway link between Haldibari in India and Chilahati in Bangladesh** was recently inaugurated and **work on Akhaura-Agartala rail link is underway**.
  - Both countries are committed for early implementation of **Bangladesh, Bhutan, Nepal and India (BBIN)**, **Motor Vehicles Agreement (MVA)**, 2015 for the regulation of passenger, personnel and cargo vehicular traffic among the four South Asian neighbors.
  - Bangladesh has also recently granted permission to use its inland route and **ports of Chittagong and Mongla** for transshipment of goods to northeast Indian states.
- **Border Management:** India shares its longest border with Bangladesh. The ratification of the **Land Boundary Agreement** in 2015 and the **delimitation of the maritime boundary** in the Bay of Bengal in 2014 led to the peaceful resolution of long pending border disputes between the countries.

#### Evolution of India-Bangladesh relationship

- The friendship between India and Bangladesh is historic, evolving over the last 50 years.
- **India's political, diplomatic, military and humanitarian support during Bangladesh's Liberation War** played an important role towards Bangladesh's independence.
- **Post-Independence, the India-Bangladesh relationship has oscillated** as Bangladesh passed through different regimes.
- However, **in the last decade, India-Bangladesh relations have warmed up, entering a new era of cooperation**, and moving beyond historical and cultural ties to become more assimilated in the areas of trade, connectivity, energy, and defence.



- Tourism:** Bangladesh accounts for more than 35% of India's international medical patients and contributes more than 50% of India's revenue from medical tourism.
- Protecting ecology:** Both countries signed an (MoU) on the Conservation of the Sundarbans in 2011.
- Capacity Building and Human Resource Development:** The Government of India has been training Bangladesh Civil Service officials, police officials and judicial officials. Bangladesh is also an important Indian Technical and Economic Cooperation (ITEC) partner country and annually around 800 participants from Bangladesh avail the ITEC training courses.
  - In addition, scholarships are awarded by ICCR (Indian Council for Cultural Relations) every year to students from Bangladesh in the IITs and NIITs.

### Challenges in the relationship

- Cross-border Migration:** Illegal migration from Bangladesh induced demographic shift in the bordering states in North East. This has given rise to the socio-ethnic tensions among the locals and migrants.
  - Recently, the National Registration of Citizens (NRC) was carried out in Assam, to which the people of Bangladesh expressed concern and feared an influx of thousands of people across the border following deportation.
  - Similarly, the Citizenship Amendment Act (CAA) caused major resentment in Bangladesh and the cancellation of Bangladesh Foreign Minister's visit to India.
- Water Disputes:** India and Bangladesh have 54 common rivers including Ganges and Brahmaputra. The major issues are sharing of river waters, interlinking of the rivers and building of dams. For example, **Teesta river water dispute**. India has also expressed concerns on the **level of pollution in the Churni river** due to the discharge of effluents from factories in the upstream Bangladesh.
  - India and Bangladesh have instituted a **joint river commission** (JRC) for the resolution of water disputes. However, doubts have been raised about the credibility of JRC, and the demand for reforming JRC has gained traction recently.
- Rising Radicalization:** Radicalization in Bangladesh is on a rise, and the influence of the radicals is believed to have increased in the country's politics. The growing presence of international militant organizations like the Islamic State in the region is also a serious concern for India.
- Cross border crime:** Tough terrain and porous border leads to crimes in border areas, such as smuggling of arms, narcotics, fake Indian currencies, cattle and trafficking of women and children.
- Negative perception of India:** Popular resentment is emerging in Bangladesh about the treatment of minorities in India. The basis for such perception has been various media reports that are exploited by the radical groups for propaganda.

### Way Forward

The political leaders of two countries must strive to forge a progressive partnership for a peaceful, prosperous, and progressive region. Following steps could be taken in this direction:

- Dealing with cross border migration:** There is a need to bring in transparency and strengthen infrastructure for the issuance of identity documents that validate one's claim to citizenship. In this regard, priority should be given to **digitalization of governance at the grassroots level**, primarily in the bordering states.
- Managing water resources:** While the Teesta issue needs a speedy resolution, the two countries should also simultaneously explore the possibility of institutionalizing a framework for management of the rivers with a **basin-wide approach**.

### India-Bangladesh vs India-Pakistan: Contrasts and Learnings

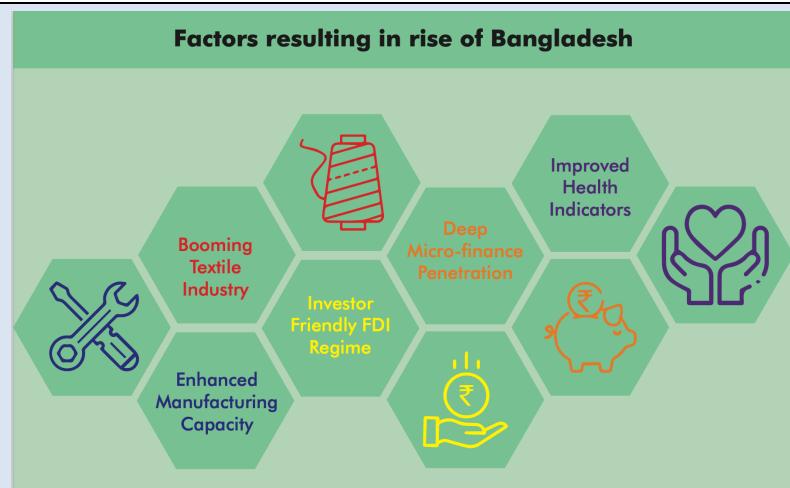
Over the period of 50 years, in the east, India and Bangladesh have cooperated at bilateral and regional level. The same has not been possible in North-west, with Pakistan. This can be attributed to following reasons-

- Political stability and policy continuity:** This has helped Delhi and Dhaka deepen bilateral ties over the last decade.
  - In contrast, the political cycles in Delhi and Islamabad have rarely been in sync.
- Concern for mutual security:** Cooperation in countering terrorism built deep mutual trust between Dhaka and Delhi. That trust helped deal with many complex issues facing the relationship.
  - In the case of Pakistan, its army has sought to use cross-border terrorism as a political lever to compel India to negotiate on Kashmir.
- Depoliticization of important economic issues:** Delhi and Dhaka have steadily moved forward on issues relating to trade, transit and connectivity by dealing with them on their own specific merits.
  - Pakistan, on the other hand, has made sensible bilateral commercial cooperation and regional economic integration hostage to the Kashmir question.

- **Encouraging people-to-people interactions** to counter propaganda and misinformation. Steps need to be taken in the management of public perception about India in Bangladesh and adequate emphasis should be given on strengthening the counter-terrorism cooperation between the two countries.
- **Collaborative approach in dealing with trade issues:** India and Bangladesh should undertake a collaborative approach and policies should be framed accordingly to avoid any future conflicts. Enhancing investment from India to Bangladesh and vice versa could be considered as a starting point.

#### **Bangladesh: A Model for the developing world**

- The impressive economic and social progress in Bangladesh is a source of inspiration not only for South Asia but also the entire developing world. From being one of the world's poorest countries in 1972, **Bangladesh is now racing to be in the world's top 25 economies by the end of this decade.**
- Its **GDP per capita is just under \$2,000 — almost the same as India's.** In five years, by 2026, Bangladesh will drop its least developed country tag, and move into the league of developing countries — on par with India.



## **2.2. INDIA-REPUBLIC OF KOREA (SOUTH KOREA) BILATERAL RELATIONS**

#### **Why in News?**

Recently, India and South Korea concluded their bilateral talks on defence cooperation.

#### **More on News**

- India and South Korea have agreed to go for **joint production and export of military hardware, enhance intelligence sharing and boost cooperation in cyber and space domains** as part of overall expansion of defence and security ties.
- South Korea also expressed **interest in India's two defence corridors.**
  - Government is working on setting up two defence industrial corridors, **one in Uttar Pradesh and another in Tamil Nadu**, with an aim to ensure connectivity among various defence industrial units.

#### **What have been the key pillars of India South Korea relations?**

- **Political**
  - India played an important and **positive role in Korean affairs after Korea's independence in 1945.** During the Korean War (1950- 53), both the warring sides accepted a resolution sponsored by India.
  - **Bilateral consular relations were established in 1962.**
  - In 2015, bilateral relationship was **upgraded to 'special strategic partnership'.**
  - Later Korea announced to upgrade the relationship with India equivalent to **four traditional partners (U.S., China, Japan, Russia)** under the "**New Asia Community Plus**" framework.
- **Commercial Relations**
  - Trade and economic relations grew with the implementation of **Comprehensive Economic Partnership Agreement (CEPA) in 2010.**
    - ✓ CEPA commits the two countries to lowering or eliminating import tariffs on a wide range of goods.



- India's share in Korea's global trade was **1.72% in 2020** and India's contribution in Korea's global imports was 1.05% in 2020.
  - ✓ Major items of India's export to Korea are mineral fuels / oil distillates (mainly naphtha), cereals, iron and steel.
  - ✓ Korea's main exports to India are automobile parts, telecommunication equipment, hot rolled iron products, petroleum refined products, nuclear reactors etc.
- India and South Korea launched an initiative '**Korea Plus' in 2016 to promote and facilitate South Korean Investments** in India.
  - ✓ Major South Korean conglomerates such as Samsung, Hyundai Motors and LG have made significant investments into India.
- **Cultural relations**
  - Spread of Buddhism from India to East Asia in the 4<sup>th</sup> century formed a direct connection and since then has continued to remain a critical reference point.
  - To further enhance cultural exchanges, **Indian Cultural Centres were established in Seoul and Busan**.
  - In order to boost people-to-people relations and travel between the two countries, India extended visa-on-arrival facility for Korean tourists from 2014.
  - An annual festival of India in Korea titled **SARANG** was initiated in 2015.
  - India offers **scholarships and fellowships to Korean nationals** for various programmes and disciplines including courses in Ayurveda, Unani, Siddha, Yoga and Homeopathy.

#### New emerging areas of Cooperation

- **Cooperation in Afghanistan:** Korea recently agreed to explore a tripartite partnership with India for the development of capacity building programmes in Afghanistan.
- **Korea's support to India in nuclear realm:**
  - As a member of the Nuclear Suppliers Group (NSG), **South Korea has supported India's bid for membership**.
  - Korea is also seeking to strengthen relationships in the strategic sectors, including **civil nuclear industries**.
- **Shared Values of Democracy:** As middle-power democracies in Asia where there are growing and the common threat from authoritarian non-democratic power, democracy building, and cooperation can be a critical platform.
- **Bollywood, K-pop and Korean Cuisine:** For years, Korean cuisine and TV serials have emerged as a key point of consumption among several states in India's northeast.
- **Swacch Bharat and New Village Movement (NVM):** Swachh Bharat Abhiyan or Clean India campaign can learn from the experience of South Korea, especially its Saemaul Undong or NVM.

Apart from the above areas, the geopolitical and geoeconomic situation of the Asian and South Asian region **has brought the two nations together in terms of Defence Cooperation**.

#### How India's defence cooperation with South Korea is growing?

- In 2005, the two sides signed an **agreement to cooperate in defence and logistics** and another MoU on cooperation **between the two Coast Guards** was signed in 2006.
- In 2010, **Memorandum of Understanding (MoUs) on Defence Cooperation**, as well as, between Defence Research and Development Organization (DRDO) and Defence Acquisition Programme Administration (DAPA) of Korea for cooperation in R&D were signed.
- In 2019, both sides concluded two agreements, namely,
  - **Naval logistics sharing pact:** It will significantly enhance Indian reach in the Indo-Pacific and will place South Korea amongst close partners of India like the US and France that have similar bilateral pacts.
  - **Defence educational exchanges.**
- In 2019, the two countries put in place a **forward-looking roadmap** that will streamline and strengthen **bilateral defense industry collaboration**.
  - India also invited the South Korean industry to explore the feasibility of local production of items, used in main weapon systems imported by Defence public sector undertakings (PSUs).



## Conclusion

South Korea's shifting perception about its economic engagement with China has influenced its strategy towards other Asian powers including India. India needs to take advantage of this opportunity as **South Korea can be a major economic partner in India's economic growth**. Such engagement will also enhance India's strategic leverage, especially in the Indo-Pacific region.

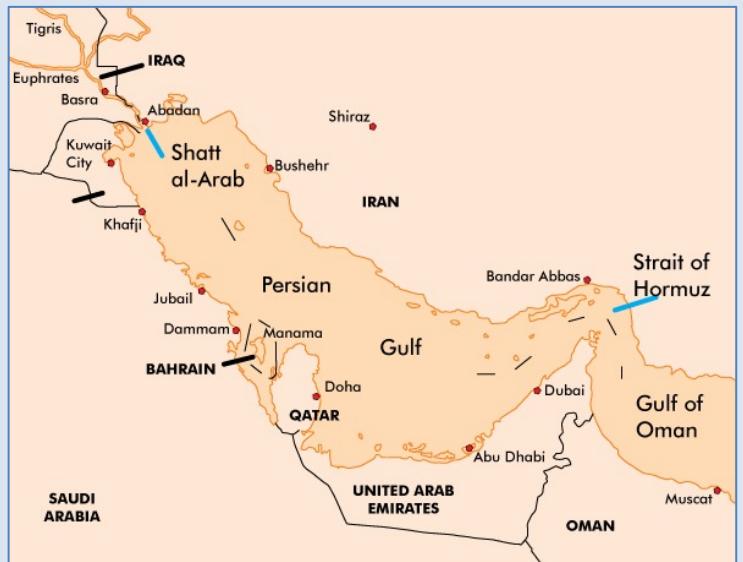
## 2.3. INDIA AND PERSIAN GULF REGION

### Why in news?

Indian Air Force participated for the **first time in Exercise Desert Flag-VI (annual multi-national exercise) hosted by the United Arab Emirates** Air Force indicating India's growing military ties with the Persian Gulf Region.

#### About Persian Gulf Region

- The Persian Gulf region includes 8 countries—Iran, Oman, United Arab Emirates, Saudi Arabia, Qatar, Bahrain, Kuwait, and Iraq bordering the Persian Gulf (an extension of the Indian Ocean (Gulf of Oman) through the Strait of Hormuz).
- The Persian Gulf and its coastal areas are the world's largest single source of petroleum (50 percent of the world's oil reserves), and related industries dominate the region.
  - Safaniya Oil Field, the world's largest offshore oilfield, is located in the Persian Gulf.
- The Persian Gulf has many fishing grounds, extensive coral reefs (mostly rocky) and abundant pearl oysters, but its ecology has been damaged by industrialization and oil spills.
- The Persian Gulf was a battlefield of the 1980–1988 Iran–Iraq War, and is the namesake of the 1991 Gulf War (Iraq's invasion of Kuwait).
- India's historical connection with the Gulf dates back more than five thousand years, to trading between the ancient civilisations of the Indus Valley and the Dilmun (linked with present-day Bahrain). British India's imperial interests in the Gulf were determined, pursued and administered from Bombay Presidency. The Indian rupee was legal tender in Kuwait, Bahrain, Qatar, Oman and the Trucial states – now the United Arab Emirates (UAE) – until the early 1960s.
- Today, the Gulf is an integral part of India's 'extended neighbourhood', both by way of geographical proximity and as an area of expanded interests and growing Indian influence. over a period of time the region holds immense significance for India's ascendancy as a growing regional and global power.



### Strategic importance of PGR for India

India's relations with the Persian Gulf countries have been exceptionally significant since ancient times and are multifaceted. The foundation of the relationship is based on the **3Es**, namely, **energy, economy and expatriates**.

- Economic relation**
  - Trade:** The India-Gulf trade in 2019-20 was nearly 19% India's global trade. The United Arab Emirates (UAE) and Saudi Arabia are India's third and fourth-largest trading partners respectively and UAE also features in the top 10 sources of FDI inflows into India.
    - ✓ Trade is dominated by import of crude oil and natural gas. India mainly exports finished precious stones and jewelry items, mineral fuels and refined oil, and electronic items to the Gulf countries.
  - Investment:** India and the countries in the region have invested in infrastructure development in both India as well as in the Gulf. For instance, Saudi Arabia and Abu Dhabi signed an agreement to jointly develop the largest refinery in the world in Ratnagiri, Maharashtra.
- Energy Security:** Fifty-three per cent of India's oil imports and 41 per cent of gas imports come from the region.
- Expatriates**
  - Remittance:** Around 9 million Indians reside in PGR remitting \$ 40-50 billion which is two percent of India's GDP and two-thirds of total remittances to the country.

- **Gulf stability:** Owing to a large Indian diaspora in the region, India today has a strong and growing stake in Gulf stability. This has resulted in current relations diversifying into security and defence cooperation. This includes **joint exercises, regular Indian ship visits and broad-based MoUs.**
  - ✓ Additionally, India has played an active role in enhancing the stability and security of the Gulf's sea lanes through its joint participation in **anti-piracy patrols off the coast of Somalia** since 2008.
- **Other areas of Cooperation:**
  - **India as their strategic partner:** India has extended its strategic partnerships with four countries in the Gulf, namely, Iran, Oman, Saudi Arabia and the UAE since 2003 on issues such as counter-terrorism, money laundering, cyber security, organised crime, human trafficking and anti-piracy.
  - **Foreign policy:** Geographically, it is an integral part of India's extended neighbourhood in terms of geographical proximity, expansion of interests and **growing Indian clout in the entire region.** For instance, Iran is crucial in the projects such as development of Chabahar port and Alternative route to Afghanistan, Central Asia and Europe via INSTC and Ashghabat agreement.

#### Strategic partnerships

- A 'strategic relationship' involves a **shared understanding between two or more states** on the **nature of threats** in their environment and place of **their collective power in helping mitigate these threats.**
- **India has strategic partnerships with around 30 countries** with US, China, Russia, the UK, Israel, Japan, France, and Germany as some of the major countries.
- However, all the strategic partnerships are not the same and not equally important. **Different dimensions play a major role in relationships** with different countries.

#### Challenges in the relationship

- **Balancing the relations:** Key challenge for India will be to maintain its relationship with Iran amidst US sanctions, navigate the geopolitical rivalries between Saudi Arabia, Iran and Israel.
- **Safety of people:** The safety and security of the Indian nationals are a key priority for the Indian government.
- **Protectionism:** The protectionist policies of the Gulf Cooperation Council (GCC) have a direct impact on Indian diaspora.
  - For instance, local job reservation policies for locals resulted reduced emigration from India to the GCC countries along with job losses, suicides by migrant workers, non-payment of salaries and the denial of labour rights and benefits.
- **Radicalisation of citizens:** Increasing incidences of terrorism, sprawling terror outfits and probability of re-emergence of Islamic State (IS) is a matter of concern to both India and countries in the region.
- **Corona crisis:** Disruptions in the GCC, caused by the historic low oil prices and plummeting global demand as a result of the COVID-19 pandemic, are likely to have economic implications for India and welfare implications for the large number of Indians who live and work in the region.
- **Rising Chinese influence:** China and Iran have recently signed a 25-year strategic cooperation pact. With a growing Chinese presence in Iran, India is concerned about its strategic stakes such as completion of the Chabahar port project.

#### Gulf Cooperation Council

- GCC was established by an agreement concluded in **1981 among Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE** in view of their special relations, geographic proximity, similar political systems based on Islamic beliefs, joint destiny and common objectives.
- The Secretariat of GCC is located in **Riyadh, Saudi Arabia.**
- It is a political, economic, social, and regional organisation according to its charter.

#### Way forward

Despite decreasing trends in commercial and trade relations, **Indo-Gulf relations will continue to flourish** because of common concerns to counterterrorism and extremism. In the longer run, **India needs to find new drivers for the India-Gulf synergy** with cooperation in healthcare and gradually extend outward towards sectors where India has a comparative advantage. E.g., pharmaceutical research and production, petrochemical complexes etc.

## 2.4. INDUS WATER TREATY

#### Why in News?

After a gap of more than two and half years Indian and Pakistani delegations began the 116th Meeting of the Permanent Indus Commission.

## About the Indus Water Treaty (IWT)

- IWT was signed in 1960, between India and Pakistan and brokered by the World Bank.
- The treaty fixed and delimited the rights and obligations of both countries concerning the use of the waters of the Indus River system.
- It provided for the funding and building of dams, link canals, barrages, and tube wells—notably the Tarbela Dam on the Indus River and the Mangla Dam on the Jhelum River.
- The treaty required the creation of a Permanent Indus Commission, with a commissioner from each country, in order to maintain a channel for communication and to try to resolve questions about implementation of the treaty. In addition, a mechanism for resolving disputes was provided.
- All the water of the eastern rivers – Sutlej, Beas, and Ravi which amounts to around 33 million acre-feet (MAF) annually — is allocated to India and is for unrestricted use. And the water of western rivers – Indus, Jhelum, and Chenab which is around 135 MAF annually has been assigned mostly to Pakistan.
  - India has the right under the Treaty to generate hydroelectricity through run of the river projects on the western rivers. These are subject to specific criteria for design and operation. And, under the Treaty Pakistan has the right to raise objections on design of Indian hydroelectric projects on western rivers.

### What are the prevalent issues within the treaty?

The primary issue that the treaty faces is Pakistan's opposition to the Indian projects on the Western Rivers. The opposition is majorly on the issue that whether projects on Jhelum and Chenab conform to the technological specifications specified in the agreement.

The issue has seen its manifestation in several projects-

- **Kishanganga Hydroelectric Project (KHEP), Jhelum:** Pakistan has opposed the construction of the project since its inception and also approached World Bank for the same.
- **Ratle Hydroelectric Project, Chenab:** The project has been under negotiations with the World Bank whether the designs of those projects violated the terms of the treaty.
- **Other projects:** Pakal Dul Hydroelectric Project, Marusudar (a tributary of Chenab), Miyar Dam, Miyar Nallah (a tributary of Chenab) and Lower Kalnai, Chenab have also been objected.

The sharing of water is a sensitive issue for both India and Pakistan. As a result, the discussions get extremely politicized. For instance, Pakistan maintains high troop levels and alertness around the canals on the eastern front, fearing that India will try to take control of the western rivers. Along with these issues, the **Indus Water Treaty also gets affected by the overall developments in the India-Pakistan relationship.**

### Why abrogation of the treaty is not a viable option?

- **Going against international law:** The IWT does not have a unilateral exit clause. Technically, under the Vienna Convention on the Law of Treaties, there are provisions to sever and withdraw from the treaty. However, the provisions cannot be appropriately used to abrogate the IWT.
  - Even the severance of diplomatic and consular relationships between India and Pakistan cannot terminate the IWT.
- **Effect on India's other lower riparian state:** The abrogation of the IWT will send alarm bells ringing in India's other lower riparian country, Bangladesh which receives about 91% of its waters from the rivers flowing from India.
- **China's cooperation on hydrological data:** Growing China-Pakistan nexus can result in China withholding Hydrological data in response to the abrogation of the treaty.
  - Such data plays an important role in gauging the amount of water coming from Tibet into Arunachal Pradesh and taking measures to avert any major disaster or floods in the state.



#### Run-of-the-river Project

Run-of-the-river hydroelectricity is a type of hydroelectric generation plant whereby little, or no water storage is provided.

## Way Forward

While the treaty may have served some purpose at the time it was signed, now with a **new set of hydrological realities, advanced engineering methods in dam construction and de-siltation**, there is an urgent need to look at it afresh.

Following efforts could be made to overcome the bilateral challenges and optimize the use of Indus Water System resources-

- **Globally advocating India's position:** Over the years, India has been a generous upper riparian state as it has utilized only about 93% of its stipulated water storage capacity. Further, out of the total estimated capacity of 11406 MW electricity that can be harnessed from the three western rivers in Kashmir, only 3034 MW has been tapped so far.
  - This position could be advocated to counter Pakistan's attempts to internationalize the issue by involving World Bank.
- **Utilizing the permissible storage capacity:** India has been woefully wanting in not utilising the 3.6 million acre feet (MAF) of "permissible storage capacity" granted by the IWT on the western rivers. Poor water development projects have allowed 2-3 MAF of water to easily flow into Pakistan.
- **Modification in light new hydrological realities:** With development of advanced engineering methods in dam construction and de-siltation, there is an urgent need to modify the treaty to incorporate the same.
- **Seeking cooperation:** Efforts could be made to seek cooperation with Pakistan in areas wherever it is possible. For example, Article VII of the IWT talks about "future cooperation" and calls for taking up joint studies and engineering works on the rivers.

## 2.5. QUAD

### Why in news?

Recently, leaders of **India, US, Australia and Japan** took part in the first-ever summit level talks of "Quad" nations, which was held virtually.



### What is Quad?

Quad or Quadrilateral Security

Dialogue has often been stated as a grouping which brings together 'four like-minded countries' i.e., India, US, Australia and Japan. The reference to like-minded here indicates towards convergence on geopolitical issues, especially the Indo-Pacific Region.

The evolution of 'Quad' since it first came into being can be traced on following lines-

- **Initiation Phase:** The US, Japan, India and Australia came together in the aftermath of the 2004 Indian Ocean tsunami. Later, officials of the four countries met in 2007 "to look at issues of common interest." These meeting led to the **genesis of the concept of Indo-Pacific**.
- **Dormant Phase:** After the initial meetings, Australia pulled out of the grouping citing China's apprehensions regarding it. This resulted in the grouping going into the dormant phase and the activity staying limited to the trilateral (Japan, India and US) or at times bilateral (India and US) Malabar exercise.
  - Malabar Exercise is a naval exercise started between India and US which has seen fluctuating participation of Japan and Australia. (Singapore also participated in the Malabar Exercise in 2007).
- **Revival Phase:** In 2017, the dialogue was revised on fringes of East Asia Summit (EAS) in Philippines. Since then, the activity in the grouping has drastically increased. For instance, in 2019, the foreign ministers of the Quad countries met in Washington for the first time. Also, all four Quad countries participated in the Malabar Exercise of 2020. (It was held in Arabian Sea and Bay of Bengal.)

Quad	Timeline
2004	Countries came together
2007	Concept of Indo-Pacific
2017	Dormant Phase Revival during EAS
2019	Quad meeting in Washington
2021	Summit level meeting

The latest development in the revived phase of the Quad is the **summit level meeting**.

## **What were the key takeaways from the Summit?**

The grouping highlighted its **takeaways through a joint statement** (up till now, each country issued separate statements). The statement, **namely, “The spirit of the Quad”**, highlight following key elements:

- **Vision for Indo-pacific:** The statement envisions a free, open, rules-based, inclusive and secure Indo-pacific region. It has also endorsed ASEAN’s Outlook on the region.
- **Responding to economic and health impacts of COVID-19:** Under the plan, the US and Japan will fund the expansion of India’s manufacturing capacity and Australia would provide the logistical support to strengthen access and “last-mile” vaccine delivery in Southeast Asia and the Pacific.
- **Combating climate change:** The group has called for recognizing climate change as a global priority and aims to facilitate and strengthen the climate actions of all nations.
- **Addressing challenges associated with emerging technologies:** The statement has also highlighted the challenges associated with emergence of technologies like 5G, Blockchain, Artificial Intelligence etc.

Also, **three working groups** have been setup on the aforementioned issues i.e., **vaccine implementation, climate change and critical and emerging technologies**. These initiatives make the summit a significant shift, as the Quad is now moving beyond Naval Exercises and collaborating on larger and immediate issues.

## **What is the significance of these steps in relation to China?**

Although the **discussions and the joint statement do not mention China** or for that matter any specific country. But the developments have been influenced by Chinese activities in the recent past. These efforts could have following impact on China’s global engagements-

- **Containing China’s Aggression in the Indo-pacific region:** China’s activities in South China Sea, its border activities and its defiance of International Law of the Sea has forced the Quad countries to pool their resources to ensure free, open, inclusive and secure Indo-pacific.
- **Building Supply Chain resilience which is not dependent on China:** Countries across the world have been wary of China as it closed down its factories abruptly in the early stages of the pandemic. The closure caused major supply chain disruption.
  - The idea behind enabling India as a vaccine manufacturing hub is to decrease manufacturing dependence on China.
- **Checking China’s domination in emerging technologies:** The developments associated with 5G and the Huawei case raised red flags with regard to cybersecurity as well as national security. This provides a glimpse as to what a technologically dominant China would entail.
  - To counter this growing trend, the Quad aims to pool their capacities to provide global governance for development of these technologies.

## **How will expansion of Quad’s mandate affect India’s interests?**

Expansion of Quad’s mandate **can benefit India in following ways-**

- **In line with India’s regional power ambitions:** China’s interference in the form of its Belt and Road initiative and its policy of Debt Diplomacy undermined India’s regional primacy. Alongside Quad, India can help keep Chinese influence at bay and move towards its vision of being the Net Security Provider in the region.
- **Building India’s manufacturing capacity:** India has highlighted on several occasions, how trade with China is indirectly hollowing out its manufacturing capacity. Quad’s agenda to delink China from global supply chain could create global manufacturing space for India.
- **Support during potential bilateral dispute with China:** Growing Chinese military power with PLA becoming more and more assertive increases India’s border vulnerabilities. In such a scenario, strengthened Quad could provide external support to India.
- **Kashmir and cross-border terrorism issue:** Strengthening of Quad would enable India to gather more support on global issues like cross-border terrorism and limiting interference on the Kashmir issue.

However, India’s involvement with the Quad could have some negative consequences due to potential deterioration of India-China relations. The **negative impacts could be on following lines-**

- **Escalation of border issues:** India is the only Quad member that is not in the west Pacific and the only one that shares an undemarcated 3,500-km land border with China.
- **Direct impact on the economic relationship:** In 2020 China became India’s number one trade partner, with two-way trade at \$77 billion. Poor relations with China can have direct immediate impact on the immediate economic stability of the region.

- **Not a military grouping:** Despite having strategically aligned interests, the Quad countries cannot militarily support each other. Thus, even if tensions between India and China escalate as a consequence of Quad's activities, Quad members are not bound to provide any support to India directly.

### Way forward

As recently India's Prime Minister pointed out in his opening remarks, "the Quad has come of age. It will now remain an important pillar of stability in the region". But this pillar exists alongside other pillars in the region like the BRICS forum or SCO among others.

In this context, India should focus on agenda centric engagement, which is based on India maintaining its strategic independence, balancing its global relationships and taking forward the time-tested idea of multi-alignment.

To know more on the **Indo-Pacific region**, kindly refer to our Weekly Focus document on "**India and the Indo-Pacific**"



**India and the  
Indo-Pacific**

The emergence of the Indo-Pacific as a new geographic space represents the new strategic reality of the twenty-first century. The Indo-Pacific therefore is a new domain in India's foreign policy engagements. The document examines issues relating to India's unique geography, interests, and potential role in the Indo-Pacific region against the backdrop of a rapidly evolving geostrategic environment. It further discusses new opportunities in the region to secure India's strategic interests and secure its profile as the responsible global power.



## 2.6. BRICS

### Why in news?

Recently, first meeting of the BRICS Contact Group on Economic and Trade Issues was held.

### More about news

- The meeting for **BRICS Contact Group on Economic and Trade Issues (CGETI) held under India's Chair**.
- The theme of BRICS this year is '**BRICS@15: Intra BRICS Cooperation for Continuity, Consolidation, and Consensus**'.
- It presented the calendar of events for BRICS CGETI 2021, which included the priority areas for **deliverables, schedule and scope of the MSME roundtable conference workshop on Services Statistics**, and the BRICS Trade Fair.
- The **deliverables proposed** in meeting are-
  - Action plan based on the document "**Strategy for BRICS Economic Partnership 2025**" adopted during Russian Presidency in 2020.
  - **BRICS Cooperation on Multilateral Trading system** including cooperation for the TRIPS Waiver proposal at WTO.
  - Framework for **Consumer Protection in E-Commerce**.
  - **Non-Tariff Measures (NTM)** Resolution Mechanism and **Sanitary and Phyto-Sanitary (SPS)** Working Mechanism.
  - Co-operation framework for **protection of Genetic Resources and Traditional Knowledge**.
  - BRICS Framework on **Co-operation in Professional Services**.

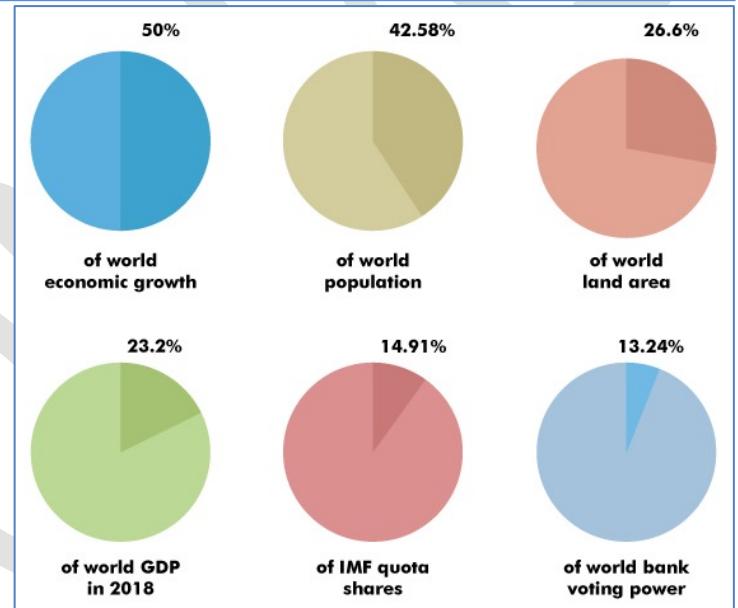
### BRICS areas of cooperation

- **Economic and financial cooperation**
  - **New Development Bank (NDB):** It was created at the **Fortaleza Summit (2014)**, is one of the most concrete results of the grouping's financial and economic cooperation.
    - ✓ Activities of this bank, it is expected the **mobilization of investment** flows in infrastructure and **sustainable development** projects in BRICS countries as well as in other emerging economies.
    - ✓ The NDB has a subscribed **capital of US\$ 50 billion dollars** and **each partner shall contribute equally** US\$ 10 billion dollars, up until 2022.

- ✓ The NDB headquarters is in Shanghai, China. The first NDB regional office, located in Johannesburg, South Africa and other at Sao Paulo, Brazil, with a representation office in Brasilia as well.
- **Contingent Reserve Arrangement (CRA):** The CRA is an important mechanism to the **macroeconomic support of BRICS countries** at shoring up its member countries in the **event of crises in their balance of payments.**
  - ✓ The total amount of resources initially allocated to the CRA is set to attain the **U\$S 100 billion dollars mark.** The countries' individual commitments are: China (US\$ 41bi); Brazil (US\$ 18bi); Russia (US\$ 18bi); India (US\$ 18bi); South Africa (US\$ 5bi).
  - ✓ These agreements contribute to **realization of the shared objectives of deepening economic cooperation and fostering integrated trade and investment markets.**



- **Health cooperation**
  - BRICS health cooperation started with the First Meeting of Health Ministers of BRICS countries, in 2011.
  - While concrete achievement on health cooperation is the **Tuberculosis Research Network**, which aims at promoting joint research and development initiatives on the fight against this disease.
  - At the multilateral level, BRICS countries articulate in the margins of the World Health Assembly (WHA) since 2012 and coordinate on the support of the Doha Declaration on the TRIPS Agreement and Public Health, from 2001.
- **Science, technology and innovation (STI)**
  - It started in 2014, with the first ministerial meeting on the subject such as **geospatial technology, management of water resources, biotechnology and biomedicine, information and communication technology etc.**
  - BRICS cooperation in STI is to foster researches that may result in **the production of goods of high added technological value; the increase of patent requests, and the exchange of knowledge between countries.**
- **Security cooperation:** The **meetings of National Security Advisors (NSA) and the working groups** exchange their approaches on international security threats and on transnational crimes, such as drug trafficking, cyber-attacks, money laundering, corruption, and terrorism.
- **Business cooperation:** **BRICS Business Council and Business Forum** are the main mechanisms for business cooperation inside the grouping.
  - Currently, the Council already has nine working groups, for subject areas like **infrastructure, manufacturing, energy, agribusiness, financial services, regional aviation, harmonization of capacity levels and capacity development.**



#### Why BRICS is important for India?

- **Voice of developing countries:** BRICS has appeared to be the voice of developing countries, facing an aggressive club of developed countries, raising challenges on issues from WTO to climate change.
  - India believes that the rights of the developing countries has to be protected by BRICS and the five BRICS countries are also members of G-20.

- **Global Grouping:** India is actively pursuing for strengthening multilateralism and membership for United Nation Security Council (UNSC) and Nuclear Supplier Group (NSG), hence support of BRICS is necessary to achieve membership through consultation on mutual interest.
- **Global financial governance:** BRICS members calls for reforming global institutions such as the UN World Trade Organisation, World Bank (WB) and International Monetary Fund (IMF), to get adequate and equitable voting rights.
- **Voice against terrorism:** India has been facing state-sponsored cross-border terrorism from Pakistan for decades now but in BRICS, China has been shielding Pakistan. India hopes to continue to work with other BRICS countries to reach an understanding with China on the issue of cross-border terrorism.
- **Border conflict:** The Sino-Indian Doklam border confrontation before the Xiamen summit chilled relations between China and India, the incident demonstrated that to construct a peace and security dialogue among the BRICS countries is very important and urgent.

## 2.7. SUEZ CANAL

### Why in news?

One of the world's largest container ships, named **Ever Given**, was wedged across the Suez Canal, blocking one of the busiest maritime trade corridors in the world.

### More about news

- During the blockage more than 180 vessels were caught up in the traffic.
- The incident set an example of the **fragility of maritime commerce and global supply chains** that should be addressed.
- Before also, few accidental groundings of vessels have closed the canal, the most notable in 2004 when a **Russian oil tanker ran aground**.

