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



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




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



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



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



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1. POLITY AND GOVERNANCE

1.1. UNIFORM CIVIL CODE (UCC)

Why in news?

Uttarakhand Chief Minister announced an expert panel that would **examine the possibility of applying the UCC** in the State.

About Uniform Civil Code (UCC)

- The UCC calls for formulation of **one law to be made applicable to all religious communities** in matters such as marriage, divorce, inheritance, and adoption.
- It is intended to **replace the system of fragmented personal laws**, which currently governs interpersonal relationships and related matters **within different religious communities**.
- The idea comes from **Article 44** (one of the Directive Principles of State Policy) of the Constitution, which provides that the State shall endeavour to **secure for all citizens a Uniform Civil Code throughout the territory of India**.

Major milestones of UCC

Origin



- The idea of UCC was influenced by **similar codes drafted in European countries** during the **19th century and early 20th century**.
- **French code of 1804 had eradicated all forms of customary or statutory laws prevailing at that time and replaced it with a uniform code.**

Pre independence



- The **Lex Loci Report (1840)** emphasised the importance and necessity of **uniformity in codification of Indian law** but recommended that personal laws of Hindus and Muslims should be **kept outside** such codification.
- **B N Rau Committee** (formed in 1941) to **codify Hindu law** recommended a codified Hindu law, which would give **equal rights to women**.

Post independence



- The **Special Marriage Act, 1954**, provides a form of **civil marriage to any citizen irrespective of religion**, thus permitting any Indian to have their marriage **outside the realm of any specific religious personal law**.
- Four major **enactments on Hindu Law**: The Hindu Marriage Act, 1955, The Hindu Succession Act, 1956, The Hindu Minority and Guardianship Act, 1956, The Hindu Adoption and Maintenance Act, 1956.

Supreme Court Judgements



- **Shah Bano case (1985)**: Parliament should outline the contours of a common civil code.
- **Ms. Jordan Diengdeh v. S.S. Chopra (1985)**: **Emphasised the urgency** of implementing a uniform civil code.
- **Sarla Mudgal Case (1995)**: Reiterated the need for Parliament to frame a Uniform Civil Code.
- **Shayara Bano versus Union of India case (2017)**: Questioned the legitimacy of the practice of talaq-e-bidat (triple talaq) and declared it unconstitutional.

Arguments in favour of a UCC

- **Simplification of laws:** When enacted the code will work to **simplify laws** that are **segregated at present** on the basis of religious beliefs like the Hindu code bill, Shariat law, and others. The code will **simplify the complex laws** around marriage ceremonies, inheritance, succession, adoptions making them one for all.
- **Gender Equality:** All the personal laws, regardless of religion, **discriminate** against women in **one way or the other**.
 - For example, **Christian women** could not obtain divorce on the **grounds of adultery** committed by the husband, it had to be coupled with **cruelty, bestiality, and sodomy**. On the other hand, Christian husbands could simply declare their wives as **adulteresses and divorce them**.
 - Similarly, the daughters **were deprived of joint heirship in parental property** as per the codes of Mitakshara, a school of Hindu law governing succession. It was only after **Lata Mittal case** (filed in 1985) that Hindu daughters were **given equal rights** in the ancestral property.
 - Individual women from different communities have been **challenging the constitutional validity** of the **discriminatory aspects of the personal laws** in courts.
 - Their main concern is the threat of **forced marriage, murderous attacks** in cases of inter-caste, inter-class and inter-religious marriages and **property disputes** even while they have to deal with issues like adultery, bigamy, polygamy, divorce etc.
- **Supported by various judicial pronouncements:** In **Shah Bano case (1985)**, Supreme Court observed that the Parliament should outline the contours of a **common civil code** as it is an instrument that facilitates **national harmony and equality before law**.
 - In the **1995 Sarla Mudgal Case**, apex court reiterated the **need for Parliament to frame a Uniform Civil Code**, which would help the cause of **national integration** by removing **ideological contradictions**.
- **Others:**
 - A **secular republic** needs a **common law** for all citizens rather than **differentiated rules** based on religious practices.
 - Many practices governed by religious tradition are at **odds with the fundamental rights** guaranteed in the Indian Constitution.
 - Lack of a UCC in India is **undercutting the chances of an overall development** of the Indian society.