### Suez Canal and its significance

- Suez Canal is **193-kilometer-long artificial waterway in Egypt**, to connect the **Mediterranean Sea and the Red Sea**.
- It enables more **direct shipping between Europe and Asia**, eliminating need to circumnavigate Africa via Cape of Good Hope.
- It provides a crucial link for oil, natural gas and cargo being shipped from East to West and about **10% of all global trade, amounting nearly \$10 billion** worth of goods every day flows through the Suez Canal.



### Suez War 1956

- **Egypt went bankrupt** in 19th century while trying for industrialization. Due to this the Governor of Egypt had to sell his shareholding in the company that managed Suez Canal, to the British.
- Thus since 1875, control of canal was with France and Britain. Consequently, Egypt was colonized by Britain. It gained **independence in 1922** but British troops remained to maintain control over the canal.
- The crisis began in 1956 when Egypt's president nationalized the canal after the British had departed.
- He took other steps that were deemed security threats by Israel and its Western allies, leading to a military intervention by Israeli, British and French forces.
- The crisis briefly closed the canal and raised the risk of entangling the Soviet Union and the United States.
- Crisis ended in early 1957 under an agreement supervised by the United Nations, which sent its first peacekeeping force to the area.
- The outcome was seen as a triumph for Egyptian nationalism, but its legacy was an undercurrent in the Cold War.

- Among other goods, **54.1 million tons of cereal, 53.5 million tons of ores and metals, and 35.4 million tons of coal and coke** in 2019 passed through the canal.
- Also, **Canal has no locks, so it can even handle aircraft carriers**, which is very important for security reasons.

#### **India's strategy on Suez Canal blockage**

- The Suez Canal route is used for Indian exports/imports worth **USD 200 billion to/from North America, South America and Europe**.
- It includes **petroleum goods, organic chemicals, iron and steel, automobile, machinery, textiles and carpets, handicrafts including furniture, leather goods, etc.**
- So, Centre chalked out a **four-point plan** to deal with the situation arising from the blockage of the Suez Canal, which includes prioritisation of cargo, freight rates, advisory to ports and re-routing of ships.
  - Under the **prioritization of cargo**, it was decided that FIEO, MPEDA and APEDA will jointly identify cargo particularly perishable cargo for priority movement and work with the shipping lines for the same.
  - The **Container Shipping Lines Association (CSLA)** assured that the **freight rates** as per existing contracts will be honored.
  - Once the blockage is over, it is expected that some **bunching may take place, especially at the ports of JNPT, Mundra and Hazira**
    - ✓ Hence, Ministry of ports, shipping and waterways assured to issue an advisory to these ports so as to gear up arrangements and ensure efficient handling during the forthcoming busy period.
  - Besides, shipping lines were advised through CSLA to explore the option of re-routing of ships via the **Cape of Good Hope**, which usually takes 15 additional days' time.

#### **Way forward**

- **Multiple sourcing options:** Shipping companies can have multiple sourcing options in place. This will reduce dependency on single vendor and mitigating exposure to losses in the future.
- **Crisis management plans:** There is need to plan for extra budget, transportation, energy and communication networks that can weather the crises without bringing the global trading system to a standstill.
- **Alternative routes:** For e.g. Diverting ship routes via Cape of Good Hope to avoid supply chain disruptions.
- **Global cooperation:** Countries should cooperate to meet immediate demand of essential goods such as food items, energy resources to avoid impact on livelihood of people and global economic imbalance.



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### 3. ECONOMY

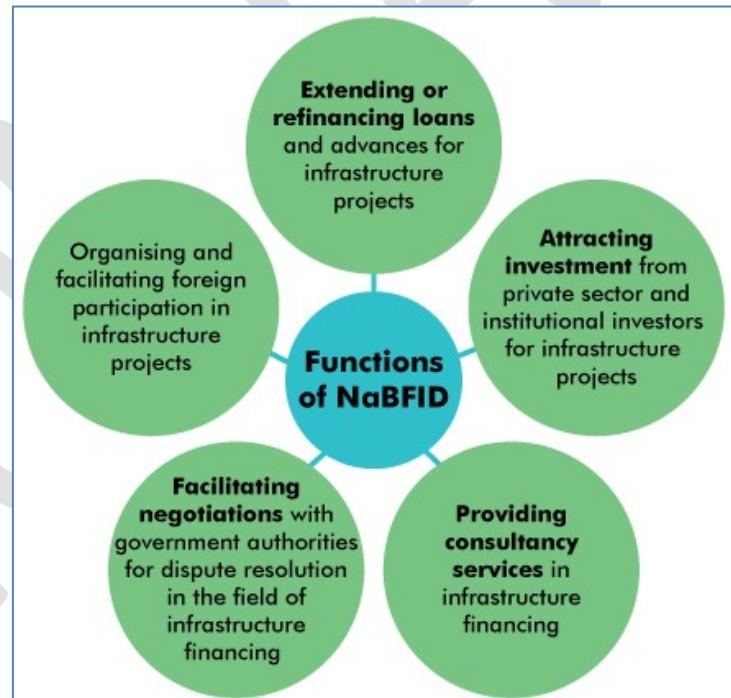
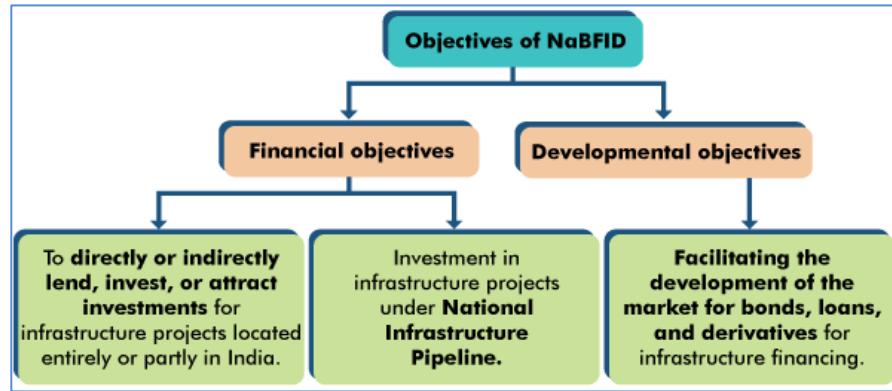
#### 3.1. NATIONAL BANK FOR FINANCING INFRASTRUCTURE AND DEVELOPMENT (NaBFID)

##### Why in news?

Recently, the Parliament passed National Bank for Financing Infrastructure and Development (NaBFID) Bill, 2021.

##### About NaBFID Bill, 2021

- Bill seeks to set up NaBFID, a Development Financial Institution (DFI) to support the development of long-term non-recourse infrastructure financing.
- Shareholding of NaBFID: NaBFID will be set up as a corporate body with authorised share capital of 1 lakh crore rupees held by central government, multilateral institutions, sovereign wealth funds, pension funds, insurers, financial institutions, etc.
  - Initially, central government will own 100% shares of the institution which may subsequently be reduced up to 26% once the institution has achieved stability and scale.
- Source of funds: NBFID may raise money in the form of loans or otherwise both in Indian rupees and foreign currencies, or the issue and sale of various financial instruments including bonds and debentures.
  - NBFID may borrow money from central government, RBI, scheduled commercial banks, mutual funds, and multilateral institutions such as World Bank and Asian Development Bank.
- Management: NBFID will be governed by a Board of Directors and the Chairperson appointed by the central government in consultation with RBI.
  - A body constituted by the central government will recommend candidates for the post of the Managing Director and Deputy Managing Directors.
  - The Board will appoint independent directors based on the recommendation of an internal committee.
- Government Support: The central government will provide grants worth Rs 5,000 crore to NBFID by the end of the first financial year.
  - The government will also provide guarantee at a concessional rate of up to 0.1% for borrowing from multilateral institutions, sovereign wealth funds, and other foreign funds.
  - Costs towards insulation from fluctuations in foreign may be reimbursed by the government in part or full.
  - Upon request by NBFID, the government may guarantee the bonds, debentures, and loans issued by NBFID.
- Investigation and prosecution: Courts will also require prior sanction for taking cognisance of offences in matters involving employees of NBFID. No investigation can be initiated against employees of NBFID without the prior sanction of
  - the central government in case of the chairperson or other directors
  - the managing director in case of other employees.



- Licences:** The RBI in consultation with the government issue licences and specify conditions for setting up of private sector DFIs and also RBI prescribe regulations for these DFIs.

#### About Development Financial institution (DFI)

- DFI known as a **development bank or a development finance company** are institutions that provides **long term development finance to various sectors like industry, agriculture, housing and infrastructure.**
- DFIs play a **pivotal role in extending credit and boosting economies**, especially in developing countries.
- DFIs can be either **wholly or partially owned by the government and few have majority private ownership**, determined by the nature of the activities being financed, and their associated risk-returns profile.
- There is **no specific use of the term 'DFI' in either the RBI Act, 1934 or the Companies Act, 1956** or various statutes establishing DFIs, while some financial institutions under RBI Act and Companies Act perform the role of DFIs in the broadest sense.

#### How DFIs are different from banks?

Parameter	Commercial Bank	Development financial institutions
<b>Definition</b>	Banks that provide services to individuals and industries.	Banks that function as multi-purpose financial institutes, with a broad development agenda.
<b>Set up</b>	Set up under the Companies Act, as Banking Companies.	Set up under specialized act E.g. Industrial Finance Corporation Act
<b>Funds</b>	Funds are raised through investments and deposits made by Depositors	Funds are borrowed and acquired by grants, selling securities
<b>Loan provided</b>	Short and Medium-term loans	Medium and Long-term loans
<b>Purpose</b>	To make a profit by lending money at a high rate of interest.	To make a profit by lending money at a high rate of interest.
<b>Clients</b>	Individuals, and Business Entities	Government and Corporates

#### Need and benefits of DFIs

- **Long term finance:** DFIs emphasizes the long-term financing of a project rather than collateral based financing and support for activities to the sectors of the economy where the risks may be higher and may not be feasible for commercial banks to finance.
- **Gap filler:** DFIs act as a gap-filler which was made due to incapability of commercial banks to finance big infrastructure projects for long term to attain growth and financial steadiness.
- **To improve capital Market:** Tax benefits and tweaks to the Indian Stamp Act as mentioned under bill will have positive impact on the bond market
- **Reduces incidences of risk:** DFIs carry out feasibility study to evaluate viability of projects. When project costs were high and could not be financed by one DFI, rather they form loan consortia with commercial banks, thereby reducing the incidence of risks.
- **Technical support and expertise:** DFIs provide skills, technical and managerial expertise to projects, which makes projects to be more successful.

#### Challenges that DFIs may face

- **Actionable strategy:** DFIs are expected to operate at the forefront of societal and economic change and need a strategy to guide them towards meeting their objectives. This may be made more difficult due to nature of their governance, often complex and prone to political interference.
- **Credit decisions:** Avoiding a high level of Non-Performing Loans is as important for DFIs as it is for commercial banks. Moreover, making good credit decisions has other dimensions and face specific challenges like underwriting weak loans for the sake of volume targets and corruption.
- **Counter-productive competition:** There can be cases where too much money chases too few good projects, resulting in poor resource allocation and counter-productive competition.

#### Evolution of DFIs in India

- After Independence, government has set up the **Industrial Finance Corporation (IFCI) under The Industrial Finance Corporation of India Act, 1948** and State Financial Corporations (SFCs) were formed under **State Financial corporations (SFCS) Act 1951** to embark on long term term-financing for industries.
- Later in **1955, the Industrial Credit and Investment Corporation of India (ICICI), the first development finance institution in the private sector** set up with backing and funding of the World Bank.
- Later **Refinance Corporation for Industry (1958), Agriculture Refinance Corporation (1963), Rural Electrification Corporation Ltd and HUDCO** were established.

- Balance between private and public sectors:** A DFI with a private sector character will require the government to believe and trust the private sector and still extend such benefits to the institution as it would normally do to a state-owned DFI.
- Attracting and retaining the best staff:** DFIs are in competition with the private sector to attract talent, they are often at a disadvantage when it comes to absolute levels of remuneration. This may erode efficiency, motivation and competence.

#### Way forward

- Standardised regulation:** There is need for establishment of standardized and streamlined regulatory frameworks where, despite government participation, decision-making and where executive responsibilities are not hampered.
- Performance analysis:** Advocate performance-based remuneration to retain staff and vocational training to keep the technical competences and maintain efficiency of DFI.
- Consultation and coordination:** Consultation among DFIs during the elaboration of the strategy, exchange information, find concrete synergies and cooperate on specific operations through co-financing to make sure that overlaps are avoided and conversely eventual markets gaps are covered.
- Strong culture of innovation:** Cultivating strong culture of innovation helps to increase value-addition and catalyse private investment in entrepreneurship especially in uncharted sectors.

## 3.2. NEW UMBRELLA ENTITY

#### Why in News?

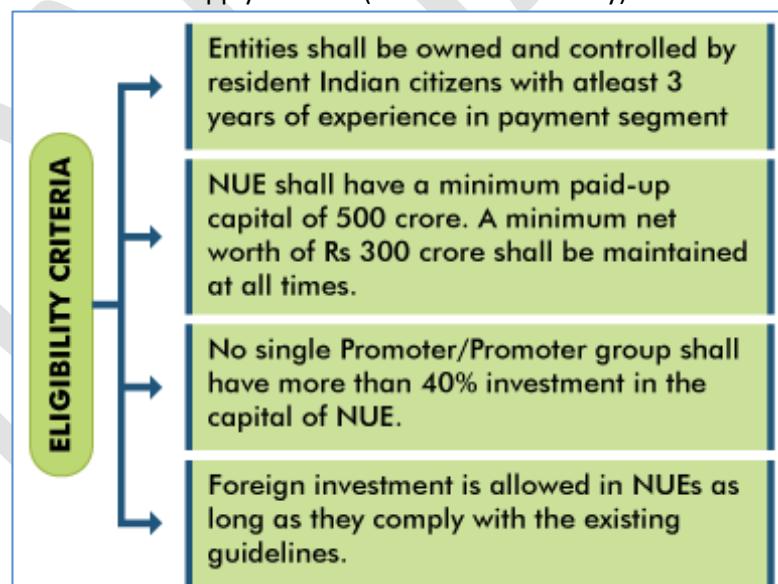
Recently, Reserve Bank of India (RBI) extended the deadline to apply for NUE (New Umbrella Entity) to March 31.

#### More on News

- In August last year, RBI had released a framework for authorization of an umbrella entity for retail payments and had invited applications from desirous entities by February 26, 2021.
- According to reports, several companies have partnered with banks and major tech players to apply for NUEs.

#### About NUE

- Objective is to set up new pan-India umbrella entity / entities focusing on retail payment systems.
- NUE will be authorised under the Payment and Settlement Systems Act, 2007 and shall be a company incorporated under the Companies Act, 2013.



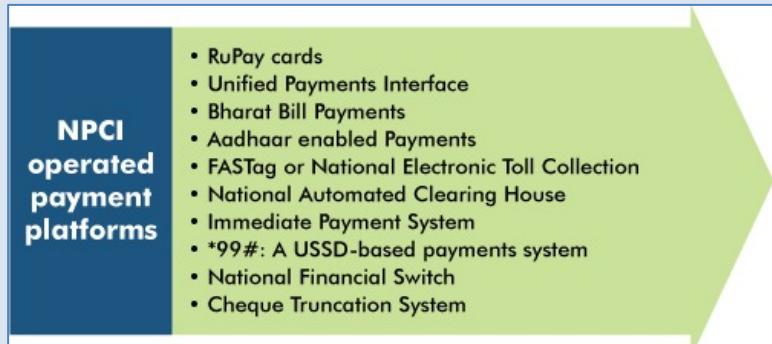
Need for NUEs		
To prevent monopoly and concentration risk	To reduce dominance of NPCI	To bring more people into digital payments channel
Currently, National Payments Corporation of India (NPCI) is the sole umbrella organisation for operating retail payments and settlement systems in India.	NPCI which controls over 60% of retail payments, has become 'too big to fail'.	As digital transactions are more transparent and tax authorities can keep an eye on money movement, unlike cash exchanges.

#### Benefit of the move

- More such entities will encourage competition and will offer more retail payment solutions to customers.
- NUE will offer innovative payment systems to include hitherto excluded cross-sections of the society and will also enhance access, customer convenience and safety.
  - Just like NPCI runs UPI, IMPS and other payment modes, the NUEs will create similar mechanisms which will then be used by banks and fintech companies.
- Entities planning to establish these NUEs aim to get an even bigger share in the digital payments sector.
  - As per recent reports, one third of Indian households are using digital payments in some form or the other.

#### About National Payments Corporation of India (NPCI)

- NPCI is an umbrella organisation for operating retail payments and settlement systems in India.
- It is an initiative of RBI and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007.
  - 10 core promoter banks are State Bank of India, Punjab National Bank, Canara Bank, Bank of Baroda, Union Bank of India, Bank of India, ICICI Bank, HDFC Bank, Citibank and HSBC
- It has been incorporated as a "Not for Profit" Company under Companies Act 1956 with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.



#### Issues with NPCI

- As it is owned by banks, it may not have an incentive for promoting competition in the payments and money transmission sector because the latter reduces the stability of deposits they may otherwise lend out.
- Its not-for-profit character and the unity of operational control and underlying infrastructure is at odds with the objective of building innovative payments systems.
- People from rural areas & senior citizens are still in doubt with NPCI products mainly because of lack of financial illiteracy and lack of operational knowledge.
- Being a single operator for payments system, it could also result in systemic and operational risk, lack of innovation and upgradation and inefficiencies.
- NPCI's role as an infrastructure provider needs to be separated from its role as instrument operator to avoid conflict of interest.

#### Way forward

- Government must follow the Watal Committee recommendation to classify NPCI as a Critical Payment Infrastructure Company to improve governance and to bring transparency in its functioning.
- Main focus of NPCI should be to create awareness of its digital products to rural areas so that the dream of Cashless India will be a reality.
- RBI shall consider other options, like NUE, to minimise concentration risk and promote innovation and competition.
- To avoid conflict of interest, NPCI can place its payment instruments related functions in a separate profit-making entity.

### 3.3. DIGITAL CURRENCY

#### Why in News?

Recently, China has floated its own Central Bank backed digital currency, namely eCNY in selected cities on a trial basis.

#### What is a Digital currency?

In the broadest sense, a digital currency is a form of currency that is available only in digital or electronic form, and not in physical form. It is also called digital money, electronic money, electronic currency, or cyber cash.

#### What are potential benefits of using a Central Bank Digital currency?

- **Transactions are low cost:** As payments in digital currencies are made directly between the transacting parties without the need of any intermediaries, the transactions are usually instantaneous and low-cost.
- **Increased safety of the financial system:** Allowing individuals, private sector companies, and non-bank financial institutions to settle directly in central bank money (rather than bank deposits) significantly reduces the concentration of liquidity and credit risk in payment systems.
- **Encourage competition and innovation in the payment systems:** Digital currency would create a level playing field in the payments sector, which could encourage multiple start-ups and development of new products in the sector.
- **Improve financial inclusion:** Digital Cash Account Providers are likely to reach the segments which are currently excluded from conventional banking services.
- **Possibility of a better directed monetary or fiscal policy:** Digital currency provide an opportunity to authorities to issue currency with additional conditions. For instance, these currencies can enable direct handouts of money that expire if not used by a particular date and can make it easier for governments to track financial transactions to stamp out tax evasion and crackdown on dissidents.

#### What are the challenges that may arise in adoption of digital currencies?

- **Privacy issue:** Central banks would have increased control over money issuance and greater insight into how people spend their money, this data can potentially affect the privacy of the users.
- **Cybersecurity threats:** Transactions in digital currencies removes Banks as intermediaries which makes users all the more vulnerable to cyber frauds and increases the fragility of the overall system.
- **Need for large-scale digital infrastructure:** Floating a digital currency requires prerequisites such as large-scale internet penetration, reliable network infrastructure and handling capacity for large scale data such as data centres among others.

#### China's Digital Currency

Countries from Sweden to Bahamas are experimenting with digital currency on some level, yet no major power is as far along as China. The development can be seen on following lines-

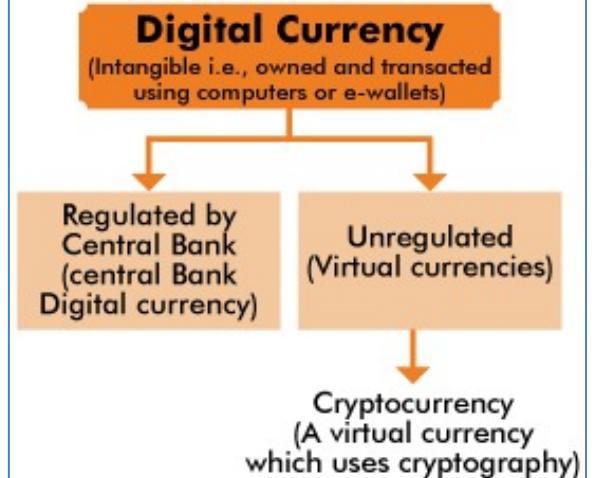
- While the **Chinese government has not officially introduced the currency**, namely, eCNY nationwide, trial has been started on a large scale.
- If the eCNY is successful, it will give the **central bank new powers, including novel types of monetary policy** to help the economy grow.
- Some economists have stated that **China's digital currency would also make it easier for the renminbi to compete with the U.S. dollar** as a global currency because it can move internationally with fewer barriers.
- In this context, the right to **issue and control digital currencies could become a 'new battlefield' of competition** between sovereign states.

#### How has Indian dispensation responded to developments regarding digital currency?

In India, despite government threats of a ban, cryptocurrency transaction volumes have been rising and about 8 million investors now hold 100 billion rupees (\$1.4 billion) in crypto investments. User registrations and money inflows at local crypto exchanges such as ZebPay, Unocoin etc. have been soaring especially in the last 2-3 years.

In this context of large demand for digital currencies, following steps have been seen-

- The **Reserve Bank of India** voiced its **concern against cryptocurrencies**. At the same time, moving forward for developing its own digital currency.



- To this effect, RBI issued an order in 2018 forbidding Banks from dealing in cryptocurrencies.
- This ban was struck down by Supreme Court in 2020. The court also ordered the government to take a position and draft a law on the matter.
- In this context, the Government of India is mooting a **law to ban mining, trading and holding of cryptocurrencies**.
  - Also, further tightening the regulatory regime, the **Ministry of Corporate Affairs (MCA)** has made amendments to rules in the Companies Act, **mandating firms to disclose their investments in cryptocurrencies**.
- The measure is in line with a **government agenda** that called for **banning private virtual currencies such as bitcoin** while building a framework for an official digital currency.

## 3.4. BOND YIELDS

### Why in News?

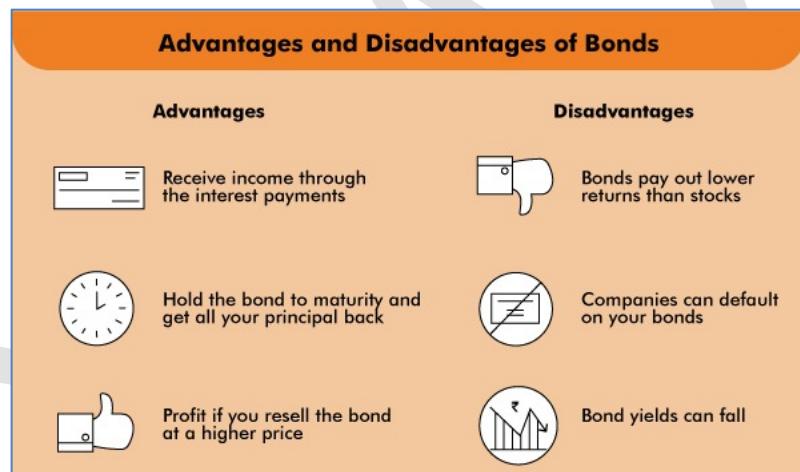
Recently, the US 10-year Treasury Bond yields have witnessed a sharp increase. Experts estimate that this development will have an indirect effect on the Indian Economy.

### What are Bonds?

A bond is a fixed income instrument that **represents a loan made by an investor to a borrower (typically corporate or governmental)**. A bond could be thought of as a contract between the lender and borrower that includes the details of the loan and its payments.

### Following are the key characteristics of Bonds-

- **Face value** is the money amount the bond will be worth at maturity; it is also the reference amount that is used for calculating the interest payments.
- **The coupon rate** is the rate of interest the bond issuer will pay on the bond. For example, a 5% coupon rate means that bondholders will receive 5% of the face value of the bond as interests.
- **The maturity date** is the date on which the bond will mature, and the bond issuer will pay the bondholder the face value of the bond.



Bonds are of several types including Corporate Bonds, Municipal Bonds, Agency based bonds and Government Bonds. In general parlance, **discussion on Bonds and Bond Yields invariably refers to the Government Bonds** (in most cases the 10-year tenored Government Securities). **Henceforth, further discussion would be in context of the Government Bonds.**

### What are Bond Yields and how are they determined?

- Bond Yields in essence shows the financial return, the owner of the bond is going to get from the bond at any given time. The simplest version of yield is calculated in the following manner:
- **Yield = [coupon amount x 100]/price**. If the price of the bond remains constant (i.e., equal to the face value), then the yield of the bond is same as the coupon rate.
- **But the Bond prices** seldom remain constant and are **subject to change on a daily basis due to factors like money supply in the economy, interest rates etc.** (we shall see these relationships in the next section) The fluctuations in prices of Bonds leads to two scenarios-
  - **Bonds trading at a premium:** If the Bond is trading at a value higher than its face value, it is said to be trading at a premium. In this case, **Yield of the bond goes lower than the coupon rate**.
  - **Bonds trading at a discount:** If the Bond is trading at a value lower than its face value, it is said to be trading at a discount. In this case, **Yield of the bond goes higher than the coupon rate**.

As can be seen from the example, when Bond prices increase, Bond yields decrease and vice versa. Therefore, it can be said that the **Bond Prices have an inverse relationship with Bond Yields**.



#### How Bond Yields interact with other key economic variables?

- Interest Rates and Monetary Policy:** Prevailing interest rates in the market indirectly determine what is the market rate of return for the investment. The Bond yields are evaluated against this market return.
  - For example, if the market rate of return is 10% and Bond coupon rate is 5%, the investors will not find the Bond attractive, and its price will decrease. On the other hand, if the market rate of return is 1% and the Bond coupon rate is 5%, investors will find the Bond attractive, and its price will increase. Also, the increase in the bond price will lead to decrease in Bond Yield and vice versa.
- Stock Prices:** The government bond yields act as a proxy for the ‘risk-free rate’ prevailing in the market. Therefore, if government Bond yields are higher, the return provided by the stock market becomes less attractive, thus driving down the general demand and price of the stocks. Also, if the yields are lower, opposite outcome would take place.
  - The higher bond yields also indirectly **push up the borrowing costs for companies as well as individuals**. This reduces the earnings available for shareholders as dividends and directly affects the budgets of retail borrowers.

Impact of interest rates on Bond yield and prices		
Interest Rates	Bond Yields	Bond Price
↑	↑	↓
↓	↓	↑

#### What could be the impact of rising US Bond Yields on India?

Since capital flows from one country to another, changing market dynamics of one large economy directly or indirectly has an impact on other large economies. Impacts of rising US Bond prices could be of following nature-

#### Reasons for rising US Bond Prices

- A potential recovery of the US Economy after it was hit severely hit by the COVID-19 crisis.
- Tightening of Monetary Policy by US Fed and consequent rise in Inflation in the US Economy.
- These reasons have resulted in the rising of yield on the benchmark 10-year Treasury note in US.

- Decreased flow of investment:** The US is a source of flow into equity markets of other countries, including India, and a rise in rates in the US makes **keeping money in domestic bonds lucrative for the country's investors**.
- Potential depreciation of Rupee:** The flow of capital that gets decreased due to rising yields can directly affect the prevalent Rupee-Dollar market equilibrium and may lead to depreciation in Rupee.
- Driving up domestic borrowing costs:** If bond yields in the US push up yields in India, this can affect the returns of companies by increasing their borrowing costs.

#### Way Forward

The rising US Bond Yields could have a noticeable impact on the Indian Economy. But, at the same time, most experts expect **monetary policy from the world's central banks to remain accommodative and hence global bond yields to remain broadly low**. This warrants a measured and patient approach from the perspective monetary and fiscal management.

### 3.5. CAPITAL GAINS TAX

#### Why in News?

Recently, the Finance Bill, 2021 proposed an amendment to the regulations relating to Capital Gains Tax (CGT).

#### More about the News

- The amendment imposes CGT on any assets or shares received by a partner of a company when s/he retires.
  - The guideline also clarified that where a partner receives any money or other asset at the time of dissolution or reconstitution of the firm/association, the profits or gains that arise shall be chargeable under '**capital gains**'.
- Further, the tax will be levied on notional gain i.e., the gain realized from the difference between the fair market value and the actual cost in the case of asset transfer.

#### What is Capital Gains Tax (CGT)?

##### **Capital Gains Tax is a tax on growth of value of investments**

incurred when individuals and corporations sell those investments. Following can be cited as the key characteristics of the CGT levied in India-

- The tax **doesn't apply to unsold investments**, so stock shares that appreciate every year will not incur capital gains taxes until they are sold, no matter how long they are held.
- Capital gains treatment only applies to "capital assets"** such as stocks, bonds, jewelry, coin collections, and real estate property among others. In other words, it **applies only to transactions** which are capital in nature i.e., **result in change of assets or liabilities**.
- Capital gains are **not applicable to an inherited property as there is no sale**, only a transfer of ownership. However, if the person who inherited the asset decides to sell it, capital gains tax will be applicable.
- The CGT framework divides the tax in two types based on the time for which they are held-
  - Short-term Capital Gains Tax (STCG) on Short-term capital asset:** When an asset is held for a period of 36 months or less, it is termed as a short-term capital asset.
    - The criteria of 36 months have been reduced to 24 months for immovable properties such as land, building and house property. For instance, if you sell house property after holding it for a period of less than 24 months, any income arising will be treated as short-term capital gain.
  - Long-term Capital Gains Tax (LTCG) on Long-term capital asset:** An asset that is held for more than 36 months is a long-term capital asset.

### 3.6. ELECTRIC VEHICLE FINANCING

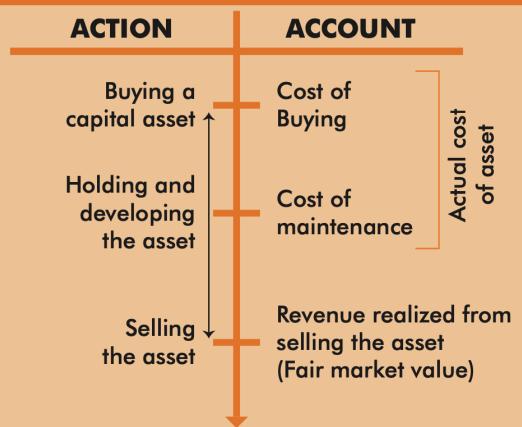
#### Why in News?

NITI Aayog and Rocky Mountain Institute India (an independent non-profit) released a new report 'Mobilising Electric Vehicle Financing in India'.

#### Key findings of the report

- Report highlights that India's **transition to electric vehicles (EVs)** will require a **total capital investment of \$266 billion** in EVs, charging infrastructure, and batteries over the next decade.

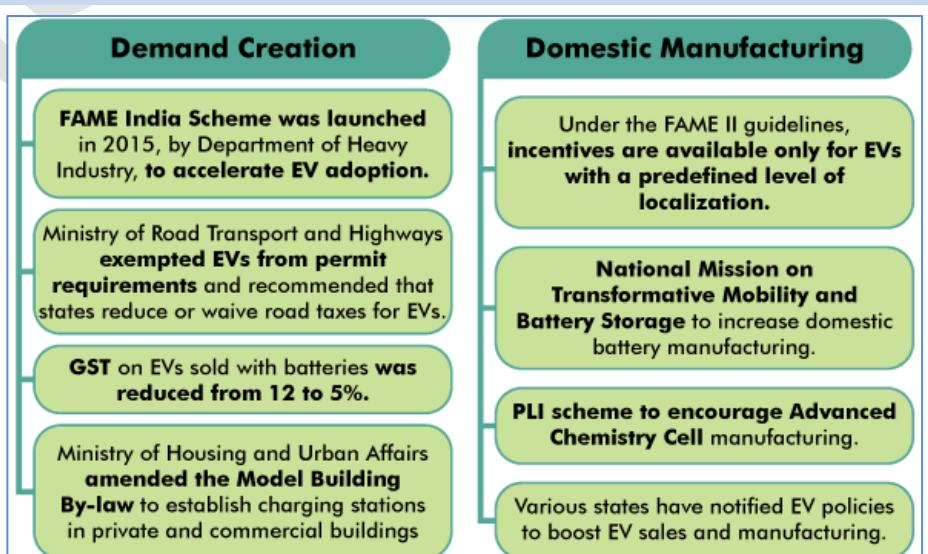
#### How CGT is levied (Example)



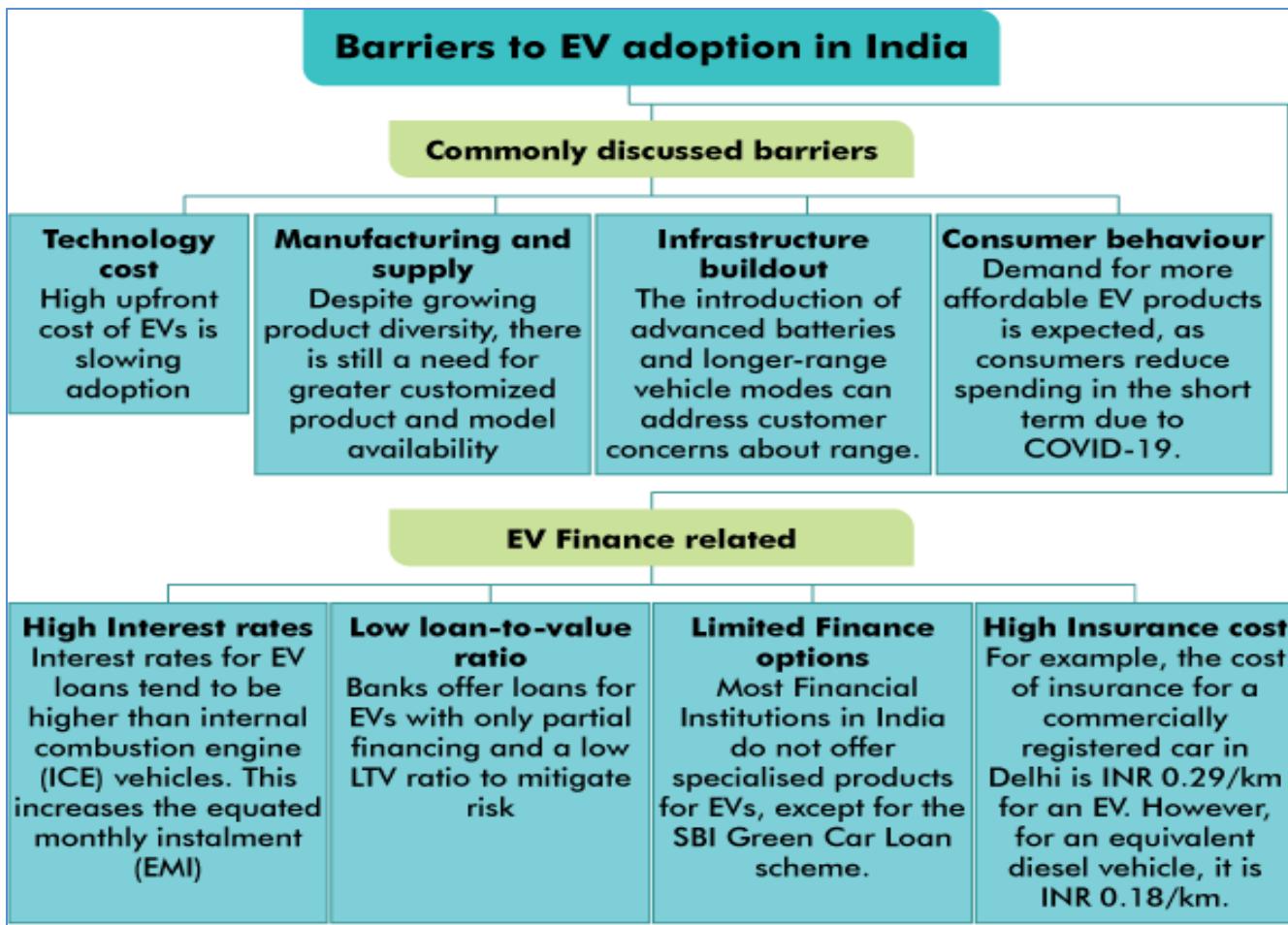
#### Calculation of CGT

$$\text{Notional Gain} = \text{Fair market value (selling price)} - \text{Actual cost (Buying + Maintenance)}$$

$$\begin{aligned}\text{Capital Gains} &= \text{Tax levied on notional gain.} \\ &\quad (\text{Ex. If notional gain is 1 lakh, and CGT rate is } 10\%) \\ &= 10\% \text{ of 1 lakh} = 10,000/-\end{aligned}$$



- EV financing industry will use a market size of \$50 billion by 2030, which amounts to about 80% of the current size of India's retail vehicle finance industry, worth \$60 billion today.



Report identified certain toolkit of solutions for catalyzing the required capital

Short Term	Medium Term	Long Term	Ecosystem Enablers
<ul style="list-style-type: none"> <li><b>Inclusion of EVs in Priority sector lending</b> guidelines to incentivise banks to increase lending.</li> <li><b>Interest rate subvention</b> to improve the affordability of loans.</li> </ul>	<ul style="list-style-type: none"> <li><b>Product guarantees and warranties</b> to reduce uncertainty associated with EV models.</li> <li><b>Risk-sharing mechanism (government and multilateral-led)</b> that partly or entirely cover possible losses associated with financing EVs will build trust in the sector.</li> </ul>	<ul style="list-style-type: none"> <li><b>Secondary market development</b> like industry-led buyback programmes, battery-repurposing schemes that would improve the residual value of EVs.</li> </ul>	<ul style="list-style-type: none"> <li><b>Digital lending:</b> It can streamline EV loans by helping overcome the operational and logistical challenges of vehicle financing.</li> <li><b>Business model innovation:</b> combined with the flow of patient capital, can demonstrate the potential of the sector.</li> <li><b>Open data repository for EVs:</b> FIs need access to data on EV specifications, real-world drive cycles, actual charging costs, and operating expenditures</li> </ul>

### 3.7. VEHICLE SCRAPPING POLICY

#### Why in News?

Ministry of Road Transport and Highways (MoRTH) announced Vehicle Scrapping Policy (VSP).

#### Key proposals in VSP

- De-registrations of vehicles
  - Commercial vehicles to be de-registered after 15 years in case of failure to get the fitness certificate.

- | Objectives of the policy |   |
|--------------------------|---|
|                          | To reduce population of old and defective vehicles  |
|                          | Achieve reduction in vehicular air pollutants to fulfil India's climate commitments         |
|                          | Improve road and vehicular safety   |
|                          | Achieve better fuel efficiency,   |
|                          | Formalize the currently informal vehicle scrapping industry                                 |
|                          | Boost availability of low-cost raw materials for automotive, steel and electronics industry |
- Private Vehicles be de-registered after 20 years if found unfit or in case of a failure to renew registration certificate.
  - All government vehicles may be de-registered and scrapped after 15 years from the date of registration.
  - Incentives to scrap old and unfit vehicles through registered scrapping centres (RSC).
    - State governments to offer road tax rebate of up to 25% for personal vehicles and 15% for commercial vehicle.
    - Manufacturers to provide 5% discount on purchase of a new vehicle against the scrapping certificate.
    - Registration fees may also be waived for purchase of new vehicle against the scrapping certificate.
  - Setting up of highly specialised Registered Vehicle Scrapping Facilities (RVSFs) across India by encouraging public and private participation.
    - MoRTH also announced draft rules to promote setting up of Registered Vehicle Scrapping Facility across India.

#### What is vehicle scrapping?

- It is the process in which End of life – vehicles (ELV) are disposed of, typically using shredders that tear them down into tiny pieces of metal which can then be recycled.
  - It covers activities such as depolluting, dismantling, segregation of material, safe disposal of non-reusable parts etc.
  - If 1990 is taken as base year, there are approximately 37 lakh Commercial Vehicles (CV) and 52 lakh Personal Vehicles (PV) eligible for voluntarily scrapping.
- ELV means all vehicles
  - No longer validly registered,
  - With cancelled registrations under Motor Vehicle Act, 1988 or due to an order of court,
  - Self-declared by owners as a waste vehicle due to circumstances that may be arising from fire, damage, natural disasters, riots, accidents etc.

#### Related News

- Ministry of Road Transport and Highways (MoRTH) has approved a proposal to levy a "Green Tax" on old vehicles which are polluting the environment.
- Main principles to be followed while levying the Green Tax are:
  - Transport vehicles older than 8 years could be charged Green Tax at the time of renewal of fitness certificate, at the rate of 10 to 25 % of road tax.
  - Higher Green tax (50% of Road Tax) for vehicles being registered in highly polluted cities.
  - Differential tax, depending on fuel (petrol/diesel) and type of vehicle.
  - Revenue collected from the Green Tax to be used for tackling pollution.
- Benefits of a Green Tax includes:
  - Dissuade people from using vehicles which damage the environment.
  - Motivate people to switch to newer, less polluting vehicles.
  - Green tax will reduce the pollution level, and make the polluter pay for pollution.

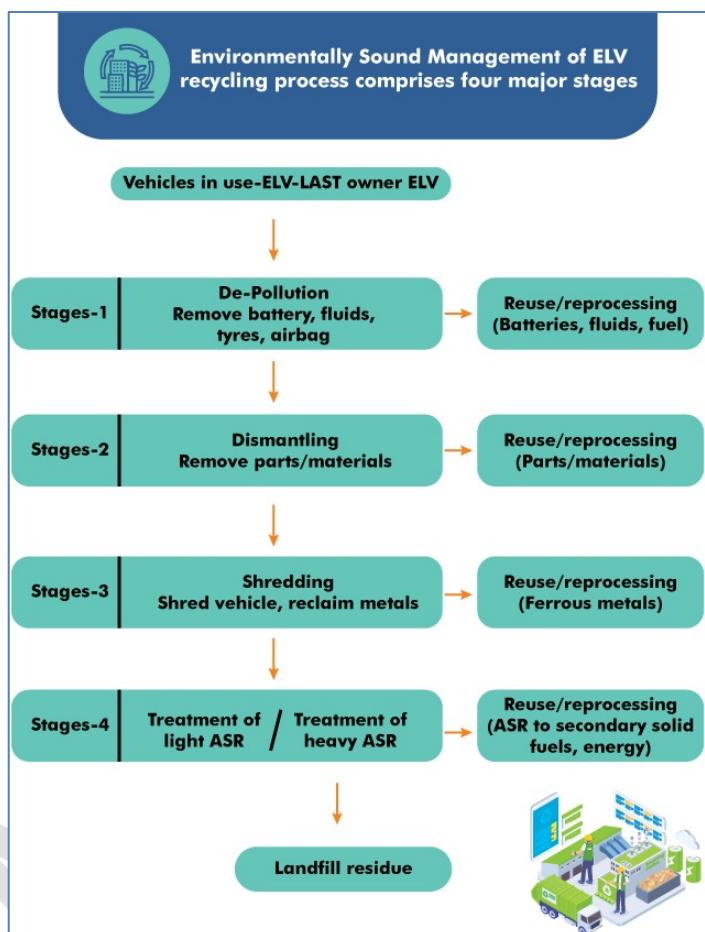
#### Challenges to such a policy

- Lack of supporting infrastructure: India currently has very less automated fitness test centres which is inadequate to cater to the market.
- Complex deregistration process: Present process for deregistering vehicles deters many owners who are interested to sell or get their old vehicles.
- Environment challenges: About 25% of waste material coming from an ELV poses a potential environmental threat, due to the presence of heavy metals, waste oils, coolants, ozone depleting substances, etc.
- Lack of consensus: In 2018, road ministry proposed to make vehicle scrapping mandatory from 2020 onwards. However, PM's Office did not agree to it and directed ministry to make scheme voluntary and consult states.
- Uncertain Numbers: It is difficult to arrive at definitive numbers for older and end-of-life vehicles, as the vehicle registration database in India is cumulative and not corrected for retirement and scrappage.

- Impact on sale of used vehicles:** Scrapping old vehicles will raise the price of second-hand vehicles. This will hit all poorer car owners.

#### Way forward

- Policy needs to provide fiscal stimulus package for replacement of older heavy-duty vehicles with BSVI vehicles.
- Notify new manufacturer/producer responsibility so that vehicles should not contain toxic metals like lead, mercury, cadmium or hexavalent chromium other than specified conditions.
- Scale up environmentally sound vehicle scrappage infrastructure nation-wide for safe disposal of waste and for material recovery for recycling like steel, aluminum and plastics etc.
- Integrate the informal sector as it plays an important role in the collection, dismantling, and recycling of ELVs.
- Cleaning up of the vehicle database to estimate accurately the quantum of legacy vehicles across all regions. MoRTH's initiative to create an online VAHAN database for active vehicle permits and registration is an important step.
- Better coordination particularly between MoRTH, Ministry of Environment, Forests and Climate Change, and Central Pollution Control Board to harmonize the regulatory framework and coordinate implementation.



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# 4. SECURITY

## 4.1. CRITICAL INFRASTRUCTURE

### Why in News?

Recently, Ministry of Power (MoP) claimed that State-sponsored Chinese hacker groups had targeted various Indian power centres.

### More on News

- MoP claimed that **no data breach/ data loss has been detected** as attempts from these groups have been thwarted after government cyber agencies warned about their activities.
  - National Critical Information Infrastructure Protection Centre (**NCIIPC**) **warned about the threat from a malware called Shadow Pad.**
- Also, a recent report in New York Times claimed that **Red Echo**, a hacker group affiliated with the Chinese government, targeted India's critical power grids through Shadow Pad malware (type of malicious software designed to harm or exploit any programmable device, service or network).

### Related News

#### Cyber Volunteer Program (CVP)

- Ministry of Home Affairs (MHA) informed that a **CVP has been rolled out** for cyber hygiene promotion to
  - Bring together citizens to contribute to the fight against cybercrime in the country.
  - Assist State/UT LEAs (law enforcement agencies) to curb cybercrimes.
- CVP is **envisioned by Indian Cyber Crime Coordination Centre (I4C).**
  - I4C, under MHA, acts as a **nodal point at National level in the fight against cybercrime.**
  - It **brings together academia, industry, public and government** in prevention, detection, investigation and prosecution of cybercrimes.

### About Critical Infrastructure (CI)

- CI describes the physical and cyber systems and assets that are so vital to a country that their incapacity or destruction would have a debilitating impact on national security and the economic and social welfare of a state.
  - **Chemicals, Dams, emergency services, Power & Energy, Banking & financial services**, government facilities, healthcare, information technology, transportation, nuclear reactors etc. are considered parts of CI of a country.
- **Importance of CIs**
  - Any delay, distortion or disruption in the functioning of these CIs has the potential to **quickly cascade across other CIs with the potential to cause political, economic, social or national instability.**
  - Attack or an outage affecting these infrastructures could have **cascading effects on large part of the population.**
  - Attacks on CIs can have a **significant economic impact, especially when targeted in conflict between nations.**

## Threats of CI

### Natural

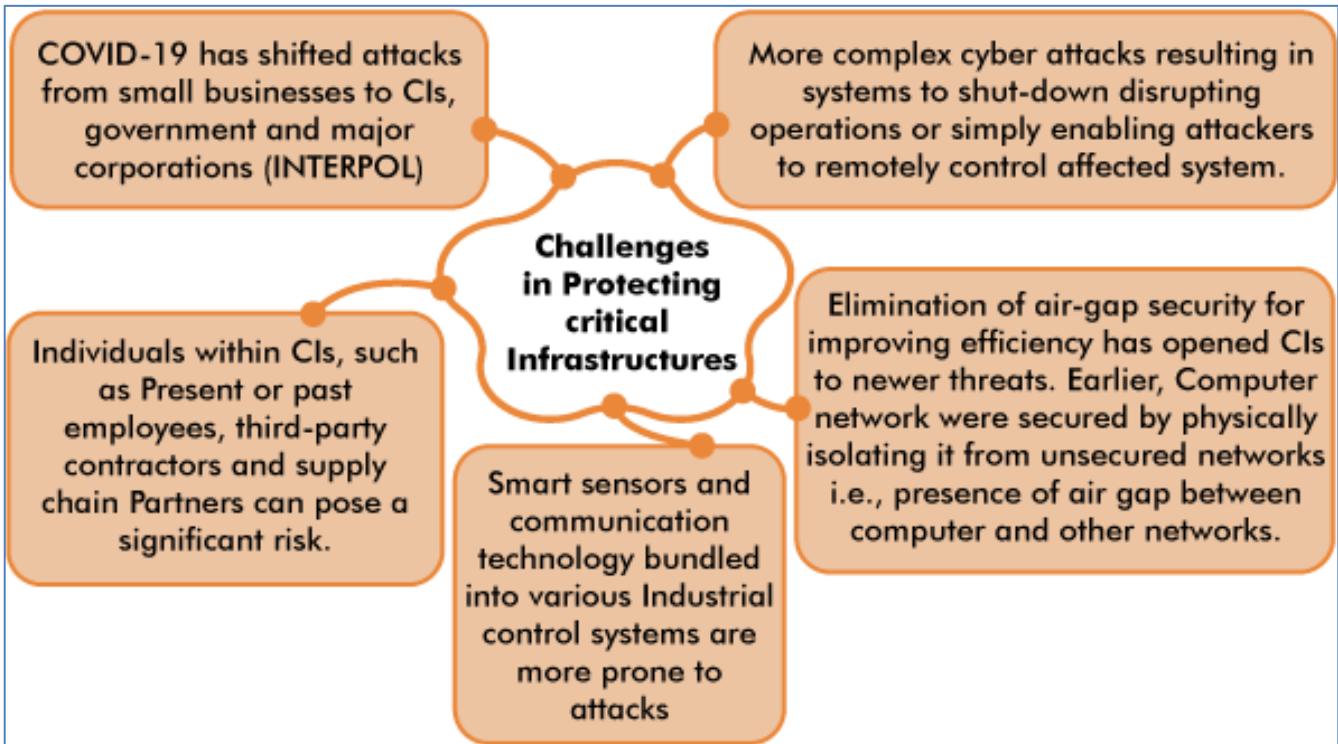
- Earthquakes, tsunamis, volcanic eruptions, extreme weather (hurricanes, floods, drought), fires.
- For ex: 2014 Floods in Kashmir affected all state-owned and private telecommunication networks.

### Human -Caused

- Terrorism, rioting, product tampering, bombing, financial crimes, economic espionage.
- For ex: Cyber attacks by Russia on Georgia in 2008, malware used to damage the centrifuges used in an Iranian nuclear facility etc.

### Accidental or Technical

- Infrastructure and hazardous material failures and accidents, power-grid failures, water-treatment facilities failures, water-mains ruptures, safety-systems failures etc.



### Way forward

- Evolving protection strategies, policies, vulnerability assessment and auditing methodologies and plans for their dissemination and implementation for protection of Cls.
- Government must develop and execute national and international cooperation strategies and also actively collaborate with public and private sector partners to improve the security and resilience of Cls.
- Training and awareness programs and also nurturing and development of audit and certification agencies for protection of Cls.
- Build and grow the cyber workforce to ensure sufficient skills and talent is available.
- An integrated and sustainable supply chain security objective must be included in business plans, contracts and operations.

#### Critical Infrastructure protection in India

- In 2014, India established the National Critical Information Infrastructure Protection Centre (NCIIPC) to regulate and protect the nation's Critical Information Infrastructures (CIIs).
  - CIIs, as defined by the Information Technology Act of 2000, are vital computer resources that, if incapacitated or destroyed, will leave a debilitating impact on national security, economy, public health or safety across both public and private sectors.
  - CI organizations in multiple sectors such as power and utilities, telecommunications and transport, and strategic and public enterprises operate according to the guidelines issued by NCPIIC.
  - These guidelines cover entire cyber security lifecycle including planning, implementation, operations, disaster recovery, and business continuity planning as well as reporting and accountability.
- Indian Computer Emergency Response Team (CERT-In): National nodal agency for responding to computer security incidents.
- National Cyber Security Coordinator (NCSC) under National Security Council Secretariat coordinates with different agencies at the national level for cyber security matters.
- National Cyber Coordination Centre to generate necessary situational awareness of cyber security threats and enable timely information sharing for proactive, preventive and protective actions.
- A new Division under the Ministry of Home Affairs for Cyber and Information Security.
- Guidelines have been issued for Chief Information Security Officers (CISOs) regarding their key roles and responsibilities for securing applications / infrastructure and compliance.
- Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre) has been launched for detection of malicious programs and provide free tools to remove the same.

## 4.2. UNLAWFUL ACTIVITIES [PREVENTION] ACT

### Why in news

Ministry of home affairs has stated that there was over 72% rise in number of UAPA (Unlawful Activities [Prevention] Act) cases in 2019 compared to 2015.

### About UAPA

- The Unlawful Activities (Prevention) Act, 1967 (Act) was enacted to **provide for more effective prevention of certain unlawful activities of individuals and associations, and for dealing with terrorist activities**, and related matters.
- Act defines "Unlawful activity"** as "any action taken by individual or association that leads to **cession of a part of the territory of India, questions the sovereignty of India or disrupt the integrity of India** etc.
- Under the Act, Central government can **declare a person or an organization as a terrorist/ terrorist organisation**, if it/ he:
  - commits or participates in acts of terrorism,
  - prepares for terrorism,
  - promotes terrorism, or
  - is otherwise involved in terrorism.
- It gives **powers to the central government to impose all-India bans on associations** which are declared 'unlawful' under the Act. It provides for **tribunal to review or to hear an appeal against the ban**.
- Both **Indian nationals and foreign nationals can be charged** under the Act. Also, Act holds offenders accountable in the same manner if **crime is committed on foreign land outside India**.
- Under the Act, Cases can be **investigated by both State police and National Investigation Agency (NIA)**.

### Significance of UAPA law in the contemporary times for India

- To uproot terrorism from India:** Terrorists and insurgents continue to receive material support and funds, the main drivers of terrorism – from several sources in India. E.g., since 2001, 8,473 Indians have died at the hands of terrorists.
- Focus on individuals:** Not designating individuals as terrorists, would give them an opportunity to **circumvent the law and they would simply gather under a different name** and keep up their terror activities. This is also important in the **context of lone wolf attacks, which do not belong to any organisation**.
- Quickens process of justice delivery:** Officers in the rank of Inspector are empowered to investigate cases under the Act. **Inspector-rank officers have over time acquired sufficient proficiency** to investigate UAPA-related cases and this move **would quicken the delivery of justice in such cases**.
- Reduces delay in attaching proceeds:** Act allows **seizure of property connected with terrorism** without taking approval of Director General of Police in case investigation is conducted by an officer of National Investigation Agency (NIA).

### Amendments to UAPA

- Amendments in 2004:** Criminalized indirectly supporting a terrorist organisation by raising of funds for a terrorist act or membership of a terrorist organization etc.
- Amendments in 2008:** Broadened the scope of the provision of "funds" to ensure a wider coverage of the financing of terrorism offences.
- Amendments in 2012:** Expanded the definition of "terrorist act" to include offences that threaten the country's economic security.
- Amendments in 2019:**
  - Government is empowered to **designate individuals as terrorists**. Earlier, only organisations could be designated as terrorist organisations.
  - If investigation is conducted by an officer of the National Investigation Agency (NIA), **approval of Director General of NIA would be required for seizure of property connected with terrorism**. (Earlier, approval of Director General of Police was required).
  - Empowered officers of NIA**, of rank of Inspector or above, to investigate cases.
  - Added International Convention for Suppression of Acts of Nuclear Terrorism (2005) to the Schedule under the Act.

Terrorist and Disruptive Activities (Prevention) Act, 1987 - repealed in 2004	Prevention of Terrorism Act" (POTA), 2002 - repealed in 2004
<b>Other Anti-terror laws</b>	
Maharashtra Control of Organised Crime Act (MCOCA), 1999 - In force	Gujarat Control of Terrorism and Organised Crime (GCTOC) Act, 2019 - In force

## Challenges of UAPA Act, 2019

- **Vague and unclear definitions:** Act does not define terrorism and definition of ‘unlawful activity’ is such that it covers almost every kind of violent act be it political or non-political.
- **Excessive discretionary powers:** No objective criterion has been laid for categorization of an individual as a terrorist and the government has been provided with “unfettered powers” to designate anyone as a terrorist.
- **Challenge to fundamental rights like Article 14, 19(1)(a), 21:** Act **does not provide any opportunity to the individual termed as a terrorist to justify his case before the arrest.** Also, the information which declares a person a terrorist can be withheld from him/her for 6 months. Those arrested under Act **can be imprisoned up to 180 days without a charge sheet being filed.**
- **Contrary to the principle of ‘innocent until proven guilty:** Act violates mandate of Universal Declaration of Human Rights and International Covenant on Civil and Political Rights which **recognize this principle as a universal human right.**
- **Inappropriate usage:** Of the 5922 persons arrested under the Act between 2016-2019, only **2.2% ended in convictions by court.**
- **Issue in the appeal process:** Act provides for appeal, but government itself will set up three-member review committee, two of whom can be serving bureaucrats.

## Conclusion

There is need for stringent laws to fight the terrorism so that authorities do not feel powerless while making a case against the accused but there is **need to balance human rights and constitutional values. Act provides for a four-level scrutiny** before any decision is taken on designation of an individual as a terrorist.

The Act is crucial for expediting prosecution in terror cases. However, due process of law shall be followed by agencies involved under the Act at every stage. Also, the role of judiciary is paramount to keep a check on misuse of such laws.

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## 5. ENVIRONMENT

### 5.1. JAL SHAKTI ABHIYAN: CATCH THE RAIN CAMPAIGN

#### Why in News?

National Water Mission (NWM), Ministry of Jal Shakti in collaboration with Nehru Yuva Kendra Sangathan (NYKS), Ministry of Youth Affairs & Sports recently launched the “JSA II: Catch the Rain” Awareness Generation Campaign.

#### About Jal Shakti Abhiyan: Catch the Rain Campaign

- The campaign has been launched with tag line “**catch the rain, where it falls, when it falls**” and will run from 22nd March 2021- 30th November 2021. It seeks to nudge all stakeholders to create **Rainwater Harvesting Structures (RWHS)** suitable to the climatic conditions and sub-soil strata.
- To facilitate these activities, states have been requested to open “**Rain Centers**” in each district-- in Collectorates/Municipalities or GP offices.
  - During this period, these Rain Centres **will have a dedicated mobile phone number** and will be manned by an engineer or a person well trained in RWHS.
  - This centre act as a **technical guidance centre** to all in the district as to how to catch the rain, as it falls, where it falls.
- The **collaboration with NYKS is a step to engage people at the grassroots** through effective campaigning & IEC activities for implementation of the campaign.
- Activities to be taken up under the campaign:
  - Drives** to make water harvesting pits, rooftop RWHS and check dams;
  - removal of encroachments** and de-silting of tanks to increase their storage capacity;
  - removal of obstructions** in the channels which bring water to them from the catchment areas;
  - repairs to traditional water harvesting structures** like step-wells and using defunct bore-wells and old wells to put the water back to aquifers.

#### About Rainwater harvesting

Rainwater harvesting is the accumulation and storage of rainwater for reuse on-site, rather than allowing it to run off. Common methods of RWHS include:

- Rooftop Rainwater harvesting:** This method uses the water collected on terraces and rooftops of houses and buildings. It is best applied in residential areas of towns and cities.
- Surface run-off rainwater harvesting:** This method is used for collecting rainwater flowing through open spaces like roads, grounds, hill, etc. This water is stored underground and is used for public purposes like watering in gardens, roadside trees, beautification, etc.
- Recharge pits:** These are large tank shaped pits dug for storing water usually adjacent to hills, or in fields. These can be used for irrigation. As the name suggests, these have an added advantage of recharging the aquifers.
- Gully Plugs:** Gully plugs are smaller pits built at regular intervals in an open area where rainwater is likely to run through. It ensures that rainwater is saved at many sites.
- Contours:** Contours are similar to gully plugs but narrow and long bands.

Ecological Region	Traditional Water Management System
Trans - Himalayan Region	Zing
Western Himalaya	Kul, Naula, Kuhl, Khatri
Eastern Himalaya	Apatani
North Eastern Hill Ranges	Zabo
Brahmaputra Valley	Dongs / Dungs/ Jampois
Indo-Gangetic Plains	Ahars – Pynes, Bengal’s Inundation Channels, Dighis, Baolis
The Thar Desert	Kunds, Kuis/beris, Baoris/Ber/Jhalaras, Nadi, Tobas, Tankas, Khandins, Vav/Bavadi, Virdas, Paar
Central Highlands	Talab, Bandhis, Saza Kuva, Johads, Naada/ Bandh, Pat, Rapat, Chandela Tank, Bundela Tank
Eastern Highlands	Katas / Mundas / Bandhas
Deccan Plateau	Cheruvu, Kohli Tanks, Bhandaras, Phad, Kere, The Ramtek Model
Western Ghats	Surangam
West Coastal Plains	Virdas
Eastern Ghats	Korambu
Eastern Coastal Plains	Eri / Ooranis
The Islands	Jack Wells

## Significance of RWHS

- Groundwater recharge:** The groundwater level in India has declined by 61 per cent between 2007 and 2017. RWHS can increase the groundwater table and improve its quality through percolation.
- Supporting rain-fed agriculture:** About 61 per cent of India's farmers rely on rain-fed agriculture and 55 per cent of the gross cropped area is under rain-fed farming. Rain-fed crops are directly affected if rains fail, resulting in crop failure. RWHS can protect crops from climate shocks.
- Addressing water scarcity:** RWHS can be crucial for domestic and industrial water supply to the cities facing high water demand.
- Ecological benefits:** A continual and efficient water harvesting system will lead to reduction in soil erosion and increase in green cover. Several traditional RWHS such as Keoladeo host a number of migratory wetland birds and aid in biodiversity conservation.
- Low-cost alternative:** Rainwater harvesting, usually involving the construction of micro impoundments, often in conjunction with green infrastructure such as groundwater or soil water storage, can be a useful alternative to larger dams.
- Minimal disturbance to the environment:** Traditional RWHS generally mimics the natural rhythms of the seasonal river flows and are built keeping in mind the contours of the land.
- Other benefits:** Flood management, water treatment, fisheries, recreation and tourism, Designing and installing rainwater collection systems can provide sustainable jobs for the economy of the future.



## Conclusion

Through community participation, RWHS can become part of nature-based solutions for conservation of water. They are also capable of delivering significant environmental secondary co-benefits: that is, the conjunctive delivery of multiple water-related and other ecosystem services.

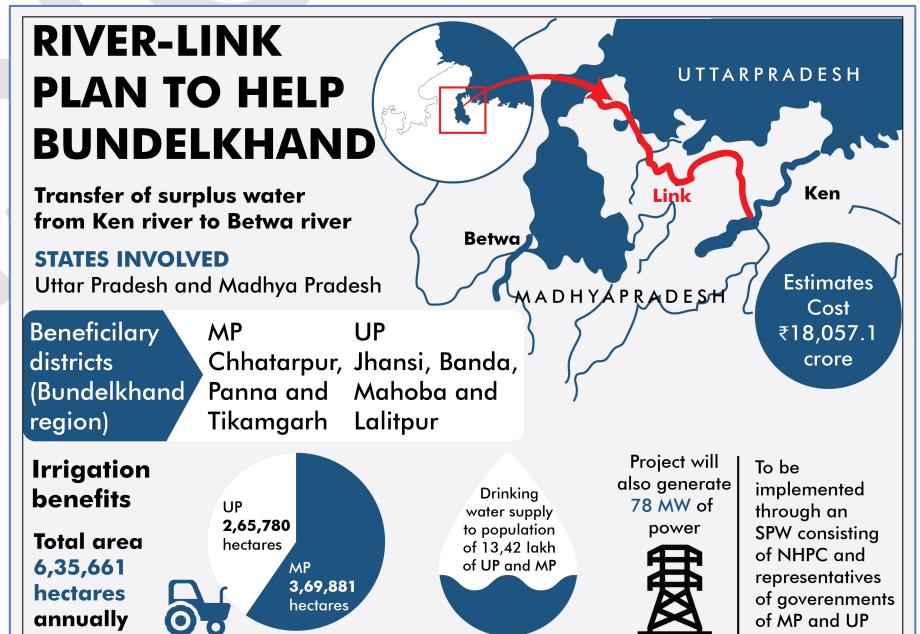
## 5.2. NATIONAL RIVER LINKING PROJECT (NRLP)

### Why in news?

On the occasion of World Water Day (22 March), a memorandum of agreement was signed between Union Minister of Jal Shakti and the chief ministers of Madhya Pradesh and Uttar Pradesh to implement the Ken-Betwa Link Project (KBLP).

### More about news

- The KBLP is the first project under the National River Linking Project (NRLP). Under this project **water from the Ken River will be transferred to the Betwa River**. Both these rivers are **tributaries of River Yamuna**.
- It would be implemented in 2 phases.
  - Phase-I:** Daudhan dam complex and its appurtenances like Low Level Tunnel, High Level Tunnel, Ken-Betwa link canal and Power houses will be completed.



- **Phase-II:** Lower Orr dam, Bina complex project and Kotha barrage will be constructed.
  - **The Centre will create a special purpose vehicle**, the Ken- Betwa Link Project Authority, for implementation of the project in eight years and will bear **90% of the total cost**.

## About National River Linking Project (NRLP)

- The idea of interlinking of rivers was **first proposed by Sir Arthur Cotton in 1850s**. It was then revived in 1972 by **K.L. Rao**, then India's minister of power and irrigation.
  - Subsequently, a **total of 30 river links** were identified under NRLP formally known as the **National Perspective Plan** across.
  - It envisages the **transfer of water from water 'surplus' basins** where there is flooding to water '**deficit**' basins where there is drought/scarcity, through inter-basin water transfer projects.
  - It is being managed by the **National Water Development Agency (NWDA)**. The project is also called as the **inter-basin transfer of water which** includes three components:
    - The northern Himalayan rivers interlinking component.
    - The southern peninsular component.
    - The intrastate river linking component.
  - On completion of the project country will **have 30 river links, 3,000 storage structures, a canal network stretching almost 15,000 km and can generate 34 GW of hydroelectric power, create some 87 million acres of irrigated land, and transfer 174 trillion liters of water a year.**

**National Water Development Agency (NWDA)**

  - It was set up in **1982** as **Autonomous Society** under the society's registration act 1860.
  - It functions under the **Ministry of Jal Shakti**.
  - Initially its purpose was to carry out the **water balance and other studies** on a scientific and realistic basis for optimum utilization of water resources of the **peninsular river system**.
  - Functions**
    - Manage the **3 components of NRP**.
    - Completion of water resources projects under **Pradhan Mantri Krishi Sinchai Yojana (PMKSY)**.
    - Act as a **repository of borrowed fund or loan from Banks/ other institutions** for the execution of projects.

### PROPOSED INTER BASIN WATER TRANSFER LINKS

<b>HIMALAYAN COMPONENT</b>	
1 Manas-Sankosh-Tista-Ganga 2 Kosi-Ghagra 3 Gandak-Ganga 4 Ghagra-Yamuna** 5 Sarda-Yamuna**	6 Yamuna-Rajasthan 7 Rajasthan-Sabarmati 8 Chunar-Sone-Barrage 9 Sone-Dam-Southern Tributaries of Ganga 10 Ganga-Damodar-Subernarekha 11 Subernarekha-Mahanadi 12 Kosi-Mechi 13 Farakka-Sunderbans 14 Jogighopa-Tista-Farakka (Alternative to 1)



## **Challenges in making NRLP a success**

- **Adverse human-ecological impact**
    - **Displacement and rehabilitation of people:** Around 580,000 people face the threat of displacement due to river linking projects. Rehabilitation of these many people would pose a great challenge before the administration. Here, it is to be noted that those who were evicted for the construction of the Bhakra and the Pong dams, two of the oldest in India, have still

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- **Huge adverse impacts on the ecology:** Changes in the hydrological profile of Indian rivers, whether by climate change or changes in the volume of water withdrawn from them, could leave current surplus rivers with a deficit.
  - ✓ Moreover, these projects would lead to **submergence of huge areas of land, forest, flora and fauna.** Thus, it may create ecological disruption. For example: It is estimated that the KBLP will lead to a loss of “10,500 hectares of wildlife habitat” in the Panna Tiger Reserve.
- **Implementation challenges:**
  - **High economic cost:** The KBLP is estimated to cost approximately Rs 38,000 crore and the initial cost of the whole river interlinking project is estimated to be at ₹5.6 lakh crore.
  - **Bringing States on board:** To implement the project successfully, the Government will have to convince States to come on board, as water is a State subject. For example: Uttar Pradesh and Madhya Pradesh had a dispute over sharing of water and other benefits.
  - **Legal challenges:** It would be difficult to get all the mandated 4-5 types of clearances on time. Delay in clearance may increase the cost of the project. These clearances are
    - ✓ Techno-economic (given by the Central Water Commission);
    - ✓ Forest Clearance and Environmental clearance (Ministry of Environment & Forests);
    - ✓ Resettlement and Rehabilitation (R&R) Plan of Tribal Population (Ministry of Tribal Affairs)
    - ✓ Wildlife clearance (Central Empowered Committee).
- **Bad international experience:** China, which also faces recurrent droughts and floods simultaneously, started its south-north water transfer project to transfer extra water from the southern part to the dry northern part. The project has dislocated farmers and even increased the incidence of drought in some parts of the southern province where rivers are already running dry.

#### Way ahead

- **Overcoming implementation challenges**
  - **Special implementing body:** In 2014 the Supreme Court had directed the Government to create an appropriate body to plan, construct, and implement this massive project. Institutionalizing such a body would expedite the implementation of the project.
  - **Concerned states should meet halfway on the deal:** The dispute between the states could be settled by ensuring some gain and some loss for all the concerned states. For example, in KBLP Uttar Pradesh agreed to drop its demand for a higher share and Madhya Pradesh is also not allowed to use the entire quantum of surplus water at the Daudhan dam site in the upper catchment area.
- **Explore alternative options:** Some experts suggest that such grand infrastructure projects are not the only options available to India. Other options could have equal or better outcomes for water security. Small-scale conservation i.e., traditional practices of water conservation, which are effective and also environment-friendly, need to be adopted to tackle the problem of drought. They include
  - Increased irrigation efficiency
  - Growing crops that are appropriate for the climatic conditions of the region in which they are grown
  - Managing water demand
  - Increasing rainwater harvesting
  - Ensuring that existing infrastructure is maintained and operating effectively

#### Conclusion

NRLP has its own boon and bane. Therefore, a balanced path of development could be pursued through a mix of traditional water conservation methods with the river linking projects. River linking projects should be considered as the last resort.

### 5.3. FLOOD MANAGEMENT

#### Why in news?

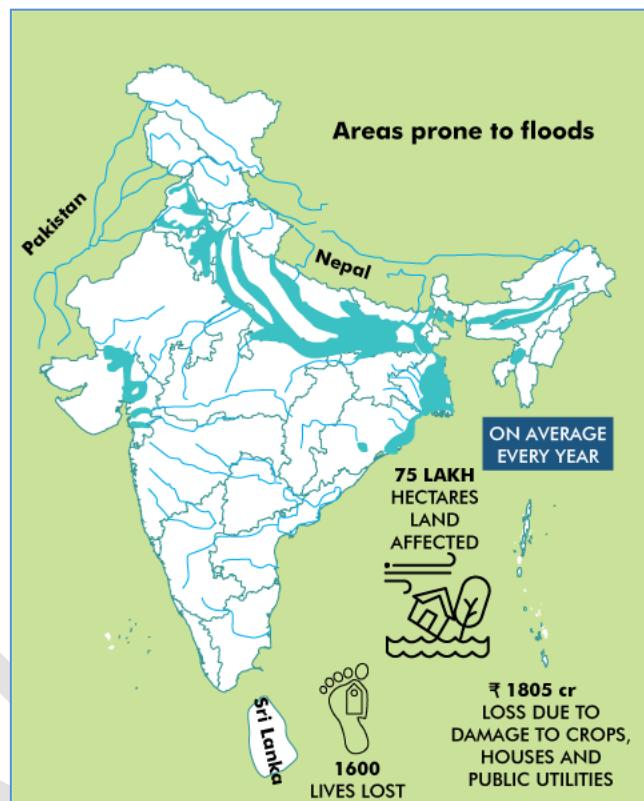
NITI Aayog recently released a report on Strategy for Flood Management in the country.

#### More on news

The report is prepared by a Committee for Formulation of Strategy for Flood Management Works in Entire Country and River Management Activities and Works Related to Border Areas (2021– 26).

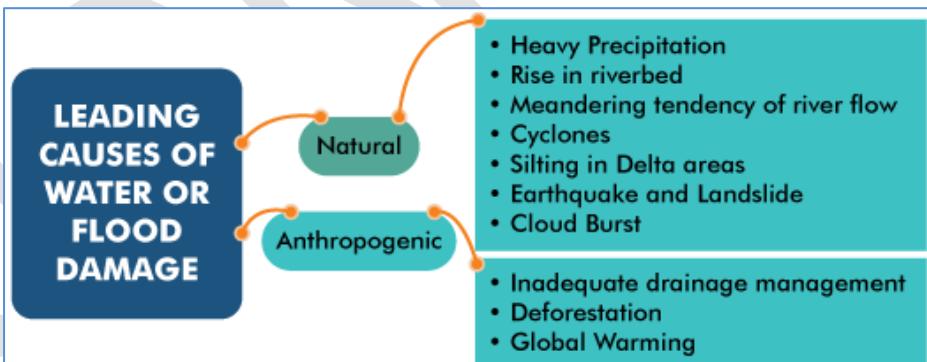
## Flood situation in India

- Flooding is caused by the inadequate capacity within the banks of the rivers to contain the high flows brought down from the upper catchments.
- Flooding is a normal process during monsoon and to some extent, it is needed to carry out some natural processes like bringing alluvial soil to fields, groundwater recharge or replenishment of waterbodies.
- India is highly vulnerable to floods. Out of the total geographical area of 329 million hectares (mha), **more than 40 mha is flood prone (around 12% of the total area of India)**.
- In recent times, **flood related damages show an increasing trend** and floods have also occurred in areas, which were earlier not considered flood prone.
- Some of the **biggest flood disasters in the last 10 years** include Uttarakhand in 2013, Kashmir in 2014, Chennai in 2015, Kerala in 2018 and 2019 and Patna in 2019 besides the recurring floods in north-eastern India.
- According to the Central Water Commission, the **expenditure on flood management** has risen from Rs. 43.44 billion in tenth five-year plan (2002-07) to Rs 171.30 billion in 11th five-year plan (2007-12).