Arguments against UCC

- **Against the diversity:** A **unified nation** does not necessarily **need to have “uniformity”**. Efforts have to be made to **reconcile our diversity with universal and indisputable arguments** on human rights.
 - Term “secularism” has meaning only if it **assured the expression** of any form of **difference**. This diversity, both religious and regional, should **not get subsumed under the louder voice of the majority**.
 - Most countries are now **moving towards recognition of difference**, and the mere existence of difference **does not imply discrimination** but is **indicative of a robust democracy**.
- **No uniformity even in civil laws relating to non-religious matters:** Indian laws do follow a **uniform code in most civil matters** – Indian Contract Act, Civil Procedure Code, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act etc. States, however, have made **hundreds of amendments** and therefore in certain matters, there is **diversity even under these civil laws**.
- **Not supported by Law commission:** In 2018 the Law Commission in a consultation paper held that UCC is **neither necessary nor desirable** at this stage. Rather it suggested the **codification of all personal laws** so that prejudices and stereotypes in every one of them would come to light and **could be tested on the anvil of fundamental rights** of the Constitution.
- **Politically sensitive issue:** The issue of UCC has been politicized in the light of continuous communalization of the issue. From Shah Bano to Sarla Mudgal case, the court was also worried **whether a secular state should bring a code** which can be perceived to be a **threat to personal laws based on the religious beliefs** of individual religions.

Road Ahead

- **Educate the citizens:** Since **caste and religious believes are inseparable** from the minds of the citizens, educating the individuals **regarding the true nature and positive effects** of UCC through **media support and social media awareness** is first step towards **making consensus**.

- **Eradicating discrimination:** Observing the **absence of consensus** on UCC, the Law Commission paper (2018) has underlined the **need to eradicate discrimination**. This way, **some of the differences** within personal laws which are meaningful **can be preserved** and **inequality can be weeded out to the greatest extent possible** without absolute uniformity.
 - Several **women’s groups** (Saheli, Vimochana and Forum against Oppression of Women) and **human rights lawyers’ teams** (Lawyers Collective and Indian Social Institute) have prepared drafts containing technical details of **gender-just and secular family laws**.
- **Adopting a piecemeal approach:** Given that **enactment of a UCC in one go** may be counter-productive to **unity and integrity** of the nation, the goal of a UCC should ideally be reached in piecemeal manner, like the **recent amendment** on the age of marriage. This could also pave the way for internal reform and change within the religious dispensation.
- **Opening personal laws for public debate:** Amendments to **Christian marriage and divorce laws** in 2001, and **Hindu Adoption and Maintenance Act, 1956** and **Guardians and Wards Act, 1890**, in 2010 are examples of **how once codified**, personal laws can be opened up for further **public debates and scrutiny**.
- **Codification of all personal laws:** Through codification, one can arrive at **certain universal principles** that **prioritise equity** rather than imposition of a uniform code in procedure which **can also discourage many from using the law altogether** given that matters of marriage and divorce can also be settled extra judicially.
 - The Law Commission suggested **certain measures in marriage and divorce** that should be uniformly accepted in the personal laws of all religions.

1.2. ONE NATION ONE ELECTION

Why in news?

Chief Election Commissioner recently told that the Election Commission (EC) is ready to hold **simultaneous elections** on the lines of Prime Minister’s call for ‘**One Nation One Election**’.

About One Nation One Election

- Ideally ‘**One Nation One Election**’ should imply that **elections to all the three tiers** of constitutional institutions take place in a **synchronized and co-ordinated** fashion. It means that a voter **casts his vote for electing members for all tiers** of the Government on a **single day**.
- However, the **elections to third tier institutions** comes in the ambit of the **State** as per the Constitution. Further, elections to the third tier are directed and controlled by the **State Election Commissions** and their **sheer numbers** in the country is significantly large.
 - Thus, it would be **impractical** to synchronize and align election schedules of the **third tier** with that of Lok Sabha and State Assembly election.
- Accordingly, the term “One nation one election” is defined as **structuring the Indian election cycle in a manner** that elections to **Lok Sabha and State Assemblies** are synchronized together.
- In such a scenario, a voter would normally **cast his/her vote** for electing members of Lok Sabha and State Assembly on a **single day and at the same time**.
- It does not mean that **voting across the country** for Lok Sabha and State Assemblies needs to **happen on a single day**. This can be conducted in a **phase-wise manner** as per the existing practice.

Need for One Nation One Election

- **Perennial election mode:** It is considered that Indian polity is **perennially in an election mode**. Barring a few years within a normal 5 year tenure of the Lok Sabha, the country witnesses, on an average, elections to **about 5-7 State Assemblies every year**.

DID YOU KNOW?