## Existing Flood Management Mechanisms in India

- **Statutory Provisions**
  - The subject of flood control does not figure as such in any of the three legislative lists included in the 7th schedule of the Constitution.
  - However, **Drainage and Embankments**, are two of the measures specifically mentioned in **entry 17 of List II** (State List), subject to Entry 56 of List I (Union List).
  - It may thus be seen that the **primary responsibility for flood control and the subject “flood management” falls within the purview of the States**. Therefore, the schemes for flood control are planned, investigated and implemented by the States as per priorities within the State with their own resources.
  - The **role of central government is technical, advisory, catalytic and promotional in nature**.
    - ✓ The central government has taken various initiatives and set up a number of organizations dealing with the floods. The most notable one is the enactment of the **National Disaster Management Act, 2005** and setting up of the NDMA, which has been assigned to deal with all types of disasters including the floods.
- **Existing approaches to manage flood:** Different measures have been adopted to reduce the flood losses and protect the flood plains. Depending upon the nature of work, Flood protection and flood management measures may be broadly classified as Structural and Non-structural:



<b>Central Government</b>
● Central Water Commission
● Ganga Flood Control Commission (GFCC)
● Brahmaputra Board (BB)
● National Disaster Management Authority (NDMA)
<b>State Government</b>
● Water Resources Departments
● State Technical Advisory Committees (STAC)
● Flood Control Boards
● Irrigation Departments
● Public Works Departments

- **Structural Approaches include**
  - ✓ An **artificially created reservoir** behind a dam across a river that can moderate the intensity and timing of the incoming flood.
  - ✓ **Detention basins/Wetlands** usually formed by utilizing natural depressions/ swamps and lakes by improving their capacity for regulating the release of stored waters.
  - ✓ **Diversion** of a part of the peak flow to another river or basin, where such diversion would not cause appreciable damage.
  - ✓ By **constructing a parallel channel** bye passing a particular town/reach of the river prone to flooding.
  - ✓ **Creating Embankments** which artificially raise the effective riverbank and thereby prevent spilling and
  - ✓ **Channel and drainage improvement works**, which artificially reduce the flood water level so as to keep the same, confined within the riverbanks and thus prevent spilling.
- **Non-structural/ Administrative Measures include**
  - ✓ Facilitating timely evacuation of the people and shifting of their movable property to safer grounds by having advance warning of incoming flood i.e., **flood forecasting, flood warning** in case of threatened inundation.
  - ✓ Discouraging creation of valuable assets/settlement of the people in the areas subject to frequent flooding i.e., enforcing **flood plain zoning** regulation.

### **Challenges in flood management**

- **Resistance on part of states** to implement the flood plain zoning approach. Passive resistance among the state to implement the model draft bill, 1975 for flood plain zoning legislation including possible legislation.
- **Divergent views on the utility of constructing embankments** due to the insufficient number of performance evaluation studies of existing embankments. It has been experienced that while some embankments have provided sustained protection against floods, some have aggravated the flood problem by raising riverbed levels. For instance, in 2007 Kosi floods in Bihar, the river had broken the embankments at more than 30 places.
- **Land-use policy:** India's land policy hasn't been congenial for efficient flood management due to various political, social and economic reasons. Modern land use gradually encroaching on the natural environment has an impact on all three dimensions of flood risk, namely hazard, vulnerability and exposure.
- **Lack of an integrated approach:** The flood protection works are done more as a fire-fighting manner instead of an integrated manner, i.e., covering the entire river or a tributary or a major segment of it. Also, the complete river morphology not studied before the implementation of the piece-meal approach of the channelization/embankment projects.
- **Lack of coordination among agencies:** Various organizations are working at different levels across the country, but the problem is in synchronization, collaboration or coordination among these agencies affecting their effective and efficient functioning.
- **Outdated estimates:** The figure of the flood-prone area i.e., 40 to 50 million hectares is very old and is related to notified riverine flood areas. However, in the last few years, the form and extent of floods have changed a lot with increased instances of urban flooding. This requires re-mapping of the entire flood-prone area to get a realistic picture.

### **Recent steps taken**

- **NDMA has released National water policy 2012** suggesting that reservoir operation procedures should be evolved and implemented in a manner so as to have flood cushion and to reduce trapping of sediment during flood season.
  - It has also suggested incorporating coping strategies for possible climate changes, such as increasing water storage capacity in dams.
- **NDMA had issued guidelines on Urban Flood Management** in India which includes measures such as creating a National Hydro-meteorological Network for providing early warning, use of Doppler Weather Radars in all urban areas, inventory of the existing storm water drainage system etc.
- In the last few years, India has focused on building a **robust early flood warning system** for better flood resilience.
  - Chennai became the first city in India to get an intelligent flood warning system.
  - Mumbai got the integrated flood warning system (IFLOWS) in June 2020.
  - TERI is now launching a similar flood forecasting system for Assam which has been prepared in collaboration with the IMD and the NDMA.

## Recommendations of the NITI Aayog Report

- **National Water Model:** This model can be used to feed the information into a decision support system which can provide support services to Nation by predicting precipitation and forecasting flood and other water related events.
- **Extension of Flood Management and Border Area Programme:** The committee has also proposed to extend the (FMBAP) for the period of 2021-26, with the provision of inclusion of new projects for funding under the scheme.
- **Legislative actions to ensure Dam safety:** Passing of Dam Safety Bill to be taken up on priority and Integrated Reservoir Operation (IRO) for flood management to be promoted by giving Central Government a proactive role and mandate.
- **Formation of Flood Management Plans** can help in rescue and relief works during and after the floods.
  - Some successful examples of floodplain restoration includes Rhine Delta, Netherlands and the river Skerne, UK.
- **Emphasize the use of advanced technology** like artificial intelligence, satellites, remote sensing and GIS for flood forecasting and warning systems.
- **Improvised city planning:** In order to check the threat of urban flooding, each city should have their flood mitigation plans (floodplain, river basin, surface water, etc.) amalgamated within the overall land use policy and master planning of the city.
  - **Yongning river park in Taizhou, China** has been designed as wetlands or floodplains to **allow periodic flooding**.
- **Balancing between the Structural and Non-Structural Measures:** Priority must be given to non-structural measures such as flood forecasting, flood plain zoning, flood proofing etc. to mitigate the floods and long term and medium-term structural measures shall be used when and where those are unavoidable.
- **Integrated flood management** which calls for a paradigm shift from the traditional, fragmented and localized approach and encourages the use of the resources of a river basin as a whole and setting up of River Basin Organization for its effective implementation.
  - For example, **Buoyant buildings or “Amphibian houses”**- which sit on dry but can float vertically during flooding- have been built in **Maasbommel (Netherlands)**.
- **Data Collection:** Continuous efforts to be made towards **modernization in collection of hydrometeorological data**, flood forecast formulation and forecast dissemination. Further simplified data dissemination policy for use of data by the States particularly regarding trans-boundary rivers to be developed.

### Flood Management and Border Areas Programme (FMBAP)

- The Scheme "FMBAP" has been framed by merging the components of two continuing XII Plan schemes titled "Flood Management Programme (FMP)" and "River Management Activities and Works related to Border Areas (RMBA)".
- The aim of the Scheme is **to assist the State Governments to provide reasonable degree of protection against floods in critical areas** by adopting optimum combination of structural and non-structural measures and enhancing capabilities of State/Central Government officials in related fields.
- The Scheme caters to Hydro-meteorological observations, Flood Forecasting and survey and investigations of water resources projects on common rivers with the neighbouring countries like Pancheshwar Multipurpose Project, Sapta Kosi-Sun Kosi Projects in Nepal.

## 5.4. CLIMATE-RESILIENT GRAINS

### Why in news

United Nations General Assembly unanimously approved the resolution sponsored by India to declare **2023 as the International Year of Millets**.

### More on news

- In 2018, India had proposed to celebrate 2023 as **International Year of Millets** at Food and Agriculture Organization.
- Significance of declaring **International Year of Millets**.
  - Help in **raising awareness and direct policy action to nutritional and health benefits** of millets consumption and their **suitability for cultivation under adverse and changing climatic conditions**.
  - Draw focus for **enhanced investments in research and development** and **extension services** related to millets.

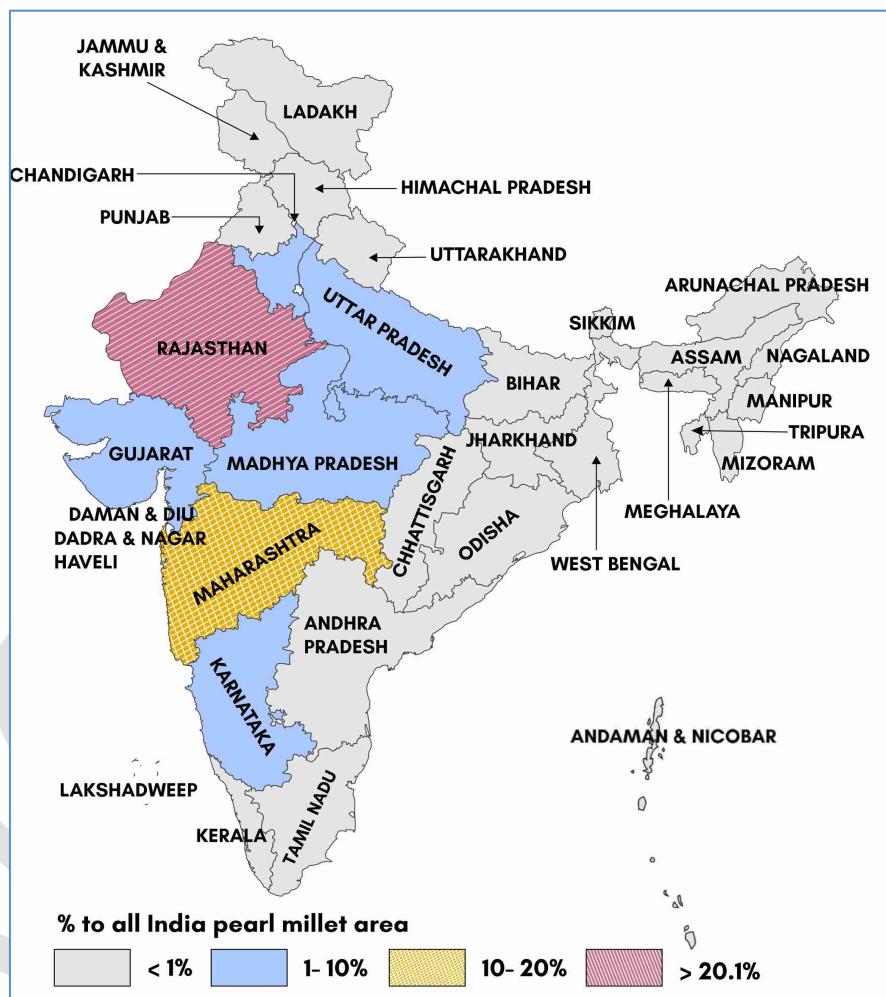
## About Millets

- Millets are a group of **small-seeded grasses**, widely **grown as cereal crops or grains** for human food and as fodder.
- They are classified into **Major Millets** and **Minor Millets** based on their grain size.

Major millets	Minor millets	Pseudo millets
sorgum (jowar), pearl millet (bajra), finger millet(ragi).	foxtail, little, kodo, proso and barnyard millet	Amaranth (Rajgira) and Buckwheat (Kuttu). These are <b>not part of the botanical family to which 'true' grains belong</b> ; however, they are <b>nutritionally similar</b> and used in similar ways to 'true' grains.

## Millets in India

- India is the **largest producer of millets** in the world with a **41.0% global market share**. India produced **11.5 million tonnes of millets in 2020**.
- During 2017-18, the **maximum area under millets was in Rajasthan**, followed by Maharashtra and Karnataka.
- Major Millets grow in Kharif season** (July to October): Pearl millet/bajra, finger millet/ragi (cereals), and jowar are kharif crops.



## Benefits of Millets production

Health benefits	Ecological benefits	Economic security
<ul style="list-style-type: none"> <li><b>Aid in fighting malnutrition as they are rich in fibre, minerals, vitamins and have more nutrient content.</b> E.g., Finger millet has 839% calcium content of wheat and 3,440% that of rice.</li> <li>They are <b>Gluten-free</b> which is advantageous for people suffering from diabetes</li> <li>They are <b>anti-carcinogenic foods and anti-hypertensive</b> and help prevent obesity and heart diseases</li> <li>Millets reduce <b>inflammation and improves digestion</b>.</li> </ul>	<ul style="list-style-type: none"> <li><b>Millet crops sequester carbon from the atmosphere</b> while <b>paddy fields emit methane</b>, a greenhouse gas.</li> <li>Millets are <b>less water intensive</b>. E.g., One rice plant requires nearly 2.5 times the amount of water required by a single millet plant of most varieties.</li> <li>They are <b>hardy, drought-tolerant, and heat-resistant crops</b> that generally do not succumb to pests and diseases.</li> <li>Millets can grow in areas with less than <b>350 mm of rainfall</b> and the cultivation cycle completed within 70-100 days.</li> <li>They can <b>grow on low fertility soil</b> and many of them are also grown to reclaim soils.</li> </ul>	<ul style="list-style-type: none"> <li>Millets are called '<b>Famine reserves</b>' as they have a short growing season of 65 days and can keep well for two years or beyond.</li> <li><b>Low investment</b> needed for production as they do not require chemical fertilisers etc. E.g., Small millet grown in dry land districts of Karnataka, requires mere INR 5,000 per acre.</li> <li><b>High demand for export</b>: According to FAO, the global millet production was estimated at <b>28.4 million metric ton in 2019</b>.</li> </ul>

## Challenges to millet production

- **Disproportionate focus on rice and wheat:** As a fall out of green revolution the focus tilted towards the two staple but less nutritious crops. While almost a third of all major food grains in India constituted millets during 1950-51, this reduced to **only around 15% by 2018-19**. Also, area under millet declined from 37 million ha in 1965-66 to 14.72 million ha in 2016-17.
- **Lack of awareness:** There is a **lack of considerable knowledge of the value of millets** among traditional communities. Earlier recognized as 'coarse grains', they are looked down upon as part of a poor person's diet.
- **Changes in dietary habits:** Between the mid-1960s and 2010, an urban Indian's wheat consumption almost doubled, from 27 kg to 52 kg. At the same time average annual per capita consumption of sorghum and millets, reduced from 32.9 kg to 4.2 kg. **Lack of ready-to-eat millet-based products** has also led to decline in consumption.
- **Post-harvest treatment of millet:** Millets need **more processing than other crops**, but the machines for these have not reached the farmer yet.
- **Low productivity:** **Most of the millets are grown in arid and semi-arid regions which are rainfall dependent.**
- **Monoculture of ragi:** Within millets, focus is on ragi as it is **economically viable, increases soil fertility and can be intercropped**. This results in less focus on another millets and risks agro-biodiversity.
- **Lower or near absence of production support,** in terms of input supply and subsidy (seed and nutrients), irrigation support, and marketing support, and lack of modern technology when compared to the support enjoyed by other crops.

## Way forward

- The **use of millets in commercial/packaged food** will encourage farmers to grow millets and will open new opportunities and revitalize the farmers.
- The inclusion of millet-based foods in **international, national and state-level feeding programs** will help to overcome the existing nutrient deficiencies of protein, calcium and iron in developing countries.
- As per NITI Aayog, there needs to be a strong **integration of the schemes for millet promotion with other schemes such as introduction of locally produced millets with ICDS (integrated child development scheme) and PDS**. E.g., Odisha has introduced local millets into ICDS.
- There are **millet hotspots like Mandla and Dindori in Madhya Pradesh, Malkangiri in Odisha, the Garhwal Himlayas and Kolli hills in Tamil Nadu**. These locations should be **promoted for diverse-centric agriculture**.
- Millets are less favorable from taste (sensory value). **This can be overcome by mixing millet flours with other flours** of high acceptability and preparing composite foods.

### Government measures to promote millet production

- **Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)** was launched in 2011-12 to promote millets as "nutri-cereals" and enhance India's nutritional security. It is a part of **Rashtriya Krishi Vikas Yojana**.
- **Integrated Cereals Development Programmes in Coarse Cereals** under Macro Management of Agriculture scheme to increase the overall productivity under specific crop-based systems.
- Government allowed **inclusion of "Nutri-Cereals" in the Public Distribution System (PDS) and mid-day meal scheme**.
- Government is also continuously increasing **the minimum support price (MSP) of millets** (bajra, jowar, and ragi) substantially so as to incentivise farmers to grow millets especially in drought prone areas.
- Government has **declared 2018 as National Year of Millets**.

## 5.5. SEEA ECOSYSTEM ACCOUNTING (SEEA EA)

### Why in news?

Recently, India implemented a **new national statistical framework- SEEA Ecosystem Accounting (SEEA EA)** that measures the services that natural ecosystems provide to **combat environmental degradation** and **promote sustainability**.

### About System of Environmental Economic Accounting (SEEA) EA

- SEEA EA is an **integrated statistical framework for organizing biophysical data, measuring ecosystem services, tracking changes in ecosystem assets** and linking this information to economic and other human activity.

### Ecosystem accounting

- It is a **coherent framework for integrating measures of ecosystems** and the flows of services from them with measures of economic and other human activity.
- In ecosystem accounting as described in the SEEA Ecosystem Accounting (SEEA EA), the **accounting approach recognises that these individual resources function in combination within a broader system** and within a given spatial area.

- SEEA EA was also adopted as **statistical standard by the United Nations Statistical Commission** recently.
- SEEA EA is built on **five core accounts**:

Ecosystem Extent accounts	Ecosystem Condition accounts	Ecosystem Services flow accounts (physical and monetary)	Monetary Ecosystem Asset accounts	Thematic accounts
Serves as a common starting point for ecosystem accounting.	Organizes biophysical information on the condition of different ecosystem types.	Record the supply of ecosystem services by ecosystem assets and the use of those services by economic units like households, govt etc.	Record information on stocks and changes in stocks (additions and reductions) of ecosystem assets.	Organise data on themes of specific policy relevance.
Organizes information on the extent of different ecosystem types (e.g. forests, wetlands, agricultural areas, marine areas) within a country in terms of area.	Organizes data on selected ecosystem characteristics at specific points in time.  Provide valuable information on the health of ecosystems.		Includes accounting for ecosystem degradation and enhancement.	Examples of relevant themes include biodiversity, climate change, oceans and urban areas.

#### Important Terms and Definitions

##### Natural Capital

- It can be defined as the **world's stocks of natural assets** which include **geology, soil, air, water and all living things**.
- It is from this Natural Capital that humans derive a wide range of services, often called **ecosystem services**, which make human life possible.
- Quantifying and valuing the contribution natural assets can help countries **track over-exploitation and invest in protecting and restoring ecosystems**.

##### Natural capital accounting

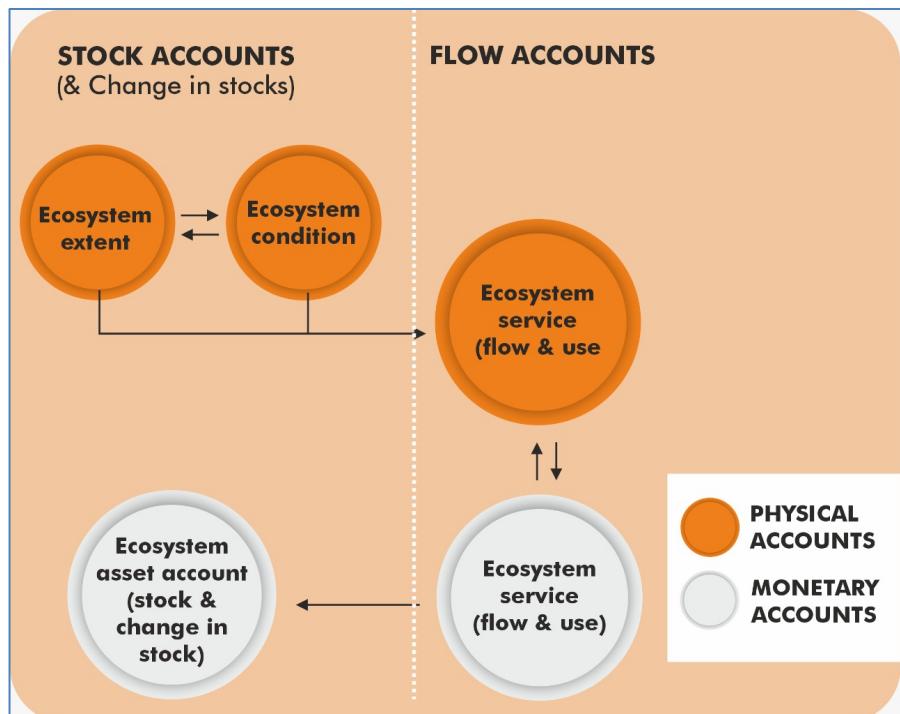
- It is a tool that can help **measure the full extent of a country's natural assets** and give perspective on the link between the economy, ecology and our environment.
- Accounting for such goods may occur in **physical or monetary terms**.

#### India's SEEA EA framework

- India is one of 90 countries that have successfully adopted the ecosystem accounting system including the new framework for **SEEA EA**.
- India's this effort was led by the **Ministry of Statistics and Programme Implementation (MoSPI) under the Natural Capital Accounting and Valuation of Ecosystem Services (NCAVES) Project** which aims to advance the theory and practice of ecosystem accounting in India.
  - **NCAVES mainstream natural capital accounting and the valuation of ecosystem services** in data-driven decision and policymaking at the national, regional and local levels.
  - NCAVES Project, funded by European Union, has been jointly implemented by:
    - ✓ **United Nations Statistics Division (UNSD)**,
    - ✓ **United Nations Environment Programme (UNEP)**
    - ✓ **Secretariat of the Convention of Biological Diversity (CBD)**.
  - In India, the **NCAVES project** is being implemented by the **MoSPI** in close collaboration with the **Ministry of Environment, Forest and Climate Change (MoEF&CC)** and the **National Remote Sensing Centre (NRSC)**.

## Environmental Accounting is important for understanding

- The contribution of ecosystems and their services to the economy, social wellbeing, jobs and livelihoods.
- The condition, health and integrity of ecosystems and biodiversity changing over time and
- The main areas of degradation and enhancement.
- To how natural resources and ecosystems best managed to ensure continued services and benefits such as energy, food supply, water supply, flood control, etc.
- The trade-offs among different land uses (e.g. for agriculture, mining, housing development, habitat conservation, recreation) to achieve long-term sustainability and equity.



### Challenges of Environmental accounting

- Cost involvement:** Environmental accounting and reporting will require extra manpower and cost. Many enterprises, unless otherwise compelled, may not be willing to incur such costs. Thus, incurring additional cost may be considered as problems in introducing EA.
- Lack of skilled manpower:** Educated people, skilled workers are vital for the efficient and effective implementation of natural accounting. Lack of skilled workforce is an obstacle for the environment.
- Lack of consciousness about environmental accounting:** Manufacturing organisation does not record correctly on the different account of environmental accounting. Many institutions intentionally avoid separate environmental accounts.
- Lack of coordination** with different stakeholders related to environmental issues affect proper implementation.

### Benefits of Environmental accounting

- Help in Conservation:** Economic estimates of natural conservation (for example, greenhouse gas regulation and flood protection) tend to outweigh the private benefits (for example, profits from agriculture or logging).
- Ecosystem restoration:** Both conservation and ecological restoration bring considerable net benefits in terms of public goods and common pool resources, regardless of the habitat or type of ecosystem state change being considered.
- Case Study:** According to a study conducted in Nepal, if **Nepal's Shivapuri-Nagarjun National Park** lost its protection and was converted from forest to farmland, it would **cut carbon storage by 60 percent and reduce water quality by 88 percent**, along with other costs, leaving a deficit of \$11 million (Rs 7 crore 20 lakh) per year.
- Better decision-making:** This information can be used for better government decision-making. Knowing the total value of natural capital can also help to address poverty issues

### Conclusion

India has shown that it does not take decades to break down information silos and that SEEA can be implemented in a short period of time. It highlights India's commitment on mitigating the effects of climate change.

 <b>SMART QUIZ</b>	<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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# 6. SOCIAL ISSUES

## 6.1. MEDICAL TERMINATION OF PREGNANCY (AMENDMENT) BILL, 2020

### Why in news?

Recently, Rajya Sabha has passed the Medical Termination of Pregnancy (MTP) (Amendment) Bill, 2020.

### About MTP bill, 2020

- The bill seeks to amend **Medical Termination of Pregnancy Act, 1971** to regulate the conditions under which a pregnancy may be aborted and increases the time period within which abortion may be carried out.
- The Bill decides to set up state level **Medical Boards** to decide if a pregnancy may be terminated after 24 weeks in cases of substantial fetal abnormalities.

### Comparison between MTP Act, 1971 and MTP (Amendment) Bill, 2020

Features	MTP Act, 1971	MTP (Amendment) Bill, 2020
Time upto 12 weeks since conception	<ul style="list-style-type: none"><li>• Advice of <b>one doctor</b></li></ul>	<ul style="list-style-type: none"><li>• Advice of <b>one doctor</b></li></ul>
Time 12 to 20 weeks since conception	<ul style="list-style-type: none"><li>• Advice of <b>two doctors</b></li></ul>	<ul style="list-style-type: none"><li>• Advice of <b>one doctor</b></li></ul>
Time 20 to 24 weeks since conception	<ul style="list-style-type: none"><li>• <b>Not allowed</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Two doctors</b> for some categories of pregnant women</li></ul>
Time more than 24 weeks since conception	<ul style="list-style-type: none"><li>• <b>Not allowed</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Medical Board</b> in case of substantial foetal abnormality</li></ul>
Any time during the pregnancy	<ul style="list-style-type: none"><li>• <b>One doctor</b>, if immediately necessary to save pregnant woman's life, <b>opinion formed in good faith</b>.</li></ul>	<ul style="list-style-type: none"><li>• <b>One doctor</b>, if immediately necessary to save pregnant woman's life, <b>opinion formed in good faith</b>.</li></ul>
Termination due to failure of contraceptive method or device	<ul style="list-style-type: none"><li>• pregnancy may be terminated up to 20 weeks by a married woman</li></ul>	<ul style="list-style-type: none"><li>• The Bill allows <b>unmarried women</b> to also terminate a pregnancy for this reason.</li></ul>
Medical Boards	<ul style="list-style-type: none"><li>• No such provision, <b>only registered medical practitioners can decide</b> upon termination of pregnancy.</li></ul>	<ul style="list-style-type: none"><li>• <b>Medical Board will decide if a pregnancy may be terminated after 24 weeks</b> due to substantial foetal abnormalities.<ul style="list-style-type: none"><li>○ All state and union territory governments will constitute a Medical Board consisting a <b>gynaecologist, paediatrician, radiologist/sonologist, and other members notified by the state government</b>.</li></ul></li></ul>
Privacy and punishment	<ul style="list-style-type: none"><li>• Any person who wilfully contravenes or wilfully fails to comply with the requirements of any regulation shall be liable to be <b>punished with fine which may extend to one thousand rupees</b>.</li></ul>	<ul style="list-style-type: none"><li>• A <b>registered medical practitioner</b> may <b>only reveal the details</b> of a woman whose pregnancy has been terminated <b>to a person authorised by law</b>.<ul style="list-style-type: none"><li>○ Violation is punishable with <b>imprisonment up to a year, a fine, or both</b>.</li></ul></li></ul>

### Significance of MTP (Amendment) Bill, 2020

- **Safe, affordable and accessible abortion:** It provides **safe, affordable, accessible abortion services to women** if substantial foetal anomalies detected late in pregnancy and pregnancies due to sexual violence faced by women.
- **Increasing upper gestational limit:** With advancement of medical technology for safe abortion, there is a scope for increasing upper gestational limit for terminating pregnancies especially for vulnerable women and for pregnancies with substantial foetal anomalies detected late in pregnancy.
- **Reduce maternal mortality and morbidity:** It increases access of women to legal and safe abortion service in order to reduce maternal mortality and morbidity caused by unsafe abortion and its complications.

### Issues with MTP (Amendment) Bill, 2020

- **Categories of women who can terminate pregnancy between 20-24 weeks not specified:** This category is not specified in the bill, while it is delegated to central government to notify these categories.
- **Time frame for Medical Board's decision not specified:** The Bill **does not provide a time frame within which the Board** must make its decision for termination of pregnancy after 24 weeks.
  - Delays in decision-making by the Medical Board may result in **further complications for the pregnant woman.**
- **No clarity about transgender persons:** Some medical studies have shown that there may be cases where **persons who identify as transgender (and not women) can become pregnant** even after receiving hormone therapy to transition from female to male and may require termination services.
  - **Bill is unclear if transgender persons** will be covered under the Bill or not.
- **Unavailability of qualified medical professionals to terminate pregnancies:** The **All-India Rural Health Statistics (2018-19)** indicates there are 1,351 gynaecologists and obstetricians in community health clinics in rural areas across India, and the shortfall is 4,002, i.e., **there is a 75% shortage of qualified doctors.**
  - As per the **National Health and Family Survey (2015-16)**, **only 53% of abortions are performed by a registered medical doctor** and the balance are conducted by a nurse, auxiliary nurse midwife, family member, or self.
- **Right to freedom:** The bill still **does not give women the freedom to decide**, since she will need a nod from a medical board in the case of pregnancies beyond 24 weeks.
  - It also said that, **should the State intervene** when the pregnant woman is worried about her own life, about the well-being of the foetus, and also about the stigma involved.
- **Lack of detailed scrutiny:** The bill **did not send to a Parliamentary Select Committee** for detailed scrutiny and **did not reflect consultations with stakeholders.**

### Way forward

- **Categories of women:** The categories of women who can terminate pregnancy between 20-24 weeks should be specified by Parliament by law and not delegated to the government.
- **Time frame for Medical Board:** There should be definite time period for decisions by medical board for termination of pregnancy after 24 weeks, to avoid delays and check complications for the pregnant woman.
- **Transgender persons:** India have Transgender Persons (Protection and Rights) Act, 2019 recognises transgender as an additional gender in India, so considering this there is need to cover transgender persons under the Bill.
- **Detailed scrutiny:** Bill needs to go through detailed scrutiny of Parliamentary Select Committee and should acquire consultations from various stakeholders involved to make it more comprehensive.

## 6.2. NON-COMMUNICABLE DISEASES

### Why in News?

Recently, UN Institute for Training & Research (UNITAR) commended India's remarkable progress in reducing the premature mortality from Non-Communicable Diseases.

#### About UNITAR

- UNITAR was created in 1963 to train and equip young diplomats from newly-independent UN Member States.
- UNITAR provides innovative learning solutions to individuals, organizations and institutions to enhance global decision-making and support country-level action.

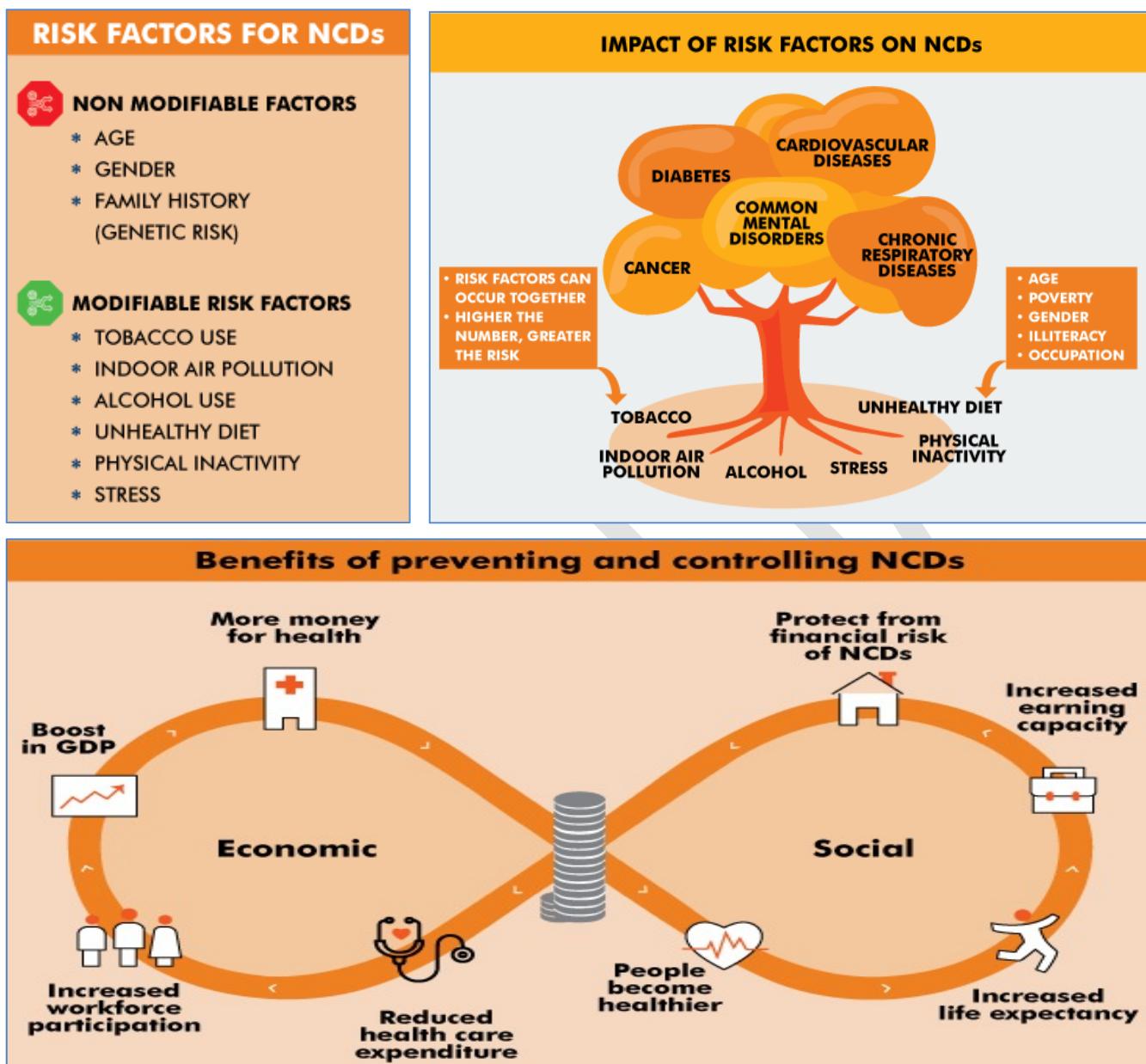
### About Non-Communicable Diseases (NCDs)

- NCDs, also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behavioral factors.
- Main types of NCDs are **cardiovascular diseases** (like heart attacks and stroke), **cancers, chronic respiratory diseases** (such as chronic obstructive pulmonary disease and asthma) and **diabetes**.
  - NCDs contribute to around 71% of all the deaths globally and to about 60% of all deaths in India.
  - NCDs disproportionately affect people in **low- and middle-income countries** where more than **three quarters of global NCD deaths occur.**

### Status of NCDs in India

- As per WHO's Global Health Observatory, India succeeded in **reducing premature NCD-related mortalities from 503 to 490 per 1 lakh population** between 2015 and 2019.

- NCDs typically present in individuals aged 55 years or older in many developed countries, but their **onset occurs in India a decade earlier ( $\geq 45$  years of age)**.
- **Cardiovascular diseases, respiratory diseases, and diabetes kill around 4 million Indians annually** (as in 2016), and most of these deaths are premature, occurring among Indians aged 30–70 years.



#### Measures taken by India to control NCDs

- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched in 2010 with focus on strengthening infrastructure, human resource development, health promotion, early diagnosis, management and referral.
- In response to WHO's Global action plan for the prevention and control of NCDs 2013-2020, **India is the first country to develop specific national targets** to reduce number of global premature deaths from NCDs **by 25% by 2025**.

#### Other programs to control NCDs

- National Programme for Control of Blindness & Visual Impairment.
- National Mental Health Programme.
- National Programme for healthcare of Elderly.
- National Programme for the Prevention & Control of Deafness.
- National Tobacco Control Programme.
- National Oral Health Programme.

#### Global Measures to control NCDs

- NCDs are recognized as a major global challenge in the United Nation's 2030 Agenda for sustainable development.
- WHO has developed a **Global action plan for the prevention and control of NCDs 2013-2020**, which specifies nine global targets.

- **Food Safety and Standards Authority of India (FSSAI)** proposed a tax and advertisement ban on unhealthy foods.
  - **FSSAI has also launched 'Eat Right India' movement** to improve public health and combat negative nutritional trends to fight lifestyle diseases and a **mass media campaign 'Heart Attack Rewind'** for the elimination of industrially produced trans-fat in the food supply.
- **Other efforts:**
  - **Ayushman Bharat Abhiyan** aims to improve health and wellness through its preventive healthcare approach.
  - Schemes like **Pradhan Mantri Ujjwala Yojana** helps to reduce indoor air pollution thereby reducing risks of cancer and chronic lung diseases.
  - **Promotion of an active life** through activities like Yoga which can address the risk of cardiovascular diseases.

#### Moving forward, what more can be done?

- **Cross-linking of screening services:** Zambia's effort to integrate national HIV services and cervical cancer prevention was helpful in screening more than 100,000 women for cervical cancer over the last 5 years.
- **Using digital technology to combat NCDs:** It can provide guidance and best practices for the planning, implementation and evaluation of various health programmes.
- **Imposing sugar tax:** Many countries, including Malaysia, South Africa etc. have used taxation to reduce the consumption of sugar-sweetened beverages and thereby tackling obesity and other NCDs.
- **Integrating mental health and psychosocial support into primary care:** It will enhance the psychological and social well-being of individuals and their communities by empowering community and individual resilience.

#### Conclusion

NCDs are **major risk factors and especially so for patients with COVID-19**. Disruption of routine health services and medical supplies risks has increased morbidity, disability, and avoidable mortality for NCD patients. Therefore, **management of NCD risks** should be an integral part of the overall National Health strategy and especially the **COVID-19 response strategy**.

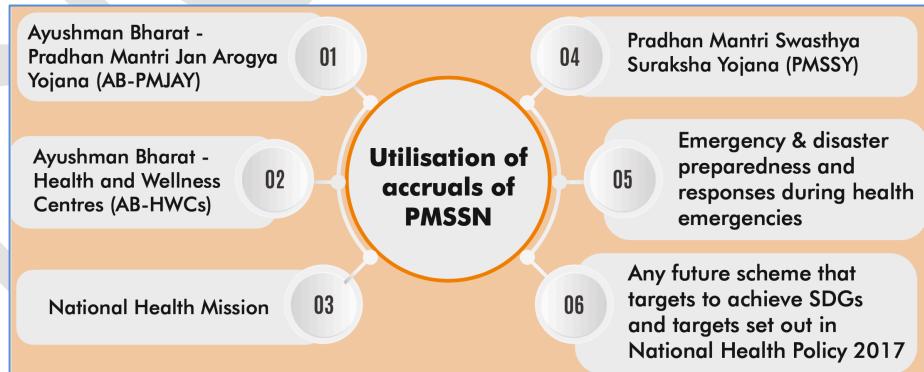
### 6.3. PRADHAN MANTRI SWASTHYA SURAKSHA NIDHI (PMSSN)

#### Why in news?

The Union Cabinet has approved the **Pradhan Mantri Swasthya Suraksha Nidhi (PMSSN)**.

#### About PMSSN

- It is a **single non-lapsable reserve fund for Health expenditure**.
- It is **fund for Health in the Public Account**, from the **proceeds of Health and Education cess** levied under Finance Act, 2007.
  - In the budget speech 2018, existing 3% Education cess is replaced by **4% Health and Education Cess**.
- **Administration and maintenance** of the PMSSN is entrusted to **Ministry of Health & Family Welfare (MoHFW)**.
- In any financial year, the **expenditure** on schemes of the MoHFW would be **initially incurred from the PMSSN and thereafter, from Gross Budgetary Support (GBS)**.
  - GBS is **the government's support for the central plan** which is earmarked for meeting the planned outlays of the Central government during the financial year. It includes the **tax receipts and other sources of revenue** raised by the Government.
- **Benefits of PMSSN**
  - It will **enhance access to universal & affordable health care** through availability of earmarked resources.



- **Amount does not lapse** at the end of financial year but carried forward to use in next financial year.
- Better health **improves productivity, impact scholastic achievements and income**.
- With improved health conditions one extra year of population **life expectancy raises GDP per capita by 4%**.
- Investment in health **creates millions of jobs**, largely for women, through a much-needed expansion of the health workforce.

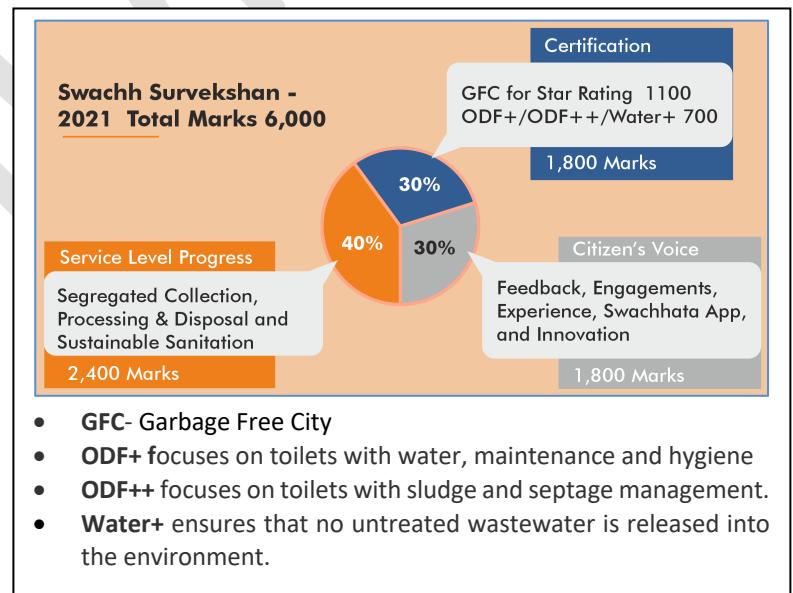
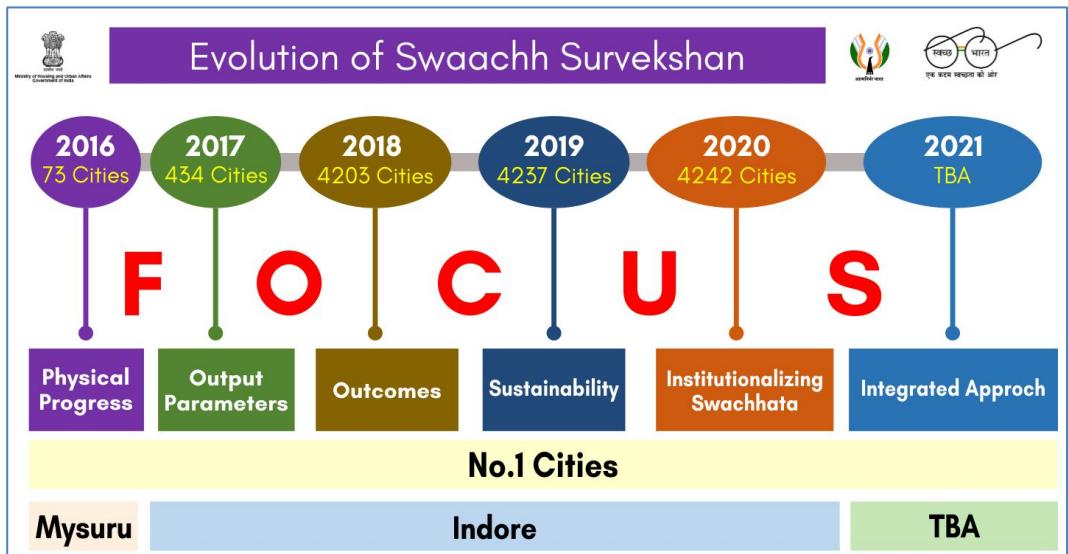
## 6.4. SWACHH SURVEKSHAN (SS) 2021

### Why in news?

Ministry of Housing and Housing Affairs (MoHUA) recently launched the **field assessment of Swachh Survekshan (SS) 2021**, the sixth edition of the annual cleanliness survey conducted by the Government of India.

### About SS 2021

- SS was introduced in 2016 as a **competitive framework** to encourage cities to improve the status of urban sanitation while encouraging large scale citizen participation.
- Survey is conducted by **MoHUA with Quality Council of India as its implementation partner**.
- SS 2021 indicators focus on parameters pertaining to **wastewater treatment and reuse** along with faecal sludge.
- Crucial issues of **legacy waste management and remediation of landfills** have also been brought to the fore in this edition.
- SS 2021 has introduced a new performance category **Prerak DAUUR Samman** which will have five performance categories ('Platinum', 'Gold', 'Silver', 'Bronze', 'Copper') based on seven criteria:
  - Segregation of Waste (Wet, dry and hazardous)
  - Processing Capacity against wet waste generated
  - Processing of Wet Waste
  - Processing/ Recycling Dry Waste
  - Construction & Demolition Waste Processing
  - Percentage of waste going to the landfill
  - Current Sanitation Status (as on 28.02.2021)
- Apart from ranking cities and States, **SS 2021 would also be ranking districts** (basis the performance of their cities).



#### Quality Council of India (QCI)

- It is an **autonomous body** set up by the **Ministry of Commerce and Industry** jointly with the Indian Industry.
  - Indian industry is represented by the **three premier industry associations** i.e. ASSOCHAM, Confederation of Indian Industry (CII) and FICCI.
- It aims to **establish and operate national accreditation structure** and promote quality through National Quality Campaign.
- QCI is registered as a **non-profit society** and is governed by a Council with **equal representations of government, industry and consumers**.
- It is under the administrative control of **Department for Promotion of Industries and Internal Trade (DPIIT)**.
- **Chairman of Council is appointed by the Prime Minister** on recommendation of the industry to the government.

## 6.5. COMMITMENT TO REDUCING INEQUALITY (CRI) INDEX

### Why in news?

Minister of Employment and Labour has recently slammed **2020 Commitment to Reducing Inequality (CRI) Index**, which placed India at rank 151 in terms of workers' rights and **129 overall out of 158 countries**.

### More about News

- Ministry contended that **methodology does not take into account the various provisions that have been provided in the Labour Codes**.
  - Code on Wages, 2019; the Industrial Relations Code, 2020; the Code on Social Security, 2020 and the Occupational Safety, Health and Working Conditions Code, 2020 had been passed by Parliament and notified.
  - These codes **subsume 29 central labour laws** and extend **social protection to workers, including in unorganised sectors** in respect of extending statutory minimum wages to all, formulation of schemes to provide for healthcare benefits, Employees' Provident Fund, Pension etc.
- Moreover, **India was not a signatory to two International Labour Organisation (ILO) conventions** on the freedom of association and protection of the right to organise (C87) and the right to organise and collective bargaining (C98).

### About ILO

- It was created in 1919, as part of the **Treaty of Versailles**.
- **It is the only tripartite U.N. agency** which brings together governments, employers and workers.
- **8 fundamental Conventions are:**
  - Forced Labour Convention, 1930 (No. 29)
  - Abolition of Forced Labour Convention, 1957 (No. 105)
  - Minimum Age Convention, 1973 (No. 138)
  - Worst Forms of Child Labour Convention, 1999 (No. 182)
  - Equal Remuneration Convention, 1951 (No. 100)
  - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
  - **Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87)**
  - **Right to Organise and Collective Bargaining Convention, 1949 (No. 98)**
- India is a founder member of ILO and has ratified first six fundamental convention **except from No. 87 & No. 98**.

### About Commitment to Reducing Inequality (CRI) Index

- CRI Index monitors **what governments are doing through their policy commitments to reduce inequality**.
- It is developed and delivered through a **partnership between Development Finance International and Oxfam International**.
- The 2020 index is the **third edition of the CRI Index** which ranks **158 governments** across the world on their commitment to reducing inequality.
- It measures government policies and actions in **three areas** that are proven to be directly related to reducing inequality:
  - **Public services (health, education and social protection)**
  - **Taxation**
  - **Workers' rights**.
- 2020 Index shows clearly how the **majority of the world's countries were woefully unprepared** for the coronavirus pandemic with very low levels of spending on public healthcare and weak social protection systems. India ranked **129 overall out of 158 countries**.
  - **151 rank in terms of workers' rights.**
  - **141 rank in public services**
  - **19 rank in terms of progressive tax.**

## Reasons behind India's low rank

- Inadequate health budget:** India's health budget is the **fourth lowest** in the world.
  - Around **70% of health spending** is out-of-pocket (OOP) spending, one of the highest levels in the world.
  - Only about **55% of population has access to essential basic health services**.
- Lack of social protection:** Most workers earn less than half of the minimum wage. 71% do not have any written job contract and 54% do not get paid leave.
  - Only **about 10% of the workforce in India is formal**, with safe working conditions and social security
  - India figures among **10 worst countries for workers in the ITUC (International Trade Union Confederation) index**. The ITUC Global Rights Index rates countries on their **degree of respect for workers' rights**.

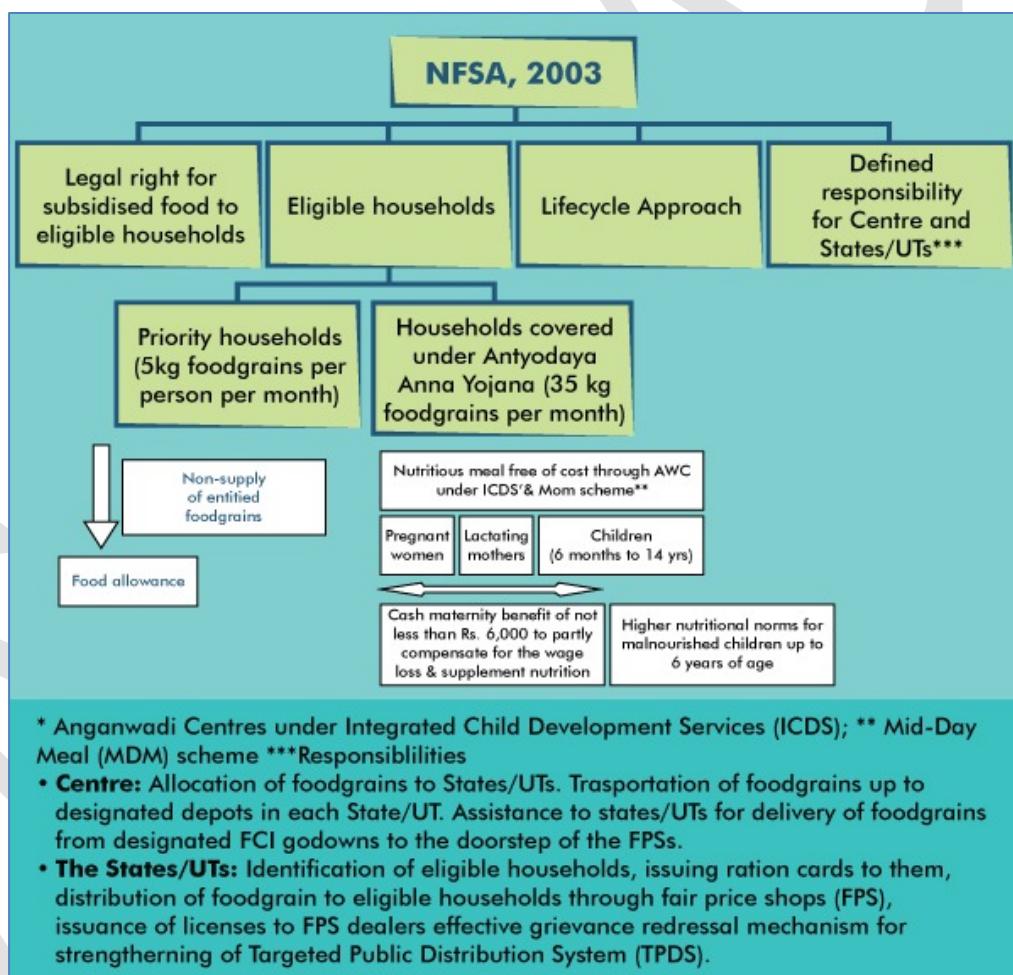
## 6.6. NATIONAL FOOD SECURITY ACT (NFSA), 2013

### Why in news?

The NITI Aayog recently circulated a discussion paper on a proposed revision in the NFSA, 2013.

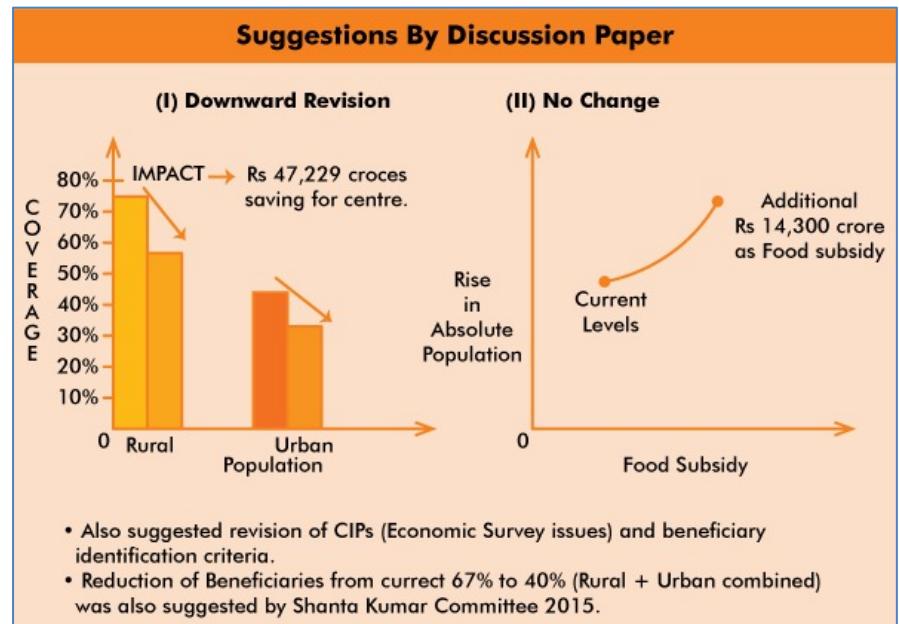
### Need for revisiting NFSA, 2013

- Validity of Central Issue Price (CIP):** These subsidised prices were fixed for "a period of three years from the date of commencement of the Act (i.e. till July, 2016). However, the CIP has remained unchanged since 2013.
- Rising food subsidy bill:** The Minimum Support Price (MSP) at which Food Corporation of India (FCI) procures rice and wheat (plus cost of storage, etc.) is much higher than CIP i.e., the price at which foodgrains are provided through the Public Distribution System (PDS) resulting in high food subsidy bill.
- Burden of maintenance of surplus stocks:** High production and hikes in MSP with no changes in the CIP has led to accumulation of stocks with FCI. These surplus stocks beyond the operational and strategic reserve requirement have also risen. Maintenance of these surplus stocks has placed an additional burden on the food subsidy bill.
- Market distortion:** If CIP is not revised, absolute number of beneficiaries (67% of the total population) would increase due to increase in population.
  - Higher quota and higher supply at the highly subsidised prices will further depress the market prices for foodgrains.
  - Those farmers who are not able to sell grains to government agencies will face decline in income.



## Criticism of proposed revision in NFSA, 2013

- Lack of objective evaluation:** Revision is not based on the objective evaluation of its functioning and efficacy but on the necessity of reducing our food subsidy.
- No proposal for enhancing efficiency:** The high food subsidy is actually a result of the mismanagement of food procurement and storage by the government. However, no proposal has been made for dealing with such mismanagement.
- Weakening of food and nutrition security:** The reform proposals would negate the goal



of expanding coverage under the NFSA by making it quasi-universal. Reducing the number of PDS beneficiaries will be a throwback to the era of targeted distribution, which was not just inefficient and leakage-prone, but also excluded a large majority of the poor who actually needed government support.

- The latest data from the National Family Health Survey (NFHS-5) has clearly shown **stagnation and in many cases reversal of the gains made on the nutritional front**. The situation would be further exacerbated by the food security and livelihood situation.

## Way ahead

- Reforms should be based on independent evaluation of the Act:** While proposed reforms in the NFSA are welcome after six years of implementation, such a process should be based on an **independent evaluation** of its functioning in the context of the Act's stated objectives. **Better targeting of beneficiaries:** The coverage of NFSA needs to be restricted to the bottom 20% and the CIP for others could be linked to the procurement prices.
- Priorities one nation, one ration (ONOR) card:** This initiative would enable the beneficiaries (particularly migrant workers) of NFSA to claim either full or part of foodgrains entitlement from any fair price shops or ration shops in the country through existing ration cards in a seamless manner. Thus, this initiative would be helpful in effective targeting and reducing leakages.
  - About 32 states and Union Territories have implemented this service so far.
- Direct Benefit Transfers (DBT):** A better alternative to subsidized food would be giving income transfers to consumers through DBT.
- Better management of surplus stock:** Following steps would help reduce the excess surplus with the FCI without creating any market distortion.
  - “Price deficiency” payment scheme:** Farmers could be compensated for the difference between the government-announced MSPs for select crops and their actual market prices.
  - FCI should actively participate in the commodity exchange** as a seller for wheat and rice. This will increase the liquidity in the market and reduce market distortions.

## Conclusion

The NFSA is a law passed by Parliament. Therefore, the government and Parliament both should take a call for any revision in its provisions. Moreover, the number of beneficiaries, which was fixed in 2011, was based on some criteria. Hence, any revision in coverage of people should succeed an exercise of data analysis.

## 6.7. HUNGER AND MALNOURISHMENT

### Why in news?

The government recently questioned the methodology and data accuracy of the Global Hunger Index (GHI) report, alleging that children considered healthy were also counted to determine the ranking.

## More on the News

- India was ranked 94 on the 2020 Global Hunger Index (GHI), lower than neighbours like Bangladesh and Pakistan.
- GHI 2020 gave score of 27.2 on a 100 point scale to India which puts the country in the “serious” category of hunger.
- According to GHI, in terms of overall undernourishment,
  - 14% of India's population does not get enough calories.
  - Almost 35% of Indian children are stunted.
  - 17.3% of Indian children under five are wasted.
  - Under 5 mortality rate is at 3.7%.

## Status of Hunger and Malnutrition in India

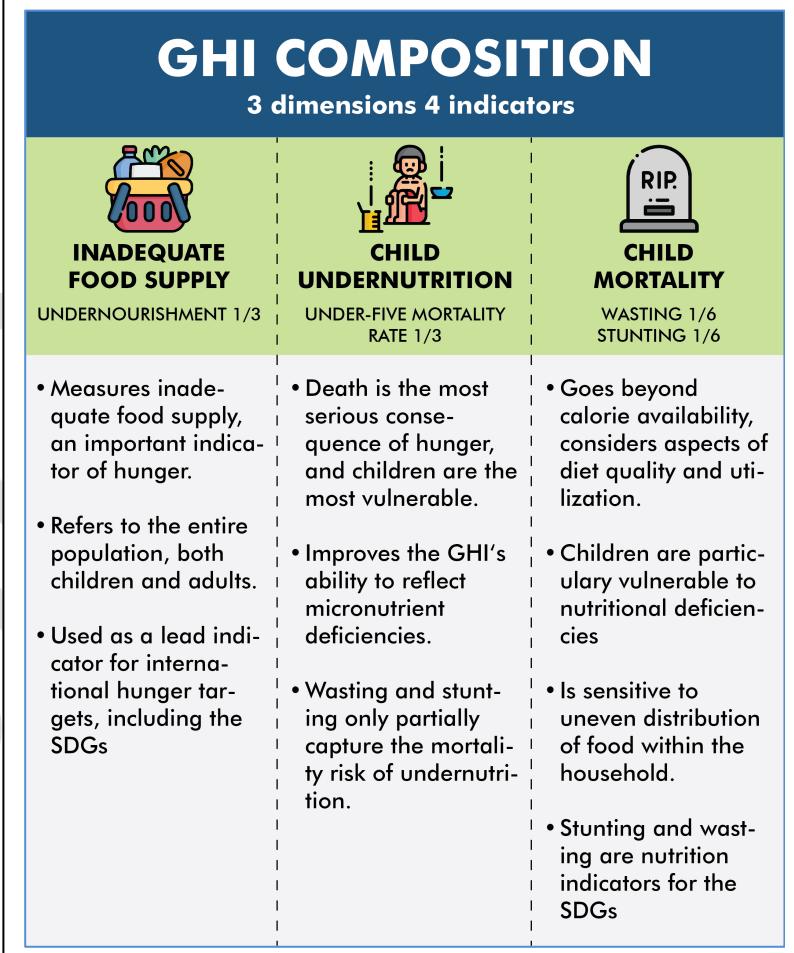
- The **Comprehensive National Nutrition Survey** compiled in 2017-18 stated that based on the sample data, 36% of under five years of age are stunted —low height for age, 29% are affected from Wasting—low weight for height, and 45% are underweight—low weight for age.
  - Also 41% of pre-schoolers, 24% of school-age children and 28% of adolescents were anaemic.
- Compared to **National Family Health Survey (NFHS)-4 data** for 2015-16, the CNNS showed an improvement of 4%, 3.7% and 2.3% in wasted, stunted and malnourished children respectively.

## Impact of Malnourishment

- Malnourished children and adolescents are at higher risk for **impaired growth, low immunity, poor mental development, and mortality**.
- Conditions of overweight and obesity pose **greater risks for non-communicable diseases** such as diabetes, cardiovascular disease and hypertension in the population.
- Micronutrient deficiencies are an important cause of morbidity and mortality**, accounting for a considerable loss of Disability Adjusted Life Years (DALYs), especially in infants and pre-school children.
- Conditions like Anemia adversely affects **psychomotor and brain development; causes weakness, fatigue and poor productivity; and predisposes individuals to infections**.

### About Global Hunger Index

- GHI is published by **Concern Worldwide (international humanitarian organization)** and **Welthungerhilfe (private aid organisations in Germany)**.
- GHI score is determined on a 100-point scale - 0 is best possible score (no hunger) and 100 is the worst. Each country's score is classified by severity -from Low to Extremely alarming.



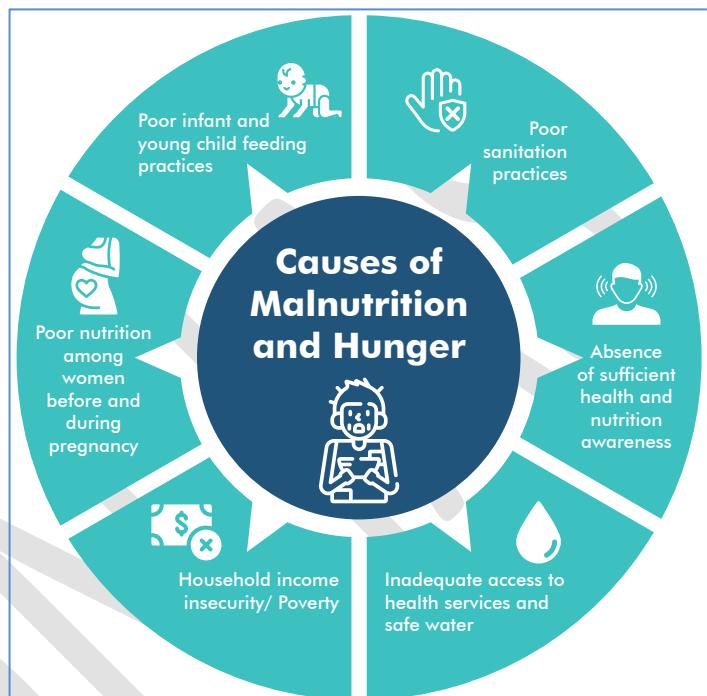
### Related Concepts

- Hunger** is usually understood to refer to the distress associated with a lack of sufficient calories. The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as the consumption of too few calories to provide the minimum amount of dietary energy that each individual requires to live a healthy and productive life, given that person's sex, age, stature, and physical activity level.
- Undernutrition** goes beyond calories and signifies deficiencies in any or all of the following: **energy, protein, and/or essential vitamins and minerals**. Undernutrition is the result of inadequate intake of food in terms of either quantity or quality, poor utilization of nutrients due to infections or other illnesses, or a combination of these factors.

- **Malnutrition** refers more broadly to both **undernutrition** (problems caused by deficiencies) and (problems caused by unbalanced diets, such as consuming too many calories in relation to requirements, leading to obesity, with or without low intake of micronutrient-rich foods).
- **Anemia** is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet the body's physiological requirements, which vary by age, sex, altitude, smoking habits, and during pregnancy.

### Steps taken by the Government to ensure nutritional security

- **POSHAN Abhiyaan:** Launched in 2018, it is a multi-ministerial convergence mission with the vision to ensure attainment of malnutrition free India by 2022 in a phased manner, through a life cycle approach, by adopting a synergised and result oriented approach.
- **Mid-day meals** in primary and upper primary schools, along with anganwadis, have played an important role in monitoring and supplementing efforts to reduce malnutrition through free food for children (and pregnant as well as lactating women).
- **Food Safety and Standards Authority of India (FSSAI)** has notified norms for permissible levels of micronutrients for fortifying processed food products such as breakfast cereals, biscuits, breads, etc. to ensure balanced consumption of micronutrients fortified products.
  - Companies will be able to fortify the products with iron, folic acid, zinc, vitamin B12, vitamin A, among other micronutrients.
- **Anemia Mukt Bharat strategy** has been designed to reduce prevalence of anemia by 3 percentage points per year among children, adolescents and women in the reproductive age group (15–49 years), between the year 2018 and 2022
- **Integrated Child Development Services (ICDS) Scheme** is one of the flagship programmes of the Government of India. It aims to improve the nutritional and health status of children in the age-group 0-6 years.
- **Jharkhand government's SAAMAR (Strategic Action for Alleviation of Malnutrition and Anemia Reduction) campaign:** It aims to identify anemic women and malnourished children and converge various departments to effectively deal with the problem in a state where malnutrition has been a major problem. The campaign also tries to target Primarily Vulnerable Tribal Groups.



### Challenges in tackling Malnourishment in India

- **Weak Implementation of schemes:** Top-down approach, and poor implementation processes, lack of effective monitoring, and siloed approaches of government schemes in tackling malnutrition (missing convergence) often result in poor nutrition indices.
- **Lack of qualified human resource:** Many workers are unable to play an effective role in attending to the problem of malnutrition because of low wages and inadequate training.
- **COVID-19 pandemic has exposed the fragility of globalized food systems:** It is characterized by increasing dependence on food imports by low- and middle-income countries; underinvestment in local farmers, farmer associations, and smallholder-oriented value chains; and increasing rates of diet-related non-communicable disease.
- **Food wastage:** India wastes about 7% of its total annual food production and almost 30% of the fruits and vegetables because of inadequate warehousing facilities and cold storages.
- **Status of women:** Indian women's nutrition, feeding and caring practices for young children are inadequate. This is related to their status in society, to early marriage, low weight at pregnancy and their lower level of education.

- Shifts in diet and lifestyle patterns:** As market exposure increases, foods and drinks high in fat, sugar and salt are cheaper and more readily available, leading to a rapid rise in the number of children and adults who are overweight and at risk for diet related NCDs such as heart disease and diabetes.
- Social structure:** Several schemes do not reach large sections of the people especially marginalized tribes and Dalits, who find themselves ostracized by the distribution system.

#### Way forward

- Identification of early signs of malnourishment:** Government should re-activate and scale-up services for the early detection and treatment of child wasting. Also, to track and tackle hunger, governments must produce data that are timely, comprehensive, and disaggregated by income, subnational location, and gender.
- Organisation of regular orientation programmes,** exposing workers to new techniques available for tracking the growth of every child, and supporting them in the implementation of schemes.
- Focusing on women and adolescent girls:** All adolescent girls and women need to be educated on nutritional behavior and should be provided educational and skilling opportunities to delay marriage.
- Design and development of more efficient integrated systems** of food production, processing, preservation and distribution to suit the changing lifestyle of country's population.
- Residential care for food security of the most vulnerable children:** For children of rural seasonal migrants, the village school should be converted into a community-based temporary residential school, to enable the child to access food and education, without having to migrate every year with their guardians.
- Formal and informal education on agriculture and nutrition** should be tailored to local conditions.

#### Related News: Hunger Hotspots

- The Food and Agriculture Organization of the United Nations (FAO) and the World Food Programme (WFP) are issuing an early warning for urgent humanitarian action in 20 countries and situations – called “hotspots” – where parts of the populations are likely to face a fast deterioration of high acute food insecurity that will put their lives and livelihoods at risk.
- There is a likelihood of further deterioration in acute food insecurity in these countries due to **multiple drivers of hunger** that are interlinked or mutually reinforcing, primarily conflict dynamics, economic shocks, the socio-economic impacts of COVID19, weather extremes and the diffusion of plant pests and animal diseases.

## 6.8. STATE OF THE WORLD'S INDIGENOUS PEOPLES

#### Why in news?

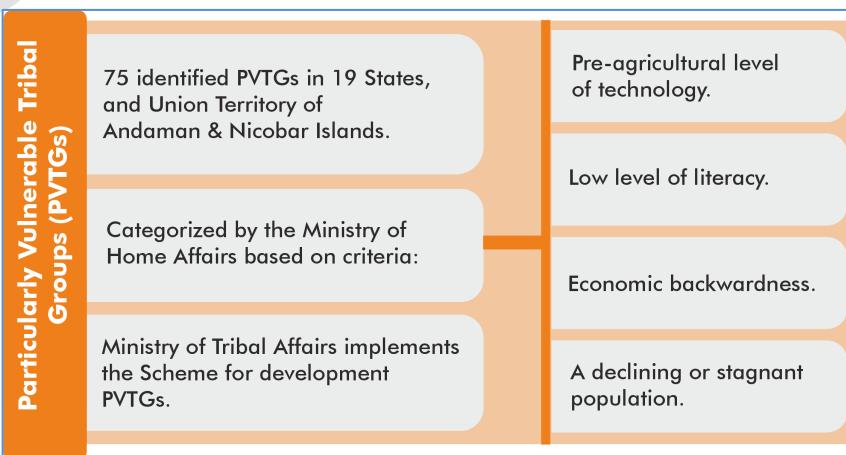
Recently, the UN Department of Economic and Social Affairs released **State of the world's indigenous peoples: Rights to Land, territories and resources report released**.

#### Findings in the report

- Report mentions the **recognition and protection of land titles and tenure of indigenous people is crucial to attaining SDGs** to eradicate poverty and achieve sustainable development by 2030.
- There is a history of such communities across the world losing access and hold to resources in the modern period.
- Report calls on the UN to **include indigenous peoples and their organizations in the development of sustainable development frameworks.**
- In this context, there is need to analyze and study the state of indigenous people in India.

#### About Indigenous peoples

- Indigenous peoples are **inheritors and practitioners of unique cultures and ways of relating to people and the environment.**
- They have retained **social, cultural, economic and political characteristics** that are distinct from those of the dominant societies in which they live.



- Indigenous peoples in India comprise an estimated population of **104 million or 8.6% of the national population**, almost 90% of them living in rural areas.
  - In India, **705 ethnic groups are notified as Scheduled Tribes (STs)** spread across 30 States or Union Territories, these are considered to be **India's indigenous peoples** that includes **75 identified PVTGs**.
  - Inherent rights of indigenous peoples:**
    - ✓ **Collective and individual right** to their ancestral land, territories and resources also, exercise control and management of their right to lands, territories and resources;
    - ✓ To **self-government by their own institutions** and authorities within their lands and territories;
    - ✓ To **fair and equitable benefit sharing** from conservation and development actions involving their lands, territories, resources, and people
    - ✓ To **conserve, develop, use and protect** their traditional knowledge

### Challenges for indigenous people in India

- Lack of access to education:** Indigenous peoples lack access to education due to their geographic and politically marginalized status. Also, education systems and curricula do not respect indigenous peoples' diverse cultures.
- Health challenges:** Many health challenges are faced by indigenous peoples, such as illnesses from pesticides and extractive industries, malnutrition, diabetes and HIV/AIDS due to their limited access to mainstream population and health facilities.
- Human rights violation:** Despite international human rights standard-setting developments, indigenous peoples continue to face serious human rights abuses, most often for defending their rights and their lands, communities etc.
- Land dispossession:** Dispossession of traditional lands and territories is one of the major problems faced by indigenous peoples due to economic policies, globalisation, growing search for rich agricultural areas and natural wealth.
- Indigenous traditional knowledge erosion, loss and threats:** Indigenous peoples' traditional knowledge and practices are undervalued, ignored and under severe threat of being eroded, lost or misappropriated and led to commodification of indigenous cultures by proliferation of products on the market that imitate, misrepresent and profit from the alleged associations.
- Forest issue:** Forest plays an essential part in ensuring indigenous peoples' physical, cultural, spiritual and economic well-being by giving them access to secure means of subsistence, forest laws for sake of economic development fatally undermine the vital Forest Rights Act to indigenous people
  - In 2019, Supreme Court issued an order to evict 8 million tribals and forest dwelling people.
- Legal loopholes:** Legal loopholes and poor enforcement of existing safeguards, bureaucratic apathy and corporate neglect of human rights of these indigenous people and muffle their voices.

### Measures needs to be taken

- Education:** Community-based education and language programs need adequate funding from States and universities can assist in curriculum development with partnership between indigenous communities and state education structures and policymakers.
- Health care:** Indigenous individuals have the right to access, without any discrimination, to all social and health services and that should be protected by government. Furthermore, there must be ongoing integration needs of indigenous peoples into health programmes, plans, projects and policies.
- Implementation of laws:** Government should immediately address the obstacles and gaps and must effectively implement the **Forest Rights Act, the LARR Act and acquire prior consent of the concerned tribal communities** in line with international human rights standards before undertaking any infrastructure development and mining plans and projects in tribal areas.
- National Action Plan:** Govt through meaningful consultations with tribal communities, must formulate its National Action Plan for implementation of the UN Guiding Principles on Business and Human Rights.

### Provisions at international level

- Indigenous and Tribal Peoples Convention 1957:**
  - First international treaty to specifically deal with indigenous rights, concerning the Protection and Integration of Indigenous and other Tribal and Semi-Tribal Populations in Independent Countries.
  - Article 1 indicates that self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.
  - It was replaced with Indigenous and **Tribal Peoples Convention, 1989**
- United Nations Declaration on the Rights of Indigenous Peoples:** Article 33 of the United Nations Declaration on the Rights of Indigenous Peoples underlines the importance of self-identification, that indigenous peoples themselves define their own identity as indigenous.