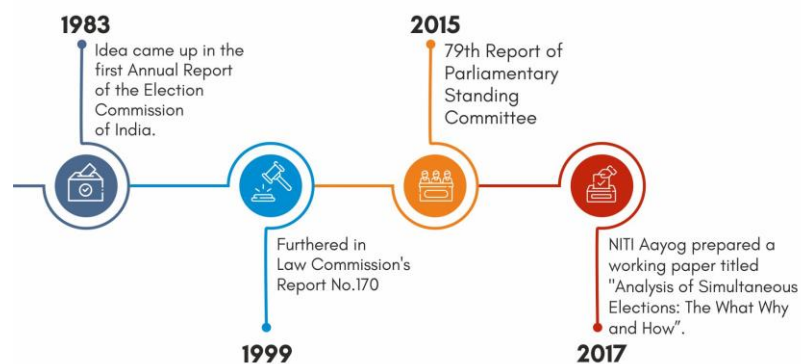


Post adoption of the Constitution, the **elections to Lok Sabha and all State Legislative Assemblies** were held simultaneously between 1951 till 1967.



The **dissolution of certain State Assemblies in 1968 and 1969** followed by dissolution of the Lok Sabha in 1970 lead to **disruption of the conduct of simultaneous elections**.

Idea of Simultaneous elections



- **Policy and governance deficits:** Politicians' preoccupation with elections leads to a permanent campaign mode **at the cost of decision-making**. Except the routine administrative activities, other **development programs, welfare schemes, capital projects etc. remain largely suspended** till the time the Model Code of Conduct (MCC) is applicable, causing **policy and governance deficit**.
 - With more and more **staggered polls and prolonged election schedules, basic services and functions** of government are neglected **for months each time**.
- **Expenditure on elections:** Frequent elections lead to **massive expenditures** by Political Parties and other stakeholders. Frequent elections **take away opportunities to optimize such costs**.
 - Further, when elections are held independently, entire expenditure on actual conduct of elections to Lok Sabha and state legislatures is **borne by Government of India and respective State Governments respectively**.
 - If concurrent election to Lok Sabha and State Legislative Assembly is held, then the expenditure is **shared between Government of India and respective State Governments**.
- **Invisible and incalculable socio-economic costs:** Due to election duties, each election also means **teachers missing** from schools & colleges, the **entire revenue machinery** on election-related work, officers and vehicles put to use on elections.
 - These costs of the **millions of man-hours used** and the economic costs of lost teaching weeks, **badly delivered or undelivered** welfare schemes to the poor **have never been calculated**.
- **Engagement of security forces:** Conducting elections is a **mammoth, complex and time consuming** activity. The Election Commission takes help of a significant number of **polling officials as well as armed forces** to ensure smooth, peaceful and impartial polls.
 - Frequent elections leads to a **lock-in of CAPF and state police forces** for prolonged periods of time. Thus, it takes away a portion of such armed police force which could **otherwise be better deployed** for other **internal security** purposes.
- **Others**
 - Frequent elections lead to **disruption of normal public life**. Holding of political rallies **disrupts road traffic** and also leads to **noise pollution**.
 - ✓ If simultaneous elections are held, this **period of disruption would be limited**.
 - Frequent elections also perpetuate **caste, religion and communal issues** across the country.
 - It also promotes **competitive populism**. Given the desperation of parties to win elections, there is always a tendency to **squander resources on short-term, unproductive freebies** at the cost of infrastructure, quality education and healthcare.
 - A Parliamentary Standing Committee believes that simultaneous elections will **reduce voters' apathy** of frequent elections and will **enthuse general population** and voters in particular which will ultimately **enhance voters' participation** in the electoral process.

Concerns associated with One Nation One Election

- **Operational feasibility:** There are a number of concerns which would **need to be adequately addressed within the constitutional and statutory boundaries**.
 - This includes aspects such as **how would terms** of Assemblies/Lok Sabha **be synchronized** for the first time and would it be feasible **to extend or curtail the existing terms** of some State Assemblies to facilitate one nation one election.
 - Further, every state has its own power dynamics, and it will be **difficult to maintain tenures that are symmetrical to those of the Centre without resorting to President's Rule repeatedly** and for long periods of time.
 - As the constitutional provisions do not **fix the term of either a State Assembly or the Lok Sabha**, it would only be a matter of time when the **electoral cycle gets disturbed again**.