- **Dispute resolution:** To adequately recognize, respect and implement indigenous rights to lands, territories and resources, States should establish effective, accessible and affordable mechanisms for the purposes of settling relevant disputes.

#### **Provisions in India to protect rights of indigenous people**

- **Fifth Schedule of Constitution of India (Article 244)**
  - It envisages a special system of administration for certain areas designated as scheduled areas and tribal areas in any state except the four states of Assam, Meghalaya, Tripura and Mizoram
  - Features of administration in the Fifth Schedule areas:
    - ✓ **Declaration of Scheduled Areas** with President of India in consultation with governor of the state concerned.
    - ✓ **Tribes Advisory Council**
    - ✓ **Law applicable to Scheduled Areas** with governor empowered to direct that any particular act of Parliament or the state legislature does not apply to a scheduled area.
    - ✓ **Constitution requires the president to appoint a commission to report** on the administration of the scheduled areas and the welfare of the scheduled tribes in the states.
- **Sixth Schedule of the Constitutions**
  - It deals with the administration of the tribal areas in the **four states of Assam, Meghalaya, Tripura and Mizoram**.
- **Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement (LARR) Act, 2013**
  - Under act, consent of 80% land owners required for private projects, 70% land owners required for Public-Private Partnership projects and no consent is required for government projects.
  - Act exempts 13 laws (such as the National Highways Act, 1956 and the Railways Act, 1989) from its ambit.
  - If land acquired under the Act remains unutilised for five years from taking possession, it must be returned to the original owners or a land bank.
  - The Act provides the option of employment to one member of an affected family as part of the rehabilitation and resettlement award.
  - The Act provides for the establishment of a Land Acquisition, Rehabilitation and Resettlement (LARR) Authority which may be approached in case a person is not satisfied with an award under the Act.
- **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006**
  - It is **to recognize and vest the forest rights and occupation** for forest dwelling Scheduled Tribes and other traditional forest dwellers (OTFD).

## **6.9. WORLD HAPPINESS REPORT 2021**

#### **Why in news?**

Recently, World Happiness Report, 2021 was released by the **UN Sustainable Development Solutions Network**.

#### **About the World Happiness Report, 2021**

- Theme of 2021 report focusses on **the effects of COVID-19 on happiness and how countries have differed in their success in maintaining connected and healthy societies**.
- This year, the **report provided two rankings**:
  - The usual one **based on average of three years of surveys** taken in 2018-2020 by Gallup (American analytics and advisory company).
  - **Another focused on 2020 alone** to help understand the outbreak's effect on subjective well-being and how factors contributing to well-being affected pandemic outcomes.
- Respondents are asked to **rate their own current lives on 0 to 10 scale**, (10: best possible & 0: worst possible).

#### **Sustainable Development Solutions Network**

- It has been **operating since 2012** under the auspices of the UN Secretary-General.
- SDSN mobilizes global scientific and technological expertise to **promote practical solutions for sustainable development**, including the implementation of the Sustainable Development Goals (SDGs) and the Paris Climate Agreement.
- SDSN is also **publishing the annual SDG Index & Dashboards Global Report**.

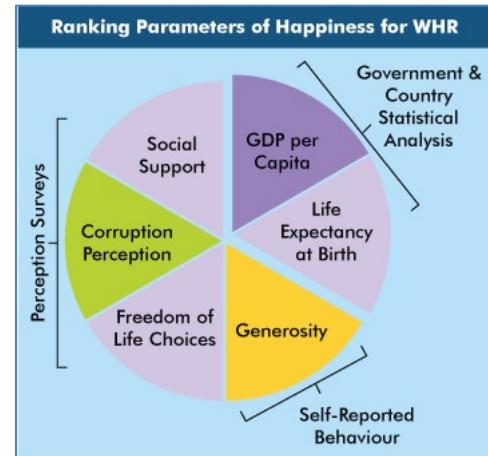
#### **Findings of the Report**

- **Top 5 countries were** – Finland (topped the list for **fourth straight year**), Iceland, Denmark, Switzerland, The Netherlands and Sweden.
- **India ranked 139<sup>th</sup> out of the 149 countries in the list**, a slight improvement since last year(ranked 140<sup>th</sup>).
- India's neighbours: **Pakistan (105<sup>th</sup>), Bangladesh (101<sup>st</sup>) and China (84<sup>th</sup>)**.
- **Afghanistan was ranked the least happy country**.

- However surprisingly, on an average there wasn't a decline in well-being when measured by people's own evaluation of their lives.

#### Key takeaways from the report

- Mental health has been one of the casualties both of the pandemic and the resulting lockdowns. As the pandemic struck, there was a large and immediate decline in mental health in many countries worldwide.
- Success of Non-Pharmaceutical Interventions (NPIs) in Asia-Pacific region resulted from measures that were both top-down, with governments setting strong control policies, and bottom up, with general public supporting governments.
- More individualistic culture of North Atlantic countries and relative looseness of social norms may also have contributed to lower public support for NPIs.
- Not being able to work has had a negative impact on well-being. Unemployment during the pandemic is associated with a 12% decline in life satisfaction and a 9% increase in negative affect.
- To evaluate social progress and to make effective policy, report suggested to take into account both: the quality of life, and the length of life.
  - Policy-makers should aim to maximise the Well-Being-Adjusted Life-Years (or WELLBYs) of all who are born taking into account total well-being of a person.



#### Factors supporting successful COVID-19 strategies as per the report:

- Confidence in public institutions: Trusted public institutions were more likely to choose the right strategy and have their populations support the required actions.
- Income inequality, acting partly as a proxy for social trust.
- Learnings from SARS and other earlier pandemics.
- Whether the head of the government was a woman.

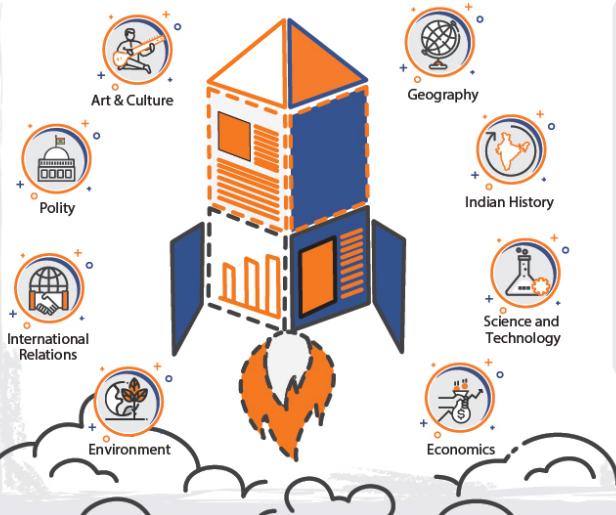
**SMART QUIZ**

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

## FAST TRACK COURSE 2021 GENERAL STUDIES PRELIMS

### PURPOSE OF THIS COURSE

The GS Prelims Course is designed to help aspirants prepare for & increase their score in General Studies Paper I. It will not only include discussion of the entire GS Paper I Prelims syllabus but also that of previous years' UPSC papers along with practice & discussion of Vision IAS classroom tests. Our goal is that the aspirants become better test takers and can see a visible improvement in their Prelims score on completion of the course.



INCLUDES	
	Access to recorded live classes at your personal student platform.
	Comprehensive, relevant & updated Soft Copy of the study material for prelims syllabus.
	Access to PT 365 classes
	Sectional mini test and Comprehensive Current Affairs.

COURSE BEGINS	TOTAL NO OF CLASSES
Admission Open	60

# 7. SCIENCE AND TECHNOLOGY

## 7.1. ARTIFICIAL INTELLIGENCE (AI)

### Why in news?

Recently, U.S. India Artificial Intelligence (USIAI) has launched for working in the field of Artificial Intelligence (AI).

### More about News

- U.S. India Artificial Intelligence (USIAI) is an initiative of IUSSTF.
- USIAI will serve as a platform to discuss opportunities, challenges, and barriers for bilateral Artificial Intelligence (AI) R&D collaboration, enabling AI innovation, share ideas for developing an AI workforce and recommend modes and mechanisms for catalyzing partnerships.
- It will provide breakthrough solutions in a range of sectors, like agriculture, energy, climate change, affordable housing and smart cities etc.

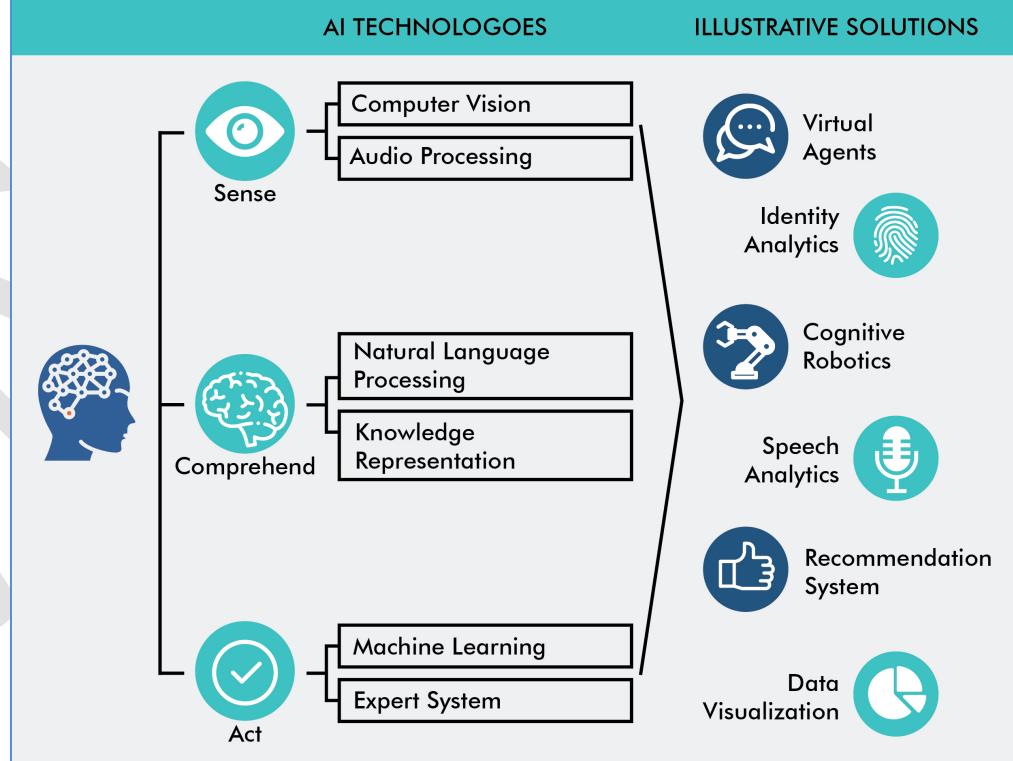
### About Artificial Intelligence (AI)

- Artificial intelligence is the branch of computer science concerned with making computers mimic human-like intelligence. In contrast to normal hardware and software, AI enables a machine to perceive and respond to its changing environment.
- AI has the potential to boost the national growth rate by 1.3% and add \$957 bn by 2035 to India's economy.
- Human-AI Collaboration
  - **Supportive Mode:** AI performs alongside humans by facilitating human judgements by providing resources such as predictive outputs.
  - **Reimagining the Business:** AI performs activities that go beyond the cognitive abilities of humans. For e.g., large-scale genome study in bioinformatics.
  - **AI replaces the Humans:** This is especially useful in potentially harmful situations for humans such as environments and rapid system response in nuclear reactors.

### Indo-U.S. Science and Technology Forum (IUSSTF)

- It was established under an agreement between the Governments of India and the United States of America in March 2000.
- It is an autonomous bilateral organization jointly funded by both the Governments that promotes Science, Technology, Engineering and Innovation through substantive interaction among government, academia and industry.
- It operates through two bilateral agreements: Indo-U.S. Science and Technology Forum (IUSSTF) and United States-India Science and Technology Endowment Fund (USISTEF).
  - USISTEF seeks to support and foster joint applied R&D to generate public good through commercialization of jointly developed technology.
- The Department of Science & Technology, Governments of India and the U.S. Department of States are respective nodal departments for IUSSTF.

## Artificial Intelligence



<b>Healthcare</b>	<ul style="list-style-type: none"> <li>Address issues particularly in rural areas that suffer from poor connectivity and limited supply of healthcare professionals.</li> <li>This can be achieved through AI driven diagnostics, early identification of potential pandemics, and imaging diagnostics.</li> </ul>
<b>Education and Skilling</b>	<ul style="list-style-type: none"> <li>Solve problem of quality and access issues observed in the Indian education sector.</li> <li>Augmenting and enhancing the learning experience through personalised learning, automating and expediting administrative tasks.</li> </ul>
<b>Agriculture</b>	<ul style="list-style-type: none"> <li>Driving a food revolution to meet the increased demand for food by improvement in crop yield.</li> <li>Address challenges in irrigation, misuse of pesticides and fertilisers through real time advisory.</li> </ul>
<b>Manufacturing</b>	<ul style="list-style-type: none"> <li>Manufacturing industry is expected to be one of the biggest beneficiaries of AI based solutions in field of engineering, supply chain management, production and quality assurance etc.</li> </ul>
<b>Energy</b>	<ul style="list-style-type: none"> <li>AI can enable storage of energy through intelligent grids enabled by smart meters, and also improve the reliability and affordability of photovoltaic energy.</li> <li>AI may also be deployed for predictive maintenance of grid infrastructure.</li> </ul>
<b>Financial Services</b>	<ul style="list-style-type: none"> <li>AI can ensure early detection of financial risk and systemic failures, and automation to reduce malicious intent in financial systems, such as market manipulation, anomalous trading etc</li> </ul>
<b>Defence and Security</b>	<ul style="list-style-type: none"> <li>AI can be used for intelligence gathering, cyber defence, risk terrain analysis, detecting anomalous behaviour in humans, etc.</li> </ul>
<b>Law Enforcement</b>	<ul style="list-style-type: none"> <li>AI technologies can be used by law enforcement which include facial recognition, speech recognition, predictive analytics etc.</li> </ul>
<b>Disaster Management</b>	<ul style="list-style-type: none"> <li>AI has potential in providing remedial measures and control in aftermath of man-made and environmental disasters.</li> <li>E.g. unmanned drones and satellite feeds combined with image processing and recognition can be used in infrastructure damage assessments.</li> </ul>

## Key challenges to adoption of AI in India

Data Security Council of India (DSCI) has highlighted some of these key challenges in the way of extensive adoption of AI-driven solutions in India, as given follow:

- **Data security and privacy issues:** AI solutions are based on a huge volume of confidential data, which are often sensitive and personal in nature. This brings a range of security and privacy vulnerabilities like exposure to cyber risk and geopolitical risk.
- **Limited AI expertise:** AI requires highly trained and skilled professionals, but being an emerging technology, the talent pool is limited. As per McKinsey, "Talent is one of the biggest challenges to AI, no matter how advanced a company's digital program."
- **Lack of investment:** High implementation cost resists numerous organizations to implement AI solutions. For instance, transforming a manufacturing plant from manual operation to automated operation would require high capital investment to integrate Industrial Internet of Things (IIoT) and other components of industry 4.0.
- **Lack of AI and cloud computing infrastructure:** AI and cloud are inseparable because AI requires huge storage of data. However, despite the potential, India lacks access to specialised compute and storage facilities.
- **Lack of integrity and ethics:** AI algorithms work based on training given to it and predicts solutions based on the data being fed into it and self-learning capability. However, in a few instances, the AI algorithm overlooks the correctness of the data and give an ambiguous result, which could be unethical.
- **Super-intelligence:** A sufficiently intelligent AI system can redesign itself or can create a better successor system which creates fear and debate around whether super-intelligence will be good or evil to humans.

## Way forward

- **Applications and Infrastructure Development:** There is need to create infrastructure to support development of AI applications with high computational power, large memory and storage space.
  - E.g., A chatbot can be developed to advise the patients on several health-related matters like HIV, STDs, tuberculosis in natural language, because such diseases are treated as untouchable in the society and AI can address concern and advise patients in this case.
- **Regulations and Policy:** AI applications touch several aspects of human life, regulations are needed to ensure safety of the people, protection of privacy for making people aware about this technology and create confidence in the people.
- **Research and Development:** Government has a major role to play in funding R&D and innovation projects and India needs to initiate a Programme to support R&D and innovation in this area with International cooperation.
  - Involvement of industry is necessary while funding R&D projects and facilitate interaction between the R&D centres/academic institutions and industry to get the input from the industry and other stakeholders.
- **Human Resource Development:** In order to cope up with the problems due to the loss of jobs, the workforce will have to be retrained to take up new types of jobs which may emerge with the automation of the processes.
  - For this both formal and informal education systems should be reviewed to produce the manpower who can deal with the changing needs of the society.

## Steps taken for AI in India

- India is moving in the right direction with the **Personal Data Protection Bill, 2019** to tackle cyber threats and data security, the bill is referred to Standing committee.
  - Also, India has adopted **National Cyber Security Strategy 2020** for ensuring a safe, secured, trusted and resilient cyber space.
- **Centre of Excellence for Artificial Intelligence** was established by **National Informatics Center** for innovative new solutions in AI space, a gateway to test and develop solutions for projects undertaken at central and state level.
- **INDIAai is the National AI Portal of India** - a central hub for everything AI in India and beyond was joint initiative of **Ministry of Electronics and IT, National e-Governance Division and NASSCOM**.
- **National Association of Software and Services Companies (NASSCOM)** has started 'Future Skills Prime initiative' which aims to foster an ecosystem that enhances India's digital talent with the right set of skills through remote and self-paced learning.
- **India's own AI-first compute infrastructure, AI Research, Analytics and knowledge Assimilation platform (AIRAWAT)** was developed to address issues of cloud computing for Big Data analytics with advanced AI processing capabilities.
- To create a policy framework and to develop the ecosystem for Artificial Intelligence MeitY has constituted four **committees covering all the aspects of AI**:
  - Committee on platforms and data for AI
  - Committee on Leveraging AI for identifying National Missions in Key Sectors
  - Committee on Mapping Technological capabilities, Key policy enablers, Skilling, Re-skilling, R&D
  - Committee on Cybersecurity, Safety, Legal and Ethical issues.

## 7.2. LARGE HADRON COLLIDER BEAUTY EXPERIMENT (LHCb)

### Why in news?

Researchers at University of Zurich and European Organization for Nuclear Research (CERN) have found new results at Large Hadron Collider beauty (LHCb) experiment.

### About Large Hadron Collider beauty experiment (LHCb)

- The LHCb experiment is one of the four large experiments at the **Large Hadron Collider (LHC) at CERN in Geneva**.
- It is **designed to study decays of particles containing a beauty quark**, the quark with the highest mass forming bound states.
  - Beauty quarks are **produced during the collision of high-energy proton beams** in the Large Hadron Collider the particle accelerator at CERN.
    - ✓ Quark are **elementary subatomic particles** that interact by means of the strong force and are believed to be among the **fundamental constituents of matter**.
    - ✓ There are six types of quarks that differ from one another in their mass and charge characteristics, that are grouped in three pairs: **up and down, charm and strange, and top and bottom**.
    - ✓ Beauty quarks (bottom quark) are much **heavier than the up and down quarks and particles containing b quarks are also unusually long-lived**, which make them very useful to physicists looking for physics beyond the standard mode.
  - As per **Standard Model** the decay process involves the conversion of a beauty quark into a strange quark with the production of an electron and antielectron or a muon and antimuon.
    - **Electrons are the subatomic particles that orbit the nucleus** of an atom and generally negative in charge. While antielectron is positively charged also called as positron.
    - **Muon is elementary subatomic particle similar to the electron** but 207 times heavier. It has two forms, the negatively charged muon and its positively charged antimuon.
  - But **results at Large Hadron Collider beauty experiment (LHCb)** shows anomalies in decaying process than standard model with new **fundamental force in addition to four fundamental ones**.
    - Four fundamental forces of standard model are **Gravity, electromagnetism, weak nuclear interactions responsible for radioactivity and strong nuclear forces that hold matter together**.
  - This anomalies in result gives **hint of the possible existence of a hypothetical particle called a leptoquark** has appeared as an unexpected difference in how beauty quarks decay to create electrons or muons.

### Large Hadron Collider (LHC)

- The Large Hadron Collider (LHC) is the **world's largest and most powerful particle accelerator** at CERN's accelerator complex.
- The LHC consists of a 27-kilometre ring of **superconducting magnets with a number of accelerating structures to boost the energy** of the particles along the way.
- The **beams inside the LHC are made to collide at four locations** around the accelerator ring, corresponding to the positions of **four particle detectors ATLAS, CMS, ALICE and LHCb**.
- The project was officially approved in 1997, and construction began on a 16.5-mile-long (27 kilometers) ring that passed beneath the French-Swiss border capable of **accelerating particles up to 99.99 percent the speed of light and smashing them together**.
- In 2012, the researchers at the LHC announced the **discovery of the Higgs boson**, particle named after physicist Peter Higgs.
  - Higgs boson is an **elementary particle gain their mass from a fundamental field (Higgs field) through its interactions**.

### About CERN

- European Organization for Nuclear Research (CERN) is one of the **world's largest centres for scientific research** uses complex scientific instruments to study the basic constituents of matter – **fundamental particles**.
- Here, **subatomic particles are made to collide together** at close to the speed of light and their interaction is studied to provide insights into the fundamental laws of nature.
- The instruments used at CERN are like
  - **accelerators to boost beams** of particles to high energies before the beams are made to collide with each other
  - **detectors to observe and record** the results of these collisions.
- It is founded in **1954**, the Franco-Swiss border near Geneva.
- Currently CERN have **23 member states**, while India is an **associate member state**.
- **Japan, Russian Federation, United States of America, European Union and UNESCO** currently have **Observer status**.

## 7.3. BLACK HOLE'S MAGNETIC FIELD

### Why in news?

The scientists have first time observed magnetic field around a Black Hole.

### More about news

- Astronomers working in collaboration between the Smithsonian Astrophysical Observatory and Harvard College Observatory have obtained a **new view of the supermassive black hole at the center of galaxy M87 or Messier 87**, some 55 million light years away from Earth.
- Images of **polarized light were released by the Event Horizon Telescope (EHT)** collaboration, a network of radio telescopes.
- In **2019 the EHT captured the first image of the shadow dark region of a black hole**, that is expected to be about three times the diameter of the black hole's event horizon.

### About Black Hole's magnetic field

- A **black hole is a place in space where gravity pulls so much that even light cannot get out** as gravity is so strong because matter has been squeezed into a tiny space.
  - They are **invisible** and observed through space telescopes with special tools.
  - Black holes can be **big or small**, the smallest black holes are as small as **just one atom**.
- Now, new image from Event Horizon Telescope (EHT) shows **polarised light, waves oscillating in only one direction produced by matter at the edge of the black hole**.
  - While, **unpolarised light is made up of light waves oscillating in many different directions**.
- **Light becomes polarized when it goes through certain filters** like, for instance, the lenses of polarized sunglasses, or when it is emitted in hot regions of space that are magnetized, hence it **suggests that presence of strong magnetic fields around the black hole**.
- New polarised image also gives **compelling evidence for how strong magnetic fields around black holes can launch and sustain bright jet of matter and energy** that emerges from its core and extends at least 100,000 light years away.
- Research suggests that the **magnetic fields are strong enough to push back on the hot gas and help it resist gravity's pull**.
  - **Only the gas that slips through the field** can start flowing inwards to the event horizon.

### Event horizon

- The **event horizon of a black hole is linked to the object's escape velocity** the speed that one would need to exceed to escape the black hole's gravitational pull.
- The event horizon is the threshold around the black hole where **the escape velocity surpasses the speed of light**.
- According to **Einstein's theory of special relativity**, nothing can travel faster through space than the speed of light.
- This means a black hole's event horizon is **essentially the point from which nothing can return** and said to be the **ultimate prison wall** one can get in but never get out.

### Event Horizon Telescope (EHT)

- The EHT is an **international collaboration** that has formed to continue the steady long-term progress on **improving the capability of Very Long Baseline Interferometry (VLBI)** at short wavelengths.
- This **links radio dishes across the globe to create an Earth-sized interferometer**, to measure the size of the emission regions of the two supermassive black holes with the event horizons.



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# 8. CULTURE

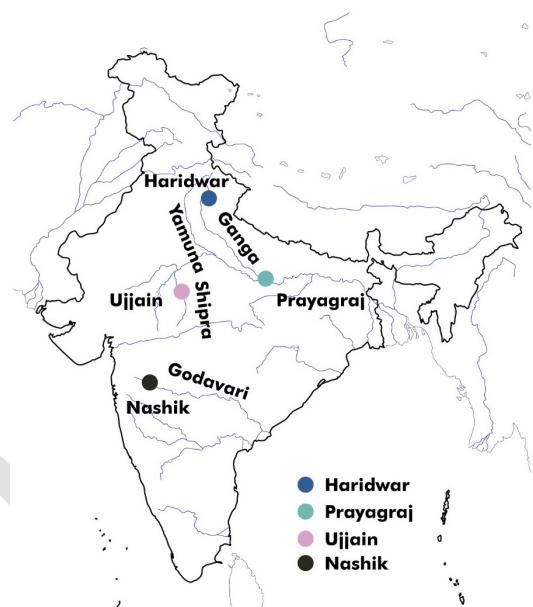
## 8.1. KUMBH MELA

### Why in news?

Recently Kumbh Mela started at Haridwar, Uttarakhand.

#### About Kumbh Mela

- After more than 100 years the kumbh Mela is being **held earlier because of specific auspicious dates**.
  - Generally, it is **celebrated once in 12 years** and the previous kumbh in Haridwar was held in 2010, while next one was to be held in 2022.
- Kumbh Mela is a **mass congregation of pilgrims who gather to take a bath/dip (Shahi Snan) in a sacred river**.
  - People from **irrespective of caste, creed or gender** are present in the festival and believe that by **bathing in the river one is freed from their past sins (karma)**, and, thus, one becomes **eligible for liberation from the cycle of birth and death**.
- The geographical location for the Kumbh Mela spans across **four cities within India**.
  - Prayagraj (Uttar Pradesh)**- confluence of Ganga, Yamuna, and the mythical Saraswati
  - Haridwar (Uttarakhand)**- Ganga river
  - Ujjain (Madhya Pradesh)**- Shipra river
  - Nashik (Maharashtra)**- Godavari river
- Types of Kumbh Mela and its occurrence**
  - Kumbha Mela**: held at all four places every 3 years
  - Ardha Kumbha Mela**: held at Haridwar and Prayagraj every 6 years
  - Purna Kumbha Mela**: held only at Prayagraj every 12 years
  - Maha Kumbha Mela**: held only at Prayagraj every 144 years or after 12 Purna Kumbh Mela.
- Kumbh Mela comes under the **UNESCO's Representative List of Intangible Cultural Heritage of Humanity**.
- UNESCO's Representative List of Intangible Cultural Heritage of Humanity in India**.



S.N.	Intangible Cultural Heritage	Year of Inscription
1.	Tradition of Vedic chanting	2008
2.	Ramlila, the traditional performance of the Ramayana	2008
3.	Kutiyattam, Sanskrit theatre of Kerala	2008
4.	Ramman, religious festival and ritual theatre of the Garhwal region	2009
5.	Mudiyettu, ritual theatre and dance drama of Kerala	2010
6.	Kalbelia folk songs and dances of Rajasthan	2010
7.	Chhau dance, tribal martial art dance in Odisha, Jharkhand and West Bengal.	2010
8.	Buddhist chanting of Ladakh	2012
9.	Sankirtana, ritual singing, drumming and dancing of Manipur	2013
10.	Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru, Punjab	2014
11.	Yoga	2016
12.	Nuvroz, beginning of the New Year for the Parsis	2016
13.	Kumbh Mela	2017



**SMART QUIZ**

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



# 9. ETHICS

## 9.1. POLICE CORRUPTION IN INDIA

### Why in News?

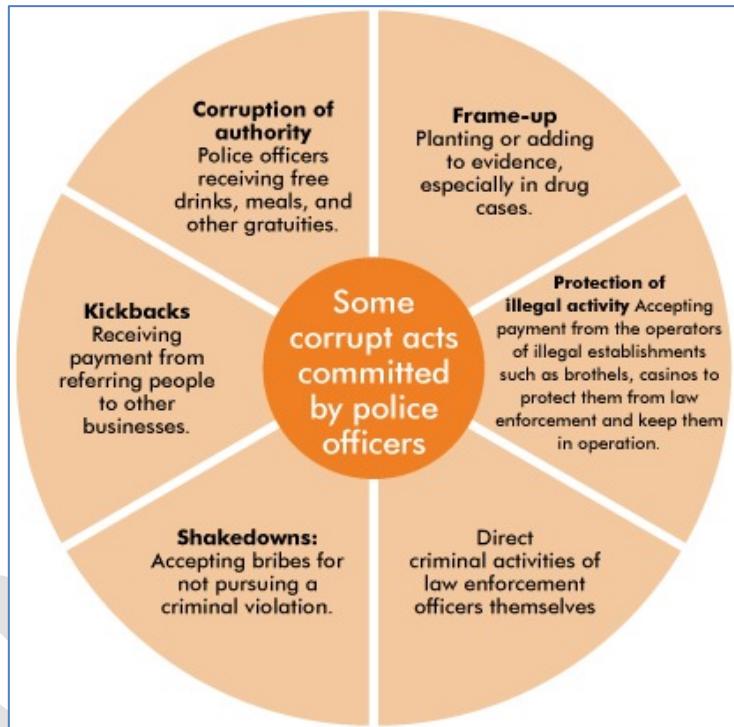
Recently, a PIL filed by the former Mumbai Police Commissioner raised the issue of alleged corruption in police transfers and postings in the state.

### What is Police Corruption?

Police corruption is a specific form of police misconduct designed to obtain financial benefits, other personal gain, and/or career advancement for a police officer or officers in exchange for not pursuing, or selectively pursuing their duty or misuse of public office in any form.

### Reasons behind Police Corruption

- **Absence of a strong institutional culture:** Institutional value system plays an important role in guiding the behavior of participants in the system. It creates an internal need to follow the ethos and decreases the need for an any external or legal enforcer.
  - For instance, strong institutional culture practiced in the Indian Armed Forces results in soldiers following the same discipline outside the military ecosystem despite having no external enforcer.
- **Misuse of power and discretion:** Police personnel wield wide powers and discretion while discharging their functions and those driven by selfish motives can misuse to accumulate private gains.
- **Ineffective enforcement of legislations:** Ambiguities in legislations coupled with the police discretion “to act or not to act” in respect of certain offences give ample opportunities to the personnel to resort to corrupt practices.
  - Santhanam Committee noted that **administrative delays are one of the major causes of corruption** and there have been numerous cases where delay has been deliberately contrived.
- **Criminalization of politics:** Political patronage coupled with muscle and money power enjoyed by the underworld prompt many police personnel to collude with such forces in order to make material gains.
  - Also, because of **nexus between Police and mafia operators**, organized crimes such as periodic extortion, kidnapping etc. committed by them go undetected.
- **Lack of supervision:** Strength and the quality of the policepersons has not kept pace with the demands of a rapidly expanding economy and administration. This has resulted in supervision becoming ineffective.
- **Vicious cycle of bribery:** Policepersons who have paid their way through, try to recover the amount as soon as possible and corruption becomes a tool for getting better return on investment.
- **Other factors:** Salary structures, nature and hours of duty, poor training, accommodation problem and certain administrative and organizational problem etc.



### Need for Ethics in Policing

Policing is **essential for maintaining law and order** and smooth functioning of the society. The **discretionary power at all levels of functioning is extremely high**. In this context, the **absence of a professional code of ethics** creates a scenario where it is easy to be a moral opportunist and use unethical conduct as a means of career advancement. Therefore, the old predicament, “**who will guard the guardians**”, makes imperative the **need for a framework of values and professional ethics** to guide the police in their dealing with citizens.



### What can be done to discourage and prevent Police Corruption?

- **Community policing** initiatives such as in Bengaluru have been successful in helping resolve conflicts, fostering positive relationships with police, improving beat security and increasing police responsiveness and effectiveness can be adopted.
- **Making Transfers and Promotions Transparent:** A system could be designed where postings are automatically generated by a software system after a given time interval. Similarly, objective criterion for promotions could be articulated.
  - Supreme Court (in Prakash Singh Case) sought a minimum tenure for the Inspector General of Police so that they are not transferred mid-term by politicians.
- **Introducing greater accountability:** Public hearings, objective performance and efficiency indicators can be introduced to monitor the performance of the Police force.
  - Another directive in Prakash Singh judgment recommended setting up State Police Complaints Authority where common people aggrieved by police action could approach.
- **Better service conditions:** It can have a positive impact on police personnel who become coarse and turn cynical due to stress, strain and frustration of law enforcement profession.
- **Changing attitude of police leaders:** There should be more flexibility, fluidity and individual innovativeness and initiative so that there would be meaningful deliberations and interactions at all levels of the force.
- **Innovative mechanisms:** Efforts should be made to redefine the core areas of policing and identify and delink those duties and tasks that give ample scope for the lower rungs of police to resort to corrupt practices.
- **Use of Information Technology:** Use of technology for reporting and handling of cases can play an important role in arresting corruption as non-registration of complaints is the most common grievance of citizens.
  - **Rajasthan has introduced** an initiative named **Aarakshi** to improve the efficiency of police procedures.

## 9.2. ETHICAL WEALTH CREATION

*"Wealth, the land unfailing, speeds to every land; Dispersing darkness at its lord's command."*

- Thiruvalluvar, Thirukural

### Introduction

The theme of the Economic Survey of 2019-20 was wealth creation. This wealth creation had to be social responsibility. The outbreak of COVID-19 has further validated this idea by exposing the fragility and deficiencies

of the current wealth creation machinery. In this context, several economists and thinkers have suggested a move towards ethical creation of wealth.

### What is meant by Ethical Wealth Creation?

Historically, the primary source of wealth within many civilizations centered around **stealing valuable assets from their neighbors** or by **conquering and enslaving them**. For example, the raids executed by Nadir Shah in the Indian sub-continent. But capturing of this wealth did not necessarily translate to a wealthier empire.

On the contrary, the **Indian subcontinent has experienced wealth creation in times of stability and absence of war**. For example, during the Maurya period in the ancient or the Mughal period in the Medieval times. The primary reason for this scenario can be attributed to idea that **ethical wealth creation has been a part of our culture**. For example, the idea of *Shubh-Laabh* propagates the idea that social prosperity and business profit cannot exist in isolation.

But how ethical wealth creation can be differentiated from unethical wealth creation? Following can be cited as key elements of ethical wealth creation-

- **Overall Human Development:** Ethical wealth creation acts as a catalyst for overall development of the individual whereas unethical wealth creation sores up wealth at the expense of development in other areas.
- **Beneficial for all stakeholders:** Ethical wealth creation is centered around win-win for customers, businesses, citizens and society in general. Unethical wealth creation, on the other hand is centered around extraction of wealth by some sections through exploitation of less powerful sections.
- **Sustainable in nature:** Ethical wealth creation is economically, socially and environmentally sustainable, unlike the scenario where immediate profit generation is the sole motive.
- **Fair and equitable sharing:** Ethical wealth creation has its basis in redistribution of wealth on the principles of fairness and equity. On the other hand, distribution in unethical wealth creation creates artificial scarcities and necessities.



### Why moving towards Ethical Wealth Creation is important?

The world is rapidly moving forward with growth in technology, human productivity and human connectivity. The speed of growth also makes the deficiencies in our growth model all the more glaring. Following can be cited as key reasons which strengthen the case of ethical wealth creation-

- **Disjointed nature of wealth creation and well-being:** Long-term well-being is primary motivation behind wealth creation. But several studies suggest that there is absence of a strong correlation between the well-being and the current model of wealth creation.
- **Economic models without moral foundations hurts the economy in the long-run:** The current profit-driven model **focuses on value extraction rather than value creation**. Encouragement of such attitude could lead to selfish economic actions. For example, growth in the number of Willful Loan Defaulters.
- **Persistent Income inequality:** The persistent nature of economic inequality suggests that the trickle-down theory, advocated by the current economic model may not hold. The theory suggests that economic growth at the top of income pyramid trickles down to the base of the pyramid.
  - At the same time, the income inequality is further fueled by the recent **issues like Jobless Growth**, which further aggravate this economic divide.
- **Environmental Sustainability:** The current model views environmental sustainability as a hindrance to development. This has translated to economic growth being accompanied with issues like climate change, global warming, threats to biodiversity etc.
- **Financial Instability:** The Global Financial Crisis of 2008 highlighted the financial fragility of the current system. The COVID-19 pandemic has now highlighted the supply chain vulnerabilities and poor disaster readiness of the system.

Applicability of these reasons becomes doubly important for India as India is going through a rapid growth phase. The more ethical this growth is, the more impactful it will be in the long-term. In this context, the Economic Survey of 2019-20 stated that **Ethical Wealth Creation will be key to India becoming a \$ 5 Trillion Economy by 2025.**

#### What can be done to make wealth creation more ethical?

- **Complementing the role of market, government and society:** Ethical wealth creation does not imply moving towards a state-centric model. It implies broadening of developmental objectives and involving all institutions to achieve these objectives.
  - For example, the idea of coming together of the invisible hand of the market and Government driven hand of trust can propagate ethical wealth creation.
- **Focusing on the Triple bottom line- People, Profit, Planet:** A triple bottom line which includes economic growth, movement of social parameters like inequality levels and status of the environment can guide the future course of action.
- **Moving from money-centric to people-centric capitalism:** Currently, the economic decisions are made solely on the basis of financial parameters. Moving towards an idea, where employees, customers and society become a part of decision-making process could produce people-centric capitalism and address issues such as jobless growth.
- **Focusing on building overall resilience going forward:** This can be done by investing on strengthening health and social protection systems and integrating environment-social-governance (ESG) principles in channelling public and private investments towards SDGs.

#### Conclusion

All the aforementioned steps focus on broadening the overall objective of development. The idea is to **bring these objectives as close to the idea of human well-being as possible.** But the dynamism of human mind and human needs does not allow us to create a fixed notion of well-being.

In this context, it becomes important to understand that **efficacy of wealth creation and its process will always be judged on its ability to address dynamic developmental needs of the time.**



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# 10. GOVERNMENT SCHEMES IN NEWS

## 10.1. PRADHAN MANTRI MATRU VANDANA YOJANA (PMMVY)

### Why in news?

Pradhan Mantri Matru Vandana Yojana has crossed 1.75 crore eligible women till financial year 2020.

### About the Scheme

Objectives	Target beneficiaries	Salient features
<ul style="list-style-type: none"><li>To provide <b>partial compensation for the wage loss</b> in terms of <b>cash incentives</b> so that the <b>woman can take adequate rest before and after delivery of the first living child.</b></li><li>To improve <b>health seeking behaviour</b> amongst <b>Pregnant Women and Lactating Mothers (PW&amp;LM)</b> through <b>cash incentives.</b></li></ul>	<ul style="list-style-type: none"><li>All Pregnant Women and Lactating Mothers (PW&amp;LM), excluding<ul style="list-style-type: none"><li>PW&amp;LM who are in regular employment with the Central Government or the State Governments or PSUs or</li><li>those who are in receipt of similar benefits under any law for the time being in force.</li></ul></li><li>A beneficiary is eligible to receive <b>benefits under the scheme only once</b></li><li><b>In case of miscarriage or still birth, the beneficiary would be eligible to claim the remaining installment(s) in event of any future pregnancy.</b><ul style="list-style-type: none"><li>After receiving the 1st installment, if the beneficiary has a miscarriage, she would only be eligible for receiving 2nd and 3rd installment in event of future pregnancy subject to fulfillment of eligibility criterion and conditionality's of the scheme. Similarly, if the beneficiary has a miscarriage or still birth after receiving 1st and 2nd installments, she would only be eligible for receiving 3rd installment in event of future pregnancy subject to fulfillment of eligibility criterion and conditionality's of the scheme.</li></ul></li></ul>	<ul style="list-style-type: none"><li><b>Cash incentive of Rs 5000 in three instalments</b> i.e. 1st instalment of Rs 1000/- on early registration of pregnancy, 2nd instalment of Rs 2000/- after six months of pregnancy and 3rd instalment of Rs 2000/- after child birth is registered and the child has received the first cycle of BCG, OPV, DPT and Hepatitis - B, or its equivalent/ substitute.</li><li>The eligible beneficiaries would receive the incentive given under the <b>Janani Suraksha Yojana (JSY)</b> for Institutional delivery and the incentive received under JSY would be accounted towards maternity benefits so that on an <b>average a woman gets Rs 6000 /</b></li></ul> <p><b>Implementing authority</b></p> <ul style="list-style-type: none"><li><b>Ministry of Women and Child Development</b> is the nodal implementing authority.</li><li>The scheme is implemented using the <b>platform of Anganwadi Services scheme of Umbrella Integrated Child Development Services (ICDS).</b></li></ul>

# 11. NEWS IN SHORT

## 11.1. STATE ELECTION COMMISSIONER (SECS)

- Recently, the Supreme Court (SC) held that **independent persons, and not serving bureaucrats, should be appointed as State Election Commissioners.**
- About SC ruling**
  - SC held that a **government officer serving a state government, or the Central Government cannot be appointed** as SEC under Article 243K.
    - Court passed this significant direction **to ensure the independence of the State Election Commission.**
  - SC directed States **to comply with the constitutional scheme of independent and fair functioning of election commissions.**
  - If bureaucrats hold any such office (under the state government), then they have to **resign before taking charge of the office** of the election commissioner.

### About SECs (Article 243K)

- The **superintendence, direction and control of the preparation of electoral rolls** for, and the conduct of all elections to the **Panchayat bodies** in the State shall be vested in a SEC.
- SEC is to be appointed by the Governor.
- Subject to the provisions of any law made by the Legislature of a State, the **conditions of services and tenure** of office of the SEC shall be such as the Governor may by rule determine.
- SEC shall not be removed from his/her office except in like manner and **on the like grounds as a Judge of a High Court.**
- According to Article 243ZA, **Elections to the Municipalities** is also vested in SEC.

## 11.2. PLACES OF WORSHIP (SPECIAL PROVISIONS) ACT, 1991

- Supreme Court has asked the Centre to respond to a plea challenging the Places of Worship (Special Provisions) Act, 1991.
- About Places of Worship (Special Provisions) Act, 1991**
  - Act **prohibits conversion of any place of worship** and provides for maintenance of the religious character of any place of worship **as it existed on the 15<sup>th</sup> August, 1947**
  - All suits, appeals or other proceedings regarding converting the character of a place of worship, **that were pending on August 15, 1947, will stand abated** when the Act commences, and no fresh proceedings can be filed.

- However, legal proceedings can be initiated with respect to the conversion of the religious character of place of worship after the commencement of the Act **if change of status took place after the cut-off date of August 15, 1947.**
- Act will not apply to -**
  - Ram Janma Bhumi Babri Masjid situated in Ayodhya.
  - To any place of worship that is an ancient and historical monument or an archaeological site, or is covered by Ancient Monuments and Archaeological Sites and Remains Act, 1958.
  - any dispute that has been settled by the parties or conversion of any place that took place by acquiescence before the Act commenced
- Also, Supreme court in the landmark Ayodhya verdict said the Act **manifests the secular values of the Constitution and strictly prohibits retrogression.**

## 11.3. WORLD SUMMIT ON INFORMATION SOCIETY FORUM 2021

- Recently, World Summit on Information Society (WSIS) Forum 2021 was held.
- WSIS Forums are **organized each year, hosted by International Telecommunications Union (ITU), co-organized by ITU, UNESCO, UNCTAD and UNDP.**
  - ITU is **United Nations specialized agency for information and communication technologies**, headquartered in Geneva, Switzerland.
- WSIS represents one of the **world's largest annual gathering of the 'Information and communications technology (ICT) for development' community.**
- It is key forum for discussing the **role of ICTs as a means of implementation of Sustainable Development Goals** and targets.
- It is committed to build a **people-centric, inclusive and development-oriented Information Society** where everyone can create, access, utilize and share information.

## 11.4. VACCINE PASSPORT

- Recently, Israel and other countries have mooted the idea of Vaccine passport.
- Vaccine passport functions as **proof that the holder has been vaccinated against COVID-19** and is, therefore, "safe".
- It is a **digital document** and will aid in digitizing vaccination records across countries.

- Vaccine passport is not a new concept. Many countries required travelers from many African countries to the US or India to submit proof that they have been vaccinated against diseases such as yellow fever.
- Vaccine passports in different regions -
  - Digital Green Certificate by European Commission
  - Virus passport - Launched by China
  - Vaccine passport - Israel
- World Health Organisation has batted against the introduction of COVID-19 vaccination proofs as there are still critical unknowns regarding the efficacy of vaccination in reducing transmission.

### 11.5. FAITH FOR RIGHTS INITIATIVE

- Faith for rights initiative was launched by the United Nations Office of the High Commissioner of Human Rights (leading UN entity on human rights established by UN General Assembly) in 2017 Beirut, Lebanon.
- It aims to unite religious communities of various faiths to counter discrimination and religious-based violence through a shared objective to promote human rights and to uphold the freedom of religion or belief.
- 18 Faith for Rights Commitments were included in "Beirut Declaration" to take concrete action on the 2012 "Rabat Plan of Action" that laid out religious leaders' core responsibilities in countering incitement to hatred.
- Faith for Right Commitments include 18 commitments such as -
  - Prevent the use of the notion of "State religion" to discriminate against any individual or group;
  - Revisit religious interpretations that appear to perpetuate gender inequality
  - Stand up for the rights of all persons belonging to minorities;
  - Publicly denounce all instances of advocacy of hatred that incites to violence.
- Last year, #Faith4Rights toolkit was launched aimed at translating the "Faith for Rights" framework into practical peer-to-peer learning and capacity-building programmes.

### 11.6. THE INSURANCE (AMENDMENT) ACT, 2021

Recently, the Parliament has passed the Insurance amendment Act, 2021.

#### Key provisions of the Act

- The act amends the Insurance Act, 1938 and would be implemented from April 1, 2021.
- **Foreign investment:** It raises the foreign direct investment (FDI) in the insurance sector to 74%

from the existing 49% and removes restrictions on ownership and control.

- However, such foreign investment may be subject to additional conditions as prescribed by the central government.
- **Investment of assets:** The Act requires insurers to hold a minimum investment in assets which would be sufficient to clear their insurance claim liabilities. If the insurer is incorporated or domiciled outside India, such assets must be held in India in a trust and vested with trustees who must be residents of India.
  - This provision will no longer apply to an insurer incorporated in India, in which at least:
    - 33% capital is owned by investors domiciled outside India, or
    - 33% of the members of the governing body are domiciled outside India.

### 11.7. PM INAUGURATES MARITIME INDIA SUMMIT 2021 ORGANISED BY MINISTRY OF PORTS, SHIPPING AND WATERWAYS (MOPSW)

- Summit will visualize a roadmap for India's Maritime sector for next decade and will work to propel India to the forefront of the Global Maritime Sector.
  - Maritime sector is composed of activities such as maritime transportation, commercial fishing and aquaculture industry, cruise and recreational sector, sport and commercial ports, marine energy sources etc.
- **Key highlights of PM address**
  - India aims to make the Indian maritime industry at par with the top global benchmark by 2030.
  - MOPSW has drawn up a list of 400 projects with investment potential of \$31 billion to develop 7500 Km coastline of India.
  - Capacity of major ports has increased from 870 million tonnes in 2014 to 1550 million tonnes now.
  - Mega ports with world-class infrastructure are being developed at Vadhavan, Paradip and Deendayal Port in Kandla.
  - Focus on the domestic shipbuilding and ship repair market.
- **PM also launched Sagar-Manthan: Mercantile Marine Domain Awareness Centre**, an information system for enhancing maritime safety, search and rescue capabilities, security and marine environment protection.
  - Apart from tracking Indian vessels globally, it can also track foreign vessels within 1,000-km of India's coastline.

## 11.8. CENTRAL SCRUTINY CENTRE (CSC) & IEPFA MOBILE APP

- Both the initiatives have been launched by the **Ministry of Corporate Affairs** to strengthen the vision of 'Digitally empowered India'.
- Central Scrutiny Centre (CSC)**
  - Its objective is to ensure that **data quality is uncompromised and free from flaws**.
  - It will primarily scrutinize the filings made by users under straight through processes (STP), **identify data quality issues** and irregularities, and **communicate the same to the concerned Registrar of Companies**.
    - ✓ **STP is an automated process** done purely through electronic transfers with no manual intervention involved.
  - This would facilitate taking corrective steps to **restore authenticity and correctness of data** and it can be seamlessly shared with other regulators, if required.

### IEPFA mobile app

- This is a mobile app of **Investor Education and Protection Fund Authority (IEPFA)**.
  - IEPFA was established in 2016 under the provisions of the **Companies Act, 2013**.
  - The Authority is entrusted with the responsibility of **administration of the Investor Education Protection Fund (IEPF)**, make refunds of shares, unclaimed dividends, matured deposits/debentures etc. to investors and to promote awareness among investors.
- The mobile app aims at achieving the goal of **financial literacy**, spreading investor awareness, education, and protection among investors.
- The app will have the facility of **tracking the status and progress of IEPF claim refund process**.
- It will also provide a mechanism for investors and common citizens to **report on suspected fraudulent schemes**.

## 11.9. DIRECT SEEDED RICE (DSR) TECHNIQUE

- Agriculture uses about 78 per cent of freshwater resources, within this groundwater contributes 64%, canals 23%, tanks 2% and other sources 11%.
- As per a **NABARD-ICRIER study** on Water Productivity Mapping, **rice and sugarcane alone consume almost 60 %** of India's irrigation water.
  - As per estimates of the Commission for Agricultural Costs and Prices, **1kg rice consumes 3,367 litre water**.
  - Punjab have high on land productivity of rice, but low in respect to applied irrigation water productivity.** Similarly, in the case of **sugarcane for states Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu**.
- To conserve water in agriculture technologies like **Direct Seeded Rice (DSR) and System of Rice**

**Intensification (SRI)** can be used to save 25-30 per cent of water compared to traditional flood irrigation.

- For this Punjab agriculture department is planning to bring under cultivation of paddy area through the direct seeding of rice (DSR) technique during upcoming Kharif season, which starts in mid-June.
- Agriculture department of Punjab is appealing farmers to sow **PR-126 variety of paddy as it is best suited for the DSR technique** and PUSA-44 variety should be avoided.

- Direct seeded rice (DSR):** It refers to the process of establishing a rice crop from **seeds sown in the field rather than by transplanting seedlings from the nursery**.
  - Direct seeding is can be done by **sowing of pre-germinated seed into a puddled soil (wet seeding) or standing water (water seeding) or prepared seedbed (dry seeding)**.
  - DSR method **saves labour, requires less water, less drudgery, early crop maturity and have low production cost**.
- System of Rice Intensification (SRI)** is a methodology for increasing the productivity of irrigated rice by changing the management of plants, soil, water and nutrients particularly by eliciting greater root growth.
  - It makes rice production more **efficient and sustainable** by saving in **seed requirement, Water Savings, Reduced chemicals fertilizer and increased grain yield**.

## 11.10. ECONOMIC FREEDOM INDEX, 2021

- It was published by US conservative think-tank, **The Heritage Foundation**.
- The index ranks **12 indicators** from property rights to financial freedom under four categories: rule of law, size of government, regulatory efficiency and open markets.
- India was ranked at **26<sup>th</sup> out of 40 countries** among Asia-Pacific countries and **121<sup>st</sup> globally (out of 184)**.
  - Improvements made in business freedom** were offset by declines in judicial effectiveness and other scores.
- Singapore topped the index** followed by New Zealand and Australia.

## 11.11. CABINET APPROVES PRODUCTION LINKED INCENTIVE SCHEME FOR FOOD PROCESSING INDUSTRY

- It has been formulated based on the PLI scheme of NITI Aayog under "AatmaNirbhar Bharat Abhiyaan for Enhancing India's Manufacturing Capabilities and Enhancing Exports".

<b>Outlay, duration, and coverage</b>	<ul style="list-style-type: none"> <li>Rs. 10900 crore from 2021-22 to 2026-27.</li> <li>Rolled out on All India basis.</li> </ul>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>Support food manufacturing entities for <b>expansion of processing capacity</b> and <b>Branding abroad</b> to incentivise emergence of strong Indian brands.</li> <li>Support <b>creation of global food manufacturing champions</b>.</li> <li>Increase <b>employment opportunities</b> of off-farm jobs,</li> <li>Ensuring <b>remunerative prices of farm produce</b>.</li> </ul>
<b>Components covered</b>	<ul style="list-style-type: none"> <li><b>Ready to Cook/ Ready to Eat (RTC/ RTE)</b> foods, Processed Fruits &amp; Vegetables, Marine Products, Mozzarella Cheese.</li> <li><b>Organic products of SMEs</b> including Free Range -Eggs, Poultry Meat, Egg Products etc.</li> </ul>
<b>Implementation</b>	<ul style="list-style-type: none"> <li>Implemented through a <b>Project Management Agency</b>.</li> <li><b>Ministry of Food Processing Industries</b> would approve selection of applicants under scheme.</li> </ul>
<b>Expected impact</b>	<ul style="list-style-type: none"> <li>Expansion of processing capacity to generate processed food output of Rs 33,494 crore.</li> <li><b>Create employment</b> for nearly 2.5 lakh persons by 2026-27</li> </ul>
<b>Convergence Framework</b>	<ul style="list-style-type: none"> <li>Coverage under the PLI Scheme will <b>not affect eligibility under other schemes</b> like Pradhan Mantri Kisan Sampada Yojana.</li> </ul>

## 11.12. AIM-PRIME (PROGRAM FOR RESEARCHERS ON INNOVATIONS, MARKET-READINESS & ENTREPRENEURSHIP)

- Recently, AIM-PRIME was launched by the **NITI Aayog in collaboration with Bill & Melinda Gates Foundation (BMGF)**.
- This initiative **builds on the foundation laid by Atal Innovation Mission (AIM)** to support startups and provides specialized services to transition research to industry.
- It is an initiative to **promote and support science-based deep-tech startups & ventures** across India.
- It will be **implemented by Venture Center** - a non-profit technology business incubator.
- The program is catalyzed by the **office of the Principal Scientific Advisor**, and the Pune Knowledge Cluster.
- The program is open to:**
  - Technology developers** (early-stage deep tech start-ups, and scientists/ engineers/ clinicians) with **strong science-based deep tech business ideas**.

- The CEOs and Senior incubation managers of AIM Funded Atal Incubation Centers** that are supporting deep tech entrepreneurs.
- About AIM**
  - It is NITI Aayog's flagship initiative **to promote a culture of innovation and entrepreneurship** in the country and was setup in 2016.
  - Objective:**
    - To develop new programmes and policies for fostering innovation in different sectors of the economy
    - To provide platforms and collaboration opportunities for different stakeholders.
    - Create an **umbrella structure to oversee the innovation & entrepreneurship ecosystem** of the country.
  - Initiatives under AIM:** Atal Tinkering Lab, Atal Incubation Center, Mentor India, Atal New India Challenge, Atal Community Innovation Centre, Aatmanirbhar Bharat ARISE.

## 11.13. ARMS IMPORTS BY INDIA FALLS: REPORT BY STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE (SIPRI)

- According to the SIPRI report, **India's import of arms decreased by 33%** between 2011-15 and 2016-20.
  - India's **top three arms suppliers** during 2016-20 were Russia (accounting for 49% of India's imports), France (18%) and Israel (13%)
  - Russia was the most affected supplier**, although India's imports of US arms also fell.
  - Five largest arms exporters in 2016-20 were the US, Russia, France, Germany and China, while the top importers were Saudi Arabia, India, Egypt, Australia and China.
- Reasons for fall in import of arms** -
  - Government has **set a target of ₹1.75 lakh crore turnover** in defence manufacturing by 2025.
  - A Negative List of **101 items** for which there would be a ban on import.
  - Bifurcation of capital procurement budget** between domestic and foreign procurements.
  - A "**Fund of Funds**" worth **Rs. 10,000 crore** for start-ups and MSMEs in defence and aerospace sector.
  - Draft Defence Acquisition Procedure 2020** hiked Indigenous Content ratio in procurement. E.g.- New buy (Global-Manufacture in India) category to encourage foreign production facilities to be set up in India.
  - Establishment of **Chief of Defence Staff post** to bring uniformity in procurement process.

## 11.14. MILITARY EXERCISES IN NEWS

DUSTLIK II	<ul style="list-style-type: none"> <li>It is a joint military exercise between India and Uzbekistan.</li> </ul>
VAJRA PRAHAR	<ul style="list-style-type: none"> <li>Recently, the <b>11th edition of Indo-US Joint Special Forces Exercise VAJRA PRAHAR 2021</b> was conducted.</li> <li>It is conducted alternatively between India and the United States.</li> </ul>

## 11.15. EARTH HOUR 2021

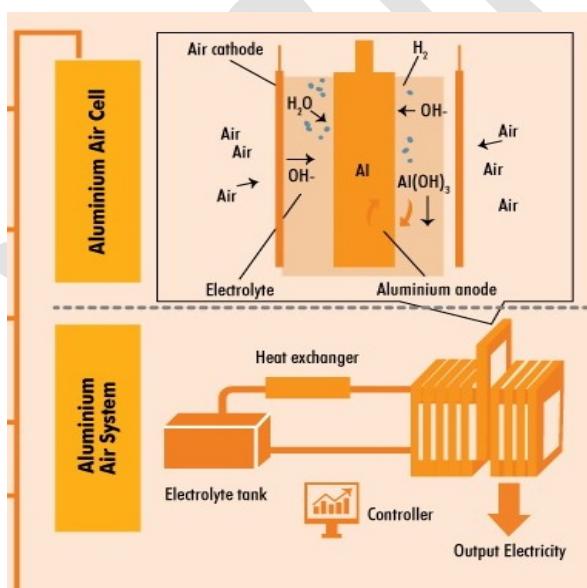
- Earth hour 2021 was celebrated on March 27<sup>th</sup>, 2021 under the **theme, "Climate change to Save Earth."**
- This year's event highlighted the link between destruction of nature and increasing outbreaks of diseases like Covid-19.
- According to data, **Delhi saved 334 MW electricity during Earth Hour.**
- About Earth hour:**
  - Organized by **World Wildlife Fund (WWF)**, the **one-hour lights out event (8:30 - 9:30 pm)** is held worldwide **toward end of March**.
  - It encourages individuals, households, communities and businesses **to turn off their non-essential lights for one hour** as a symbol for their commitment to the planet.
  - It started as a **light out event in Sydney, Australia in 2007** and since then has garnered support in 185 countries.
  - Objective** is to unite people to take action on environmental issues and protect the planet.
- Achievements so far:**
  - WWF-Uganda created the world's first Earth Hour Forest.
  - In Paraguay, WWF used Earth Hour platform to build public support to gain an extension of the logging moratorium, helping to reduce deforestation.
  - Solar-powered lights were installed in three villages without electricity in India.**
- About WWF:**
  - It is an **international non-governmental organization**, established in **1961** and headquartered at **Gland, Switzerland**.
  - It is the **world's leading conservation organization** with the **objective of conserving nature** and reduce the most pressing threats to the diversity of life on Earth.
  - Other initiatives by WWF** - TRAFFIC, non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.
  - Report published by WWF:** Living Planet Report.

## 11.16. QUASI-RESONANT AMPLIFICATION (QRA)

- As per recent study, a correlation has been found between the phenomenon "**Quasi-Resonant Amplification**" (QRA) and occurrence of **heatwaves in India**.
  - Research has shown for the first time that **heat waves will occur in India as a result of a QRA**.
  - This QRA mechanism is also shown to be the cause of **2003 European heatwave, 2010 Pakistan flood and Russian heat wave** and other extreme events affecting human and animal life.
- QRA is a mechanism which is caused **by Arctic warming as a result of global warming**.
- More about Study**
  - Strong evidence has been found that **QRA occurs in the spring season (April-May)** as well, when heatwaves occur in India.
  - In the Arctic region, **temperature is increasing more than twice** as fast as the global average.
  - Any increase in temperature due to global warming has an impact on the arctic warming which in turn causes **heatwaves in India, including Andhra Pradesh and Telangana**.
  - The researchers suggest that heatwaves in India can be **predicted at least four days in advance**.
- About Heat wave**
  - Qualitatively, heat wave is a **condition of air temperature which becomes fatal** to human body when exposed.
  - Quantitatively, it is defined based on the **temperature thresholds over a region** in terms of actual temperature or its departure from normal.
  - In India, Heat wave is considered if **maximum temperature of a station reaches at least 40 C or more for Plains and at least 30 C or more for Hilly regions**.
  - Based on Departure from Normal**
    - Heat wave:** Departure from normal is 4.5 degree C to 6.4 degree Celsius.
    - Severe Heat Wave:** Departure from normal is >6.4 degree Celsius.
  - Based on Actual Maximum Temperature**
    - Heat Wave:** When actual maximum temperature  $\geq 45$  C
    - Severe Heat Wave:** When actual maximum temperature  $\geq 47$  C
  - If above criteria met **at least in 2 stations in a Meteorological sub-division for at least two consecutive days** and it is declared on the second day.

## 11.17. ALUMINIUM-AIR BATTERIES

- Indian Oil Corporation Ltd. has entered into a joint venture with Israel-based battery technology startup Phinergy to develop aluminium-air technology-based battery systems for electric vehicles and stationary storage, as well as hydrogen storage solutions.
- Aluminium-air batteries utilise oxygen in the air which reacts with an aluminium hydroxide solution to oxidise the aluminium and produce electricity.
  - Metal-air batteries are equipped with a metal anode and an air-breathing cathode through a suitable electrolyte.
  - Apart from aluminium-air, other metal-air batteries that have been extensively studied are sodium (Na)-air, potassium (K)-air, zinc (Zn)-air, magnesium (Mg)-air etc.
- Benefits of Aluminium-air batteries over Lithium-ion batteries.
  - Significantly cheaper, lighter and more energy-dense alternative.
  - Expected to offer much greater range of 400 km or more per battery compared to lithium-ion batteries (150-200 kilometres) per full charge.
  - Unlike other batteries, aluminium plate in an aluminium-air battery can be recycled and traded directly for industrial uses.
- One of the key downsides of aluminium-air batteries is that they cannot be recharged like lithium-ion batteries.



## 11.18. MIYAWAKI TECHNIQUE OF URBAN FOREST MANAGEMENT

- Recently, many states including Maharashtra and West Bengal have started promoting Miyawaki for creation of forests in the urban areas.

### • About Miyawaki technique

- It is an afforestation method based on the work of Japanese botanist Akira Miyawaki in the 1980s.
- The technique compresses layers of a forest – shrubs, trees, canopies – on small plots of land, turning them into tiny forests.
- Miyawaki technique process involves following steps
  - Planting three to four saplings per square meter, using native varieties adapted to local conditions.
  - Wide variety of species – ideally 30 or more – are planted to recreate layers of a natural forest.
  - Mulching, natural water retention and perforation material like rice husk and use of organic compost is done to support their growth.
  - The site is monitored and maintained for a period of 2 to 3 years, after which the sites become self-sustainable.

### • Benefits of Miyawaki technique -

- Works effectively irrespective of soil and climate conditions.
- Mini forests grow 10 times faster and become 30 times denser and 100 times more biodiverse than those planted through conventional methods.
- Help lower temperatures in concrete heat islands
  - Heat islands are urbanized areas that experience higher temperatures than outlying areas as urban infrastructure absorbs and re-emits sun's heat more than natural landscapes.
- Reduce air and noise pollution, attracts local birds and insects and create carbon sinks
  - Up to 30 times or more Carbon-dioxide absorption as compared to conventional forest.
- Miyawaki forests are designed to regenerate land in far less time than the time it takes a forest to recover on its own, which is over 70 years.
- However, such forests lack some qualities of natural forests, such as medicinal properties and the ability to bring rain.

## 11.19. ENERGY EFFICIENCY ENTERPRISE (E3) CERTIFICATIONS PROGRAMME FOR BRICK MANUFACTURING SECTOR

- E3 Certification Scheme, launched by Ministry of Power, is aimed at tapping huge energy efficacy potential in this sector.

- It will lead to adoption of more efficient technologies for making energy efficient bricks. Such bricks will be useful in complying the requirements of Energy Conservation Buildings Code (ECBC).
- Brick sector contributes nearly 0.7% to GDP and offers seasonal employment generation to over 1 crore workers.

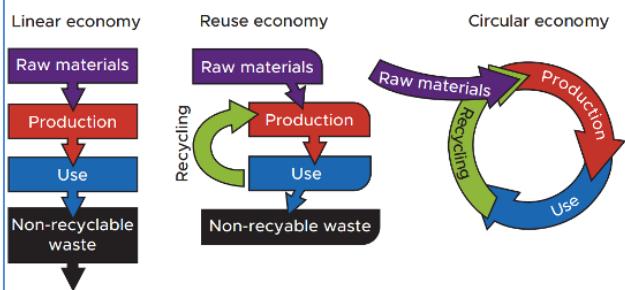
## 11.20. RIGHT TO REPAIR

- European Union (EU) has brought a law to establish **strong Right to Repair laws** to promote circular economy in the EU.
- Under Right to repair, manufacturers of appliances will have to ensure **spare parts are available for up to a decade** (10 years).
- New devices will also have to come with **repair manuals and be made in such a way that they can be dismantled** using conventional tools when they really can't be fixed anymore, to improve recycling.

## 11.21. GOVERNMENT DRIVING TRANSITION FROM LINEAR TO CIRCULAR ECONOMY

- With a **growing population, rapid urbanization, climate change and environmental pollution**, government has been formulating policies and projects to **move towards a circular economy**.
  - India's resource extraction is 1,580 tonnes/acre (world average is 450 tonnes/acre). While Europe recycles 70% of its consumption items, India recycles only 20%.
- Linear economy is based on a **take-make-consume-throw away pattern**.
- In **circular economy resources are kept in use for as long as possible**, maximum value is extracted from them whilst in use, products and materials are recovered and regenerated at the end of each service life.
  - 5R principles of circular economy are- **Reduce, Reuse, Recycle, Re-manufacture, Repair/Refurbish**.
- **Steps taken**
  - Notification of various rules, such as **Plastic Waste Management Rules, e-Waste Management Rules etc.**
  - Policies like **Zero Effect, Zero Defect, National Electricity Mobility Mission Plan etc.**
  - Promoting usage of fly ash and slag produced in the steel industry in other sectors.
- To expedite the transition of the country from a linear to a circular economy, **11 committees, comprising officials from MoEFCC and NITI Aayog, have been formed for 11 focus areas** such as Municipal Solid Waste and Liquid Waste, Scrap Metal etc.

## FROM A LINEAR TO CIRCULAR ECONOMY



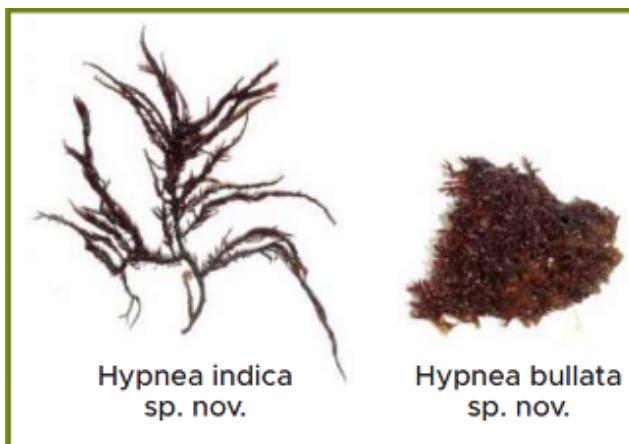
## 11.22. 3<sup>RD</sup> EDITION OF THE ANNUAL CONFERENCE OF THE COALITION FOR DISASTER RESILIENT INFRASTRUCTURE (CDRI) HELD

- Infrastructure that can stand damage from any kind of natural or man-made disaster is known as DRI. It encompasses:
  - **Structural Measures** involve adjusting engineering designs and standards to reflect disaster risk such as flood control systems, retrofitting of buildings etc.
  - **Non-structural measures** refer to risk-sensitive planning, enabling institutional frameworks, hazard mapping, ecosystem-based management, and disaster risk financing.
- **About CDRI**
  - It is a **voluntary multi stakeholder international grouping**, including governments, UN agencies, private sector etc. to develop resilience of infrastructure systems to climate and disaster risks.
    - ✓ It was announced by India's PM at UN Climate Action Summit 2019.
  - CDRI will set targets for member countries to **bring down disaster deaths, economic losses** and strive to achieve Sustainable Development Goal.
    - ✓ It will also work at the intersection of **Sendai Framework for Disaster Risk Reduction** and **Paris Climate Agreement**.
  - Governing Council is the **highest policy-making body** of CDRI. India is the co-chair along with UK.

CDRI   MEMBER COUNTRIES   AS OF 2 MARCH 2021	
AFGHANISTAN	INDIA
AUSTRALIA	ITALY
ARGENTINA	JAMAICA
BHUTAN	JAPAN
CHILE	MALDIVES
FIJI	MAURITIUS
FRANCE	MONGOLIA
GERMANY	NEPAL
	NETHERLANDS
	PERU
	SRI LANKA
	TURKEY
	U.K.
	U.S.A.

### 11.23. SPECIES DISCOVERED

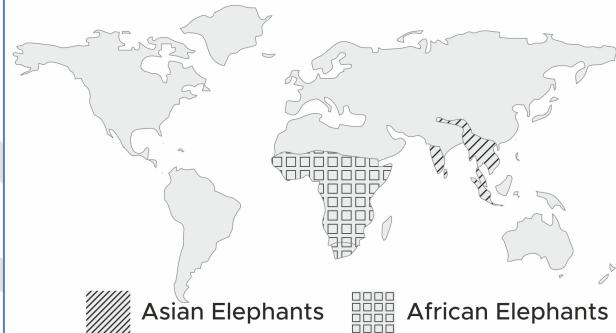
- 2 new **red algal seaweed species** have been discovered along India's coastline.
  - **Hypnea indica** was discovered in **Kanyakumari in Tamil Nadu**, and Somnath Pathan and Sivrajpur in **Gujarat**.
  - **Hypnea bullata** was discovered from **Kanyakumari and Diu island of Daman and Diu**.
  - They grow in the **intertidal regions** of the sea.
- A new **butterfly species Nacadubasinhalarama swamii Sadasiyan** is discovered in the Agasthyamalais in the Western Ghats.



- Female elephants live for **60 to 70 years**.
- Elephants have the **longest gestation period of all mammals**, up to 22 months.

Species	Old Status	New Status
Forest Elephant ( <i>Loxodonta cyclotis</i> )	Vulnerable 	Critically endangered 
Savanna/ Bush elephant ( <i>Loxodonta africana</i> )	Vulnerable 	Endangered 
Asian Elephant	Endangered 	

### ELEPHANT RANGE MAP



### 11.24. AFRICAN ELEPHANT SPECIES NOW ENDANGERED AND CRITICALLY ENDANGERED - IUCN RED LIST

- IUCN has categorised, savanna elephant as “**endangered**” and much smaller, lighter forest elephant as “**critically endangered**”.
  - These two are **subspecies of African elephants**.
  - Both species are facing threat from **poaching for ivory and human encroachment**.
- **About Savanna elephant & Forest Elephant**
  - **Forest elephants occur in the tropical forests of Central Africa** and in a range of habitats in West Africa.
  - Forest elephants are **found in variety of habitats in Sub-Saharan Africa** including grasslands and deserts.
- **Asian elephants (found in India)** are smaller than African elephants, and their ears are smaller compared to the large fan-shaped ears of the African species.
  - **Only some male Asian elephants have tusks**, while both male and female African elephants grow tusks.
  - **Asian Elephants have 3 subspecies: Indian, Sri Lankan and Sumatran**.
- With respect to Indian elephant,
  - The **oldest female in an elephant herd is always the leader**.

### 11.25. MINISTRY OF POWER LAUNCHES GRAM UNNATIYOTI BY AFFORDABLE LEDS FOR ALL (UJALA) PROGRAMME

- Under the programme, **7 watt and 12-watt LED bulbs with 3 years of warranty will be given to rural consumers** on submission of working incandescent bulbs.
  - Bulbs are offered by **Energy Efficiency Services Ltd's** subsidiary Convergence Energy Services Ltd (CESL).
  - In the 1<sup>st</sup> phase of the schemes rural consumers can **exchange a maximum of five bulbs for LED bulbs**.
  - Participating rural households will also have **metres installed in their houses** to account for usage.
- **Funding:** Scheme has no government support or subsidy and it will be **financed entirely through carbon credits**
  - Carbon credits will be **prepared under the Shine Programme of Activities** with an option for verifying under the Voluntary Carbon Standard, depending on the needs of buyers.
  - Carbon credits is a **mechanism devised under the Kyoto Protocol** to award encashable points or CERs (carbon emission reduction) to

eco-friendly projects on the basis of the carbon emissions they control.

- **Benefit of programme:**

- Reduce carbon footprint.
- Improve energy access in rural areas.
- Better illumination, at an affordable price.

#### About EESL

- EESL under Ministry of Power is working towards mainstreaming energy efficiency and is implementing the world's largest energy efficiency portfolio in the country.
- EESL's other energy efficiency programmes
  - Street Light National Programme (SNLP)
  - Agriculture Demand Side Management (AgDSM) Programme
  - Energy efficient Buildings Program
  - Smart Meter National Program
  - Retrofit of Air Conditioning to Improve Indoor Air Quality for Safety and Efficiency (RAISE).

## 11.26. INDIA'S FIRST INTER-STATE TIGER TRANSLOCATION PROJECT FAILS

- Recently, a tigress shifted as part of **India's first inter-state translocation project in 2018** from Madhya Pradesh to Odisha returned home.
  - Under the project, two big cats, a male (Mahavir) from **Kanha Tiger Reserve** and a female (Sundari) from **Bandhavgarh from Madhya Pradesh** were relocated to **Satkosia Tiger Reserve in Odisha**.
- The relocation was meant to serve two purposes:
  - Reducing tiger population in areas with excess tigers to majorly reduce territorial disputes.
  - To reintroduce tigers in areas where the population has considerably reduced due to various reasons.
- Issues with project
  - Arrival of the tigers was followed by **severe protests by villagers living on the fringes of the reserve**.
    - ✓ There was **lack of confidence and trust building measures** prior to translocation between the forest department and the villagers.
  - **Low prey base** forced tigress to human dominated area, causing **human-animal conflict**.
  - Death of male tiger due to **poaching**.
  - Translocation was done in haste and **field staff and tiger reserve management were not prepared**.

## 11.27. FOOD WASTE INDEX REPORT 2021

- Report is released by **United Nations Environment Programme (UNEP)**.

- As per it, an estimated 931 million tonnes of food equalling **17% of total food available to consumers in 2019 globally wasted**.
- For India, waste in kg / capita / year was 50, lower than Nigeria producing waste at 189 kg / capita / year.
- Report suggests reducing food waste would **improve food security, address climate change, save money and lower pressures on the environment**.

## 11.28. ALL MAJOR SCHEMES OF MINISTRY OF WOMEN AND CHILD DEVELOPMENT CLASSIFIED UNDER 3 UMBRELLA SCHEMES

- Move would help in effective implementation of various schemes by:
  - Promoting inter-ministerial and inter-sectoral convergence
  - Reducing duplication of work
  - Better identification, targeting and efficient utilization of scarce resources etc.

Umbrella Scheme	Nature of merged schemes	Schemes included
<b>Saksham Anganwadi and POSHAN 2.0</b>	<ul style="list-style-type: none"> <li>• Saksham Anganwadi aims to make anganwadi centres interactive and more child-friendly by providing additional facilities like creche as well as smart teaching and learning aid.</li> <li>• Mission POSHAN 2.0 will be launched by merging the Supplementary Nutrition Programme and POSHAN Abhiyan to strengthen nutritional content, delivery outreach and outcome.</li> <li>○ POSHAN Abhiyaan or National Nutrition Mission is a flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers.</li> </ul>	<ul style="list-style-type: none"> <li>• Umbrella Integrated Child Development Services - Anganwadi Services, POSHAN Abhiyan, Scheme for Adolescent Girls, National Creche Scheme.</li> </ul>
<b>Mission VATSALY A</b>	<ul style="list-style-type: none"> <li>• Initiatives taken to ensure safety and well-being of children.</li> </ul>	<ul style="list-style-type: none"> <li>• Child Protection Services and Child Welfare Services</li> </ul>

<b>Mission Shakti</b>	<ul style="list-style-type: none"> <li>It will consist of policies and schemes for protection and empowerment of women.</li> <li>It will run in convergence with the other Missions/ Umbrella Schemes.</li> </ul>	<ul style="list-style-type: none"> <li><b>SAMBAL</b> (One Stop Centre, Mahila Police Volunteer, Women's Helpline/Swadhar/Ujjawala/Widow Homes etc.)</li> <li><b>SAMARTHYA</b> (Beti Bachao Beti Padhao, Creche, Pradhan Mantri Matru Vandana Yojana/ Gender Budgeting/Research/)</li> </ul>
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## 11.29. WORLD IMMUNISATION & LOGISTICS SUMMIT

- Recently, the **Union Minister for Health and Family Welfare of India digitally participated** in the two-day virtual Summit, hosted by Abu Dhabi, UNITED ARAB EMIRATES (UAE).
- The summit was **organised by the HOPE Consortium' of UAE** with a call to enhance collaboration in the world's approach to tackle COVID-19 and ensure a healthier future for all.
- The summit saw participation of **acclaimed global healthcare and philanthropic leaders, decision-makers, experts and senior government officials**, to explore a unified global approach to fighting the COVID-19 pandemic.
- The summit highlighted the **next phase of the global pandemic response**, which includes delivering vaccines globally and how this challenge can be addressed through effective transportation and technology, including data-enabled supply chains and blockchain solutions.
- About HOPE Consortium**
  - It is a UAE-based **public-private partnership, launched in November, 2020**.
  - It envisages to provide a **complete supply chain solution** to address vaccine transport, demand planning, sourcing, training, and digital technology infrastructure, and facilitate **vaccine availability across the world**.
  - Abu Dhabi Ports has the **Middle East's largest capacities for cold chain and ultra-cold storage**.
    - UAE will leverage its capabilities as an innovation epicenter serving the Middle East and wider world through Abu Dhabi as a **supply chain gateway connecting East and West**.

## 11.30. STOP TB PARTNERSHIP

- Founded in 2001, the Partnership's **mission is to serve every person who is vulnerable to TB and**

ensure high-quality diagnosis, treatment and care to all who need it.

- It **has over 1700 partners** which includes international and technical organizations, government programmes, research and funding agencies, foundations, NGOs, civil society and community groups and the private sector.
- Union Minister for Health and Family Welfare has been **appointed as Chairman of Stop TB Partnership Board**.
  - Board provides **leadership and direction, monitors implementation of agreed policies, plans and activities of the partnership etc.**

## 11.31. SWACHHTA SAARTHI FELLOWSHIPS

- Launched by the **office of the Principal Scientific Adviser** under its '**Waste to Wealth Mission**' (one of the nine national missions of the Prime Minister's Science, Technology, and Innovation Advisory Council, PM-STIAC).
- There are **three categories of awards** for community work of waste management scientifically and sustainably:
  - Category-A:** For students from 9th to 12<sup>th</sup>
  - Category-B:** For College students (UG, PG, Research Students)
  - Category-C:** For Citizens working in the community and through SHGs, municipal or sanitary workers working beyond specifications of their job requirement.

## 11.32. MINISTER OF SOCIAL JUSTICE AND EMPOWERMENT LAUNCHES "SUGAMYA BHARAT APP"

- Sugamya Bharat app — a crowd-sourcing mobile application is a means for sensitising and enhancing accessibility in the three pillars of the Accessible India Campaign (**Sugamya Bharat Abhiyan**) i.e.
  - Built Environment Accessibility**
  - Transportation System Accessibility**
  - Information and Communication Eco-System Accessibility**
- The app will enable people with disabilities and even the elderly to register accessibility-related problems in buildings, in modes of transport or any infrastructure by uploading pictures on it.
  - They can also receive information on accessibility-related issues through the app.
- Sugamya Bharat Abhiyan** is conceptualised by the **Department of Empowerment of Persons with Disabilities (DEPwD)** as a nation-wide flagship campaign for achieving universal accessibility
- Other initiatives under **Sugamya Bharat Abhiyan** scheme are

- Organisations, both public and private are encouraged to use their CSR funds for building accessible infrastructure.
- 'Inclusiveness and Accessibility Index' is to be used by the government to assess the effort of various industries on how they are making their workplace ready for Persons with Disabilities (PWD).
- "SugamyaPustakalaya" is an online library for Persons with print disabilities as part of the Accessible India (Sugamya Bharat) Campaign.



### 11.33. INDIA AN OVERPERFORMER IN FRONTIER TECHNOLOGIES

- According to 'Technology and Innovation Report 2021' released by United Nations Conference on Trade and Development (UNCTAD), finds India as the top "over-performer" in terms of readiness in using, adopting and adapting frontier technologies among developing countries.
  - Report also finds that a few developing nations are exhibiting stronger capabilities to use, adopt and adapt frontier technologies than their per capita GDPs would suggest.
- 'Frontier technologies' are a group of new technologies that take advantage of digitalization and connectivity which enable them to combine to multiply their impacts.
  - Frontier technologies include artificial intelligence, the internet of things, big data, blockchain, fifth-generation mobile telephony, three-dimensional printing, robotics, drones (remotely controlled flights), gene-editing, nanotechnology and

solar power — the ones that take advantage of digitalisation and connectivity.

- These technologies can be used to boost productivity and improve livelihoods.

#### About UNCTAD

- UNCTAD is a permanent intergovernmental body established by the United Nations General Assembly in 1964.
- It is headquartered in Geneva, Switzerland.
- It supports developing countries to access the benefits of a globalized economy more fairly and effectively.
- Other notable reports published by UNCTAD are:
  - World Investment Report.
  - Trade and Development Report.

### 11.34. ACT ACCELERATOR

- The Access to COVID-19 Tools (ACT) Accelerator, is a global collaboration to accelerate development, production, and equitable access to COVID-19 tests, treatments, and vaccines.
  - Access to COVID-19 Tools (ACT) Accelerator brings together governments, scientists, businesses, civil society, and philanthropists and global health organizations (the Bill & Melinda Gates Foundation, CEPI, FIND, Gavi, The Global Fund, Unitaid, Wellcome, the WHO, and the World Bank).
- In 2021 ACT-Accelerator will intensify its drive for equity and scale in the delivery of essential COVID-19 tools, while managing emerging viral risks. To address these major shifts and maintain momentum, ACT-Accelerator has defined four strategic priorities for 2021.
  - ACT-Accelerator's 'Strategic Priorities for 2021':
    - Rapidly scale up the delivery of at least 2 billion doses of vaccines.
    - Bolster R&D, evaluation & regulatory pathways to optimize products & address variants.
    - Stimulate rapid and effective uptake of COVID-19 test, tests, treatments and PPE.
    - Ensure robust supply pipeline of essential tests, therapeutics & PPE for LICs/LMICs.
  - It is currently facing a severe fund crunch and needs additional \$22.1 billion to meet its goals for 2020-21.

### 11.35. EL SALVADOR CERTIFIED AS MALARIA-FREE

- Certification of malaria elimination is granted by WHO when a country has proven, beyond reasonable doubt, that the chain of indigenous transmission has been interrupted nationwide for at least the previous 3 consecutive years.
- Globally, a total of 38 countries and territories have reached this milestone.
- El Salvador has become the first country in Central America and the third in all Americas to get the malaria-free certificate from WHO in recent years.

- The only other countries in the WHO Regions of Americas to have eliminated malaria in recent years are **Paraguay (2018)** and **Argentina (2019)**.
- El Salvador is among 21 countries identified in 2016 as having the potential to eliminate the mosquito-borne disease by 2020 in a **WHO initiative called 'E-2020'**.



### 11.36. P172+18 QUASAR

- Quasars are very **luminous objects in faraway galaxies that emit jets at radio frequencies**.
- Quasars give off enormous amounts of energy - they **can be a trillion times brighter than Sun**.
  - Quasars are believed to **produce their energy from massive black holes** in the center of galaxies in which quasars are located.
  - Because quasars are so bright, **they drown out light from all other stars in same galaxy**.
- Study of quasars **can provide information about the early stages of the universe**.

### 11.37. FUGAKU: WORLD'S MOST POWERFUL SUPERCOMPUTER IS READY FOR USE

- Japan's Fugaku with a speed of **415.53 petaflop** has become world's fastest supercomputers (**surpassing China's Sunway TaihuLight**).
- A supercomputer is a computer with a **high level of performance as compared to a general-purpose computer**. Its performance is commonly measured in FLOPS.
  - **An ordinary computer** does one thing at a time, so it does things in a distinct series of operations; that's called **serial processing**.
  - **Supercomputer works** much more quickly by splitting problems into pieces and working on

many pieces at once, which is called **parallel processing**.

- **Application:** Climate Modelling, Big Data Analytics, National Security/ Defence Applications, Seismic Analysis, Disaster Simulations and Management etc.
- **Supercomputers in India**
  - First Indian supercomputer was **PARAM 8000**.
  - **PARAM Siddhi** (210 petaflop) is India's fastest supercomputer.
  - In 2015, **National Supercomputing Mission (NSM)** was launched.
    - ✓ It aims at establishing **supercomputer facilities across 70 national R&D institutions** and connecting them onto a National Knowledge Network.
    - ✓ Other supercomputers installed under NSM are **PARAM- Shivay, PARAM Shakti and PARAM Brahma**.

#### FLOPS (Floating-point Operations per Second)

- It is a **common benchmark measurement for rating the speed of microprocessors**.
  - A **MegaFLOPS** is equal to one million FLOPS and a **GigaFLOPS** is equal to one billion FLOPS.
  - A **TeraFLOPS** is equal to one trillion FLOPS.
  - A **PetaFLOPS** can be measured as one thousand teraflops.

### 11.38. CSIR FLORICULTURE MISSION

- Launched by **Ministry of Science & Technology**, mission will be implemented in **21 states**.
- Under this available **knowledge base in CSIR Institutes will be utilized and leveraged to help Indian farmers and industry** re-position itself to meet the import requirements.
- **Need:**
  - Despite diverse agro-climatic and edaphic conditions, India **shares only 0.6 % of global floriculture market**.
  - At least **1200 million USD worth of floriculture products are being imported** by India every year from different countries".
- **Floriculture** is branch of ornamental horticulture concerned with **growing and marketing flowers** and ornamental plants and flower arrangement.

### 11.39. MARTIAN BLUEBERRIES

- In 2004, NASA's **Opportunity rover found several small spheres on Mars**, informally named Martian blueberries.
  - Mineralogy study of these spheres found **they were made of iron oxide compounds called haematites** (suggesting presence of water on Mars).
- A recent research on **Jhuran formation in Gujarat suggests that haematite concretions in this area resemble the ones on Mars**.

- Jhuran formation is marked by first **occurrence of ironstone band and last occurrence of calcareous sandstone**.
  - Jhuran Formation is **present in the offshore (GK-29A-1 well), Kutch mainland and Banni graben**.
  - Age:** Upper Jurassic (Agrovia –Neocomian).

#### 11.40. ISRO LAUNCHED SOUNDING ROCKET RH-560

- Sounding Rockets** are one or two stage solid propellant rockets used for **probing the upper atmospheric regions and for space research**.
- They also serve as **easily affordable platforms to test or prove prototypes** of new components or subsystems intended for use in launch vehicles and satellites.
- ISRO has developed a **series of sounding rockets called Rohini series**. Ex - RH-200, RH-300 (The number indicates the diameter of the rocket in mm).
  - RH-560 aims to study attitudinal variations in the neutral winds and plasma dynamics from Sriharikota spaceport.

#### 11.41. DSIR-PROMOTING INNOVATIONS IN INDIVIDUALS, STARTUPS AND MSMES (DSIR-PRISM) SCHEME

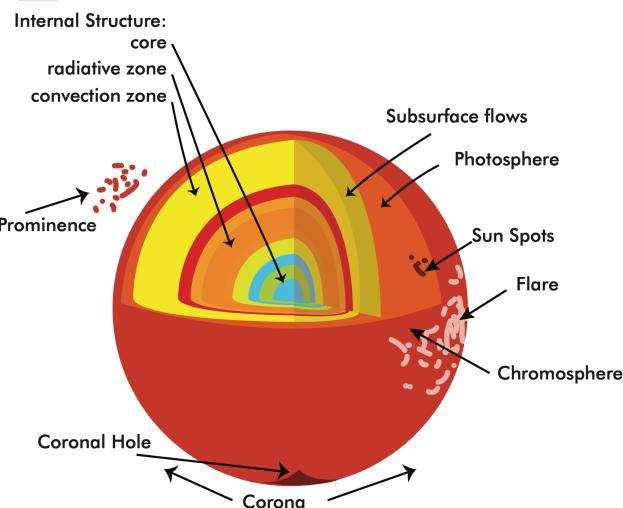
- Recently, awareness program for Department of Scientific and Industrial Research (DSIR) –PRISM was launched.
- DSIR, part of Ministry of Science and Technology, carries out **activities relating to indigenous technology promotion, development, utilization and transfer**.
- PRISM is aimed at transforming an individual innovator into a successful technopreneur by promoting, supporting, and funding implementable and commercially viable innovations created for the society.
- Under PRISM, an innovator of Indian nationality is provided technical, strategic, and financial assistance.
- It is implemented across various sectors from energy to healthcare to waste management and others.

#### 11.42. NOVEL TECHNIQUE FOR TRACKING CORONAL MASS EJECTIONS (CMEs) TO BE USED IN INDIA'S FIRST SOLAR MISSION

- Scientists from **Aryabhatta Research Institute of observational sciences (ARIES)** have developed an algorithm, **CMEs Identification in Inner Solar**

**Corona (CIISCO)** to detect and track CMEs in lower corona.

- The parameters determined by **CIISCO** are useful to characterise these **eruptions in the lower corona**, a region where the properties of such eruptions are less known.
- ARIES, Nainital, is an autonomous institute under **Department of Science and Technology**.
- CME is a **giant cloud of solar plasma drenched with magnetic field lines** that is blown away from the Sun often during strong, long-duration solar flares and filament eruptions.
- A CME contains **particle radiation (mostly protons and electrons) and powerful magnetic fields**. They cause disruption of space weather and satellite failures, and power outages, etc.
- Computer Aided CME Tracking Software (CACTus)** was used to detect and characterise such eruptions automatically in the outer corona.
  - However, this algorithm **could not be applied to the inner corona observations** due to the vast acceleration experienced by these eruptions.
- As **India's first solar mission, Aditya-L1**, will be observing this region of the solar corona, implementation of CIISCO on the Aditya-L1 data will provide new insight into the CME properties in this less explored region.



#### 11.43. ARKTIKA-M

- This is Russia's **first Arctic monitoring satellite** to monitor the climate and environment in the Arctic region.
- The Arctic has warmed **more than twice as fast as the global average** over the last three decades.
- This opens up **opportunities for huge oil and gas reserves** that are being eyed by countries including the United States, Russia, Canada etc.

#### 11.44. GANDHI PEACE PRIZE FOR YEAR 2019 AND 2020 ANNOUNCED

- 2019 award is conferred to **Majesty Sultan Qaboos bin Said Al Said of Oman** and 2020 award to **Bangabandhu Sheikh Mujibur Rahman of Bangladesh**.
- It is an **annual award since 1995, the 125th Birth Anniversary commemoration year of Mahatma Gandhi**. The award is open to all persons regardless of nationality, race, language, caste, creed or sex.
- It carries an amount of **Rs. 1 crore, a citation, a plaque and an exquisite traditional handicraft item**.
- Recent awardees include Ekal Abhiyan Trust, India (2017) and Shri Yohei Sasakawa, Japan(2018).

## 11.45. TRIBES IN NEWS

- **Shigmo or Shigmotsav:** It is the celebration of a 'rich, golden harvest of paddy' by **tribal communities of Goa**.
  - Agricultural communities including the **Kunbis, Gawdas and Velips** also celebrate the festival.
  - It marks **onset of spring** and **begins with 'Naman'** that is the invocation of the local folk deities.
  - During this **Folk dance like Ghodemodini (a dance of equestrian warriors), Gopha and Phugadi** are performed.
- **Zo tribe:** These are indigenous people found in India, Bangladesh and Myanmar.

- Recently, **Zo Reunification Organisation (ZORO)** has asked Centre to revoke order directing four north-eastern States bordering Myanmar to deport people who have taken refuge in India following military coup.
- **Matua Community:** Prime minister on his visit to Bangladesh **met the Matua community members of Orakandi** (the birthplace of community's spiritual guru Harichand Thakur) in Gopalganj, India.
  - They are **Namasudras**, a **Scheduled Caste group** which trace their ancestry to **East Bengal**, and many of them entered West Bengal after the formation of Bangladesh.
  - The **Matua Mahasangha**, a religious reforms movement and a sect, was formed by **Harichand Thakur (1812-1878)** in East Bengal in the mid-1800s.
  - Matua politics revolved around anti-Congressism, including their **opposition to the Swadeshi Movement (1905-1908)**.
  - In later times, they were close to rural **Bengal's Vaishnava tradition**. Their only ritual was singing devotional songs in the Bhakti tradition and songs defied the Brahmanical rituals of society.

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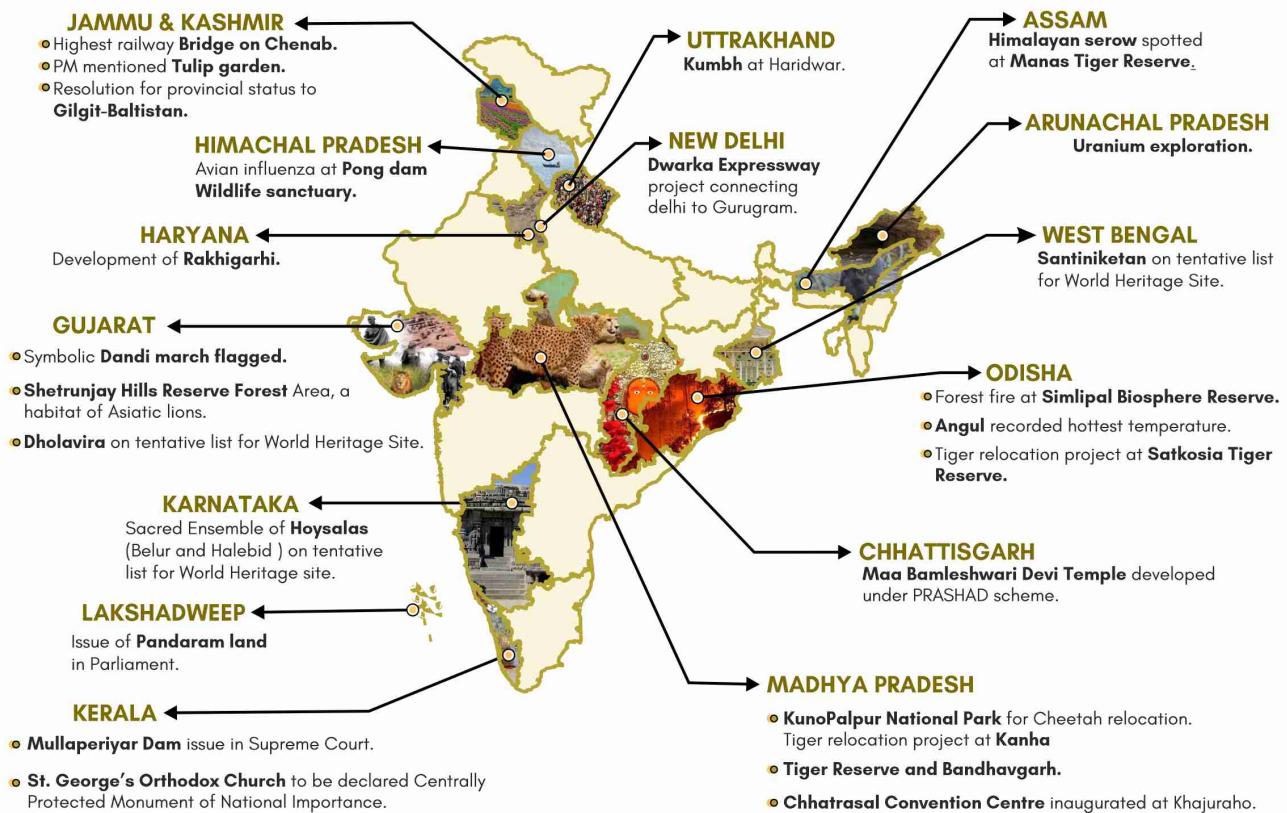
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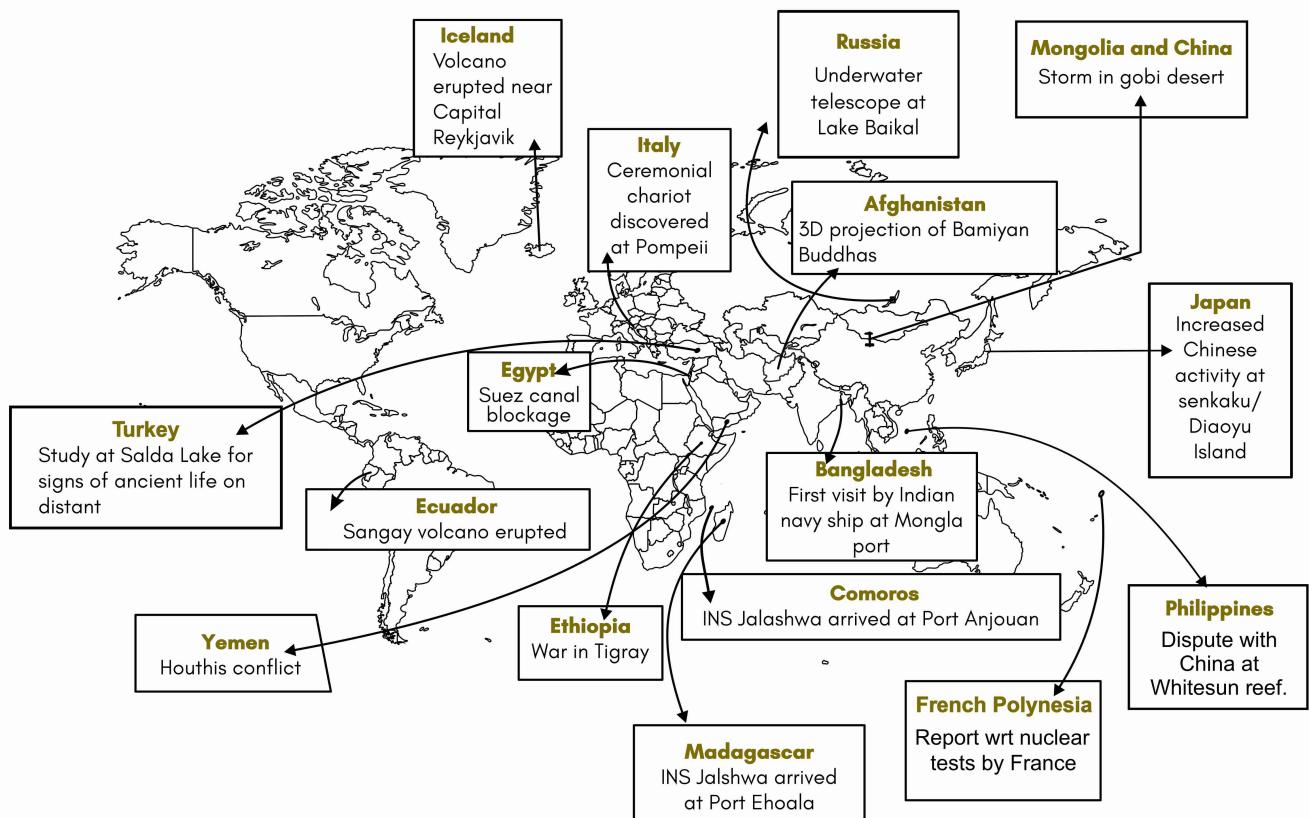




## Places in News: India



## Places in News: World



# Personalities in News

Personality	About	Ethical Values exhibited by the personality
 <b>Lachit Borphukan</b>	<ul style="list-style-type: none"> <li>► He was a general during <b>17th Century period of the Ahom dynasty</b> (Assam).</li> <li>► He is best known for the <b>Battle of Saraighat on the Brahmaputra</b>, where he defeated the Mughals, in 1671.</li> <li>► Lachit was appointed as 'Borphukan' by King Chakradhwaj Singha. Borphukan is a <b>position embedded with both executive and judicial powers</b>.</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Leadership, Valour and Fortitude</b> <ul style="list-style-type: none"> <li>► As a military administrator, he successfully led the army of Ahoms against extremely powerful Mughals.</li> </ul> </li> </ul>
 <b>Ayya Vaikunda Swamikal (1809-1851)</b>	<ul style="list-style-type: none"> <li>► Prime Minister paid tributes to Ayya Vaikunda Swamikal on his birth anniversary.</li> <li>► He was a <b>social thinker and reformer who lived in the Princely Kingdom of Travancore</b> in 19th century Kerala.</li> <li>► He <b>critiqued caste discrimination and religious hierarchy</b> and fought against <b>practice of untouchability</b>. He <b>discouraged idol worship</b>.</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Human Dignity, Justice and Rationalism</b> <ul style="list-style-type: none"> <li>► As a social and religious reformer, he founded "Samathwa Samajam", one of the first socio reform movements in South India in 1836.</li> <li>► He gave the call '<b>ONE CASTE, ONE RELIGION, ONE CLAN, ONE WORLD, ONE GOD</b>'.</li> </ul> </li> </ul>
 <b>Bhagat Singh (1907 - 1931)</b>	<ul style="list-style-type: none"> <li>► Nation remembered Bhagat Singh on Shaheed Diwas (23rd March).</li> <li>► He, along with Rajguru and Sukhdev, was <b>sentenced to death for Lahore conspiracy Case</b>.</li> <li>► In 1924, he <b>became a member of Hindustan Republican Association (HRA)</b>. Later Bhagat Singh renamed HRA to Hindustan Socialist Republican Association (HSRA).</li> <li>► In 1926, he <b>started a youth organization called Naujawan Bharat Sabha</b>.</li> <li>► He, along with Batukeshwar Dutt, <b>threw bombs in Central legislative assembly</b>.</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Patriotism, Courage, and Socialism</b> <ul style="list-style-type: none"> <li>► He was a revolutionary leader who <b>believed in socialist, secular and democratic India</b>. He was inspired by the Bolshevik Revolution.</li> <li>► He was arrested and given death penalty by Britishers for his revolutionary zeal to oppose them.</li> </ul> </li> </ul>
 <b>Chandrasekhara Venkata Raman</b>	<ul style="list-style-type: none"> <li>► National Science Day is celebrated in India every year, since 1987 to <b>mark discovery of the Raman Effect by Indian physicist Sir CV Raman</b> in 1928.</li> <li>► CV Raman discovered that <b>when light traverses a transparent material, some of the deflected light changes wavelength and amplitude</b>.</li> <li>► This phenomenon was a new type of scattering of light and was <b>subsequently termed the Raman effect (Raman scattering)</b>.</li> <li>► This discovery was <b>significant</b> as it gave <b>proof of the quantum nature of light</b>.</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Dedication, Hardwork and Commitment</b> <ul style="list-style-type: none"> <li>► As an eminent scientist, he showed <b>exemplary interest</b> in understanding the physical laws of nature.</li> <li>► For this he was <b>awarded Nobel Prize in Physics in 1930</b> (first Asian to win Nobel Prize in Science) and <b>Bharat Ratna</b> in 1954.</li> </ul> </li> </ul>
 <b>Professor Velcheru Narayana Rao</b>	<ul style="list-style-type: none"> <li>► Recently, <b>Sahitya Akademi Fellowship was awarded</b> to a distinguished scholar, writer, translator and critic, Professor Velcheru Narayana Rao.</li> <li>► Election has been made based <b>on his contribution to the Telugu literature</b>.</li> <li>► His publications include <b>Girls for Sale: Kanyakulam, A play from Colonial India</b> etc.</li> <li>► <b>He was born in Koppaka near Eluru in Andhra Pradesh</b>.</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Understanding Social Dilemmas with Rationality</b> <ul style="list-style-type: none"> <li>► Through his writing he expressed the <b>moral dilemmas present in various social issues of the time</b>. He has been conferred highest literary honour of the country.</li> </ul> </li> </ul>
 <b>Bangabandhu Sheikh Mujibur Rahman (1920-1975)</b>	<ul style="list-style-type: none"> <li>► Prime Minister of India visited Bangladesh on account of his <b>centenary birth celebrations</b>.</li> <li>► He was a founding member of the East Pakistan Muslim Students League, <b>Prime minister of Bangladesh</b> (1972-24 January 1975), <b>President of Bangladesh</b> (25 January 1975-15 August 1975).</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Dedication and Will power</b> <ul style="list-style-type: none"> <li>► As a political activist and great leader, he stood for values of <b>self-determination and freedom of his nation</b>.</li> <li>► <b>Father of the Nation</b> Bangabandhu Sheikh Mujibur Rahman is the architect of independent Bangladesh.</li> </ul> </li> </ul>
 <b>King Bhumibol Adulyadej (1927 - 2016)</b>	<ul style="list-style-type: none"> <li>► <b>Indian Council of Agricultural Research</b> won King Bhumibol World Soil Day Award 2020.</li> <li>► He was <b>ninth king of the Chakkri dynasty</b>, which has ruled Thailand from 1782, and Thailand's <b>longest-serving monarch</b>.</li> </ul>	<ul style="list-style-type: none"> <li>► <b>Unity and Brotherhood</b> <ul style="list-style-type: none"> <li>► As a strong monarch, he governed the nation as a <b>benign ruler</b>. Through his intervention, he thwarted a civil war in the country and later helped restore peace by installing civilian-led democracy.</li> </ul> </li> </ul>

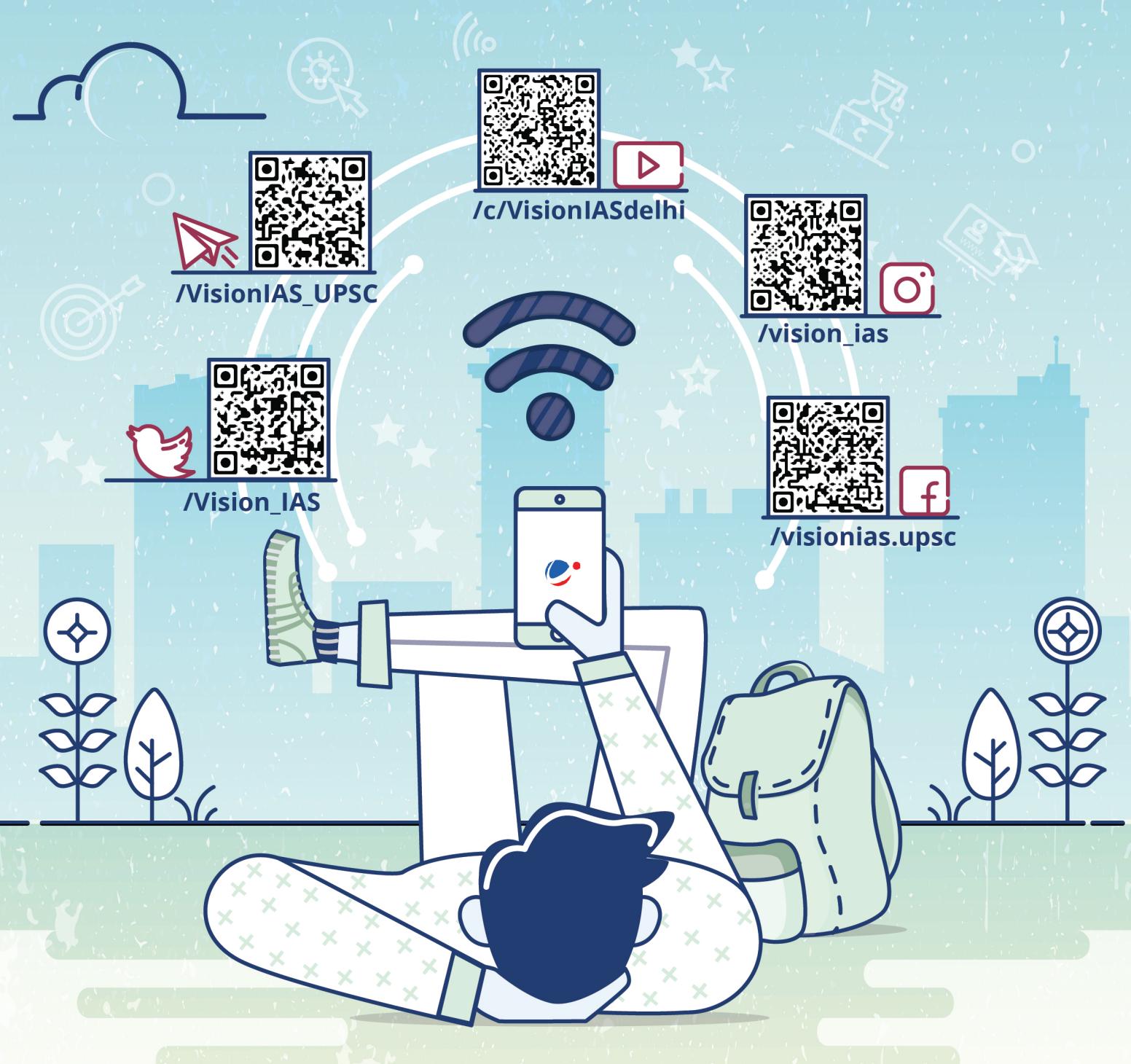
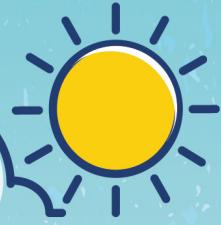
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ISSUE	DESCRIPTION	LEARN MORE
 <b>India's Vaccination Drives: Strategy, Obstacles and Opportunities</b>	<p>Launching the most awaited COVID vaccine, India started its journey on the road to recovery from a pandemic that has unprecedentedly disrupted and taken lives. India is now also the fastest country in the world to achieve the 100 million vaccination mark. This document takes us through the story of India becoming the global leader in vaccine manufacturing and analyses the success stories, existing bottlenecks in the system and the potential opportunities. It also delves into the ongoing debate over the efficacy of vaccine diplomacy as pursued by India.</p>	
 <b>Importance of Institutions in a Democracy</b>	<p>The effectiveness of institutions and the soundness of democratic politics are acknowledged as catalysts for a nation's development. These institutions are however inherently fragile and need to be nurtured with the human values of trust, faith and responsibility. The recent assault on the Capitol Hill in the US has highlighted the need to take stock of the situation in world's largest democracy, India, too. This document discusses the evolution of democratic institutions in India and the emerging challenges being faced by them. Analysing the equation between institutions, democracy and development, the document suggests best possible ways to make these institutions future ready.</p>	
 <b>Inter-State Water Governance: From Conflict to Cooperation</b>	<p>For long, it has been widely speculated that nations will go to war for the control over water that is shared between countries such as international rivers. However, contrary to this apprehension, it has been seen that subnational disputes are far more omnipresent. India has seen a fair share of such hostilities between states flaring up from time to time over interstate river water. This document provides an understanding of the existing challenges and gaps in the institutional and political fabric of interstate river water governance within the Indian federal system and offers recommendations for ensuring an effective river water governance.</p>	
 <b>Transitioning to a Sustainable Energy Ecosystem</b>	<p>Energy is the engine that fuels our economies and modern human activities. Societal and economic disruptions due to the COVID-19 pandemic have given rise to calls for nations to "build back better", and to steer economies towards more sustainable trajectories. The document analyses the developmental benefits of investing in a sustainable energy ecosystem and India's progress in this domain. It further discusses models such as Energy Trilemma to develop greener and more inclusive energy systems that offer greater resilience to future crises.</p>	

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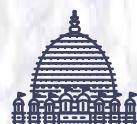
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