- **Inconsistent with Westminster democracy and federalism:** Synchronizing the election calendar in any given state with that of the Centre would **deprive a state of one of the essential elements** of Westminster democracy- A government may **choose to dissolve itself**, or a government may **fall if it loses its majority**.
- **Impact on voters' behaviour:** Voter may **not differentiate** between the voting choices for State Assembly and Lok Sabha in case simultaneous elections are held. This situation could lead to:
 - **National issues** impacting electorate's behaviour for **voting in State Assembly elections**; or
 - **State issues** impacting electorate's behaviour for voting in Lok Sabha elections.
- **Disadvantage to regional parties:** Regional parties may be at a disadvantage as voters are **reportedly likely to predominantly vote one way**, giving the dominant party at the Centre an advantage. Thus a dominant position at the Centre may **translate into corresponding gains** at the state level.
 - One nation one election will **give pole position to large national parties** which would reap the economies of scale and **put regional parties at a comparative disadvantage**.
- **Others:** Having to face **electorate more than once** every 5 year **enhances the accountability** of politicians and keeps them on their toes.

Road Ahead

- **Conducting election in two phases:** Parliamentary Standing Committee suggested that simultaneous elections be **considered in two-phases**. Phase I is suggested to be in sync with that of the Lok Sabha elections. Phase II is suggested **approximately mid-way** in the term of the Lok Sabha.
 - Thus, it is envisaged to **conduct elections every 2.5 years** (30 months) in the country once the **entire electoral cycles** of Lok Sabha and all State Assemblies **are synchronized**.
- **Avoiding premature dissolution:** Election commission has made following recommendations:
 - **In case of Lok Sabha:** Any 'no-confidence motion' moved should also **necessarily include a further 'confidence motion'** in favour of a government to be headed by a named individual as the future Prime Minister.
 - In spite of the above arrangement, if there is a situation **where dissolution of Lok Sabha cannot be avoided**, then the **following options** can be considered:
 - ✓ If the remainder of the term of the Lok Sabha is not long (period to be specified), there could be a provision for the **President to carry out the administration** of the country, on the aid and advice of his Council of Ministers to be appointed by him till, the **time the next House is constituted at the prescribed time**.
 - ✓ If the remainder of the term is long (period to be specified), **then fresh election may be held** and the term of the House in such case should be for the **rest of what would have been the original term**.
 - **In the case of Legislative Assembly:** In the event of a 'no-confidence motion', it should be mandatory **to simultaneously move a 'confidence motion'** for formation of an alternative government. This will, in normal course, **eliminate cases of premature dissolution** of Assemblies.
 - If for any unavoidable reason, any **existing Legislative Assembly has to be dissolved prematurely**, there should be a provision for the **Governor to carry out the administration of the State**, on the aid and advice of his Council of Ministers to be appointed by him, or for the **imposition of the President's Rule**, till period of expiry of term.
- **Schedule of Bye-elections:** The Parliamentary Standing Committee recommended that **bye-elections to all seats** that become vacant **during a year** may be **conducted together** during a **pre-determined time period**.
- **Law Commission recommendations:** Law Commission of India had suggested that elections of legislative assemblies whose term ends **six months after the general elections** to Lok Sabha can be clubbed together. However, the results of such elections **can be declared at the end of the assembly's tenure**.

1.3. THE CRIMINAL PROCEDURE (IDENTIFICATION) ACT, 2022

Why in news?

Recently, the **Criminal Procedure (Identification) Act, 2022** received the assent of the President.

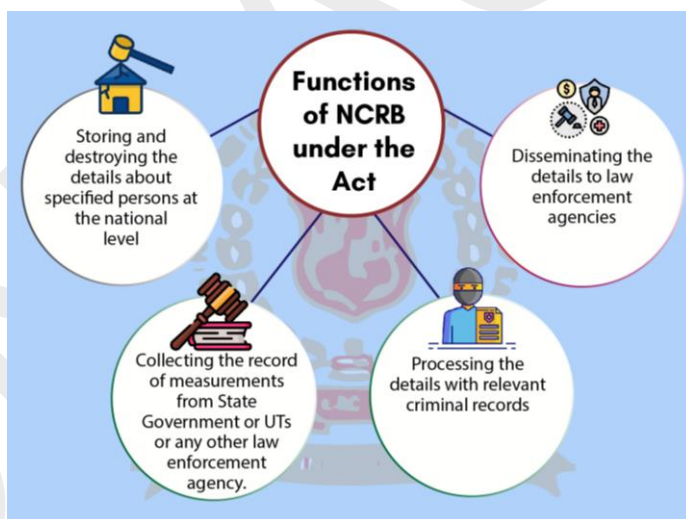
About the Act

- The Act seeks to **replace the Identification of Prisoners Act, 1920**.

- **Need for such Act:**
 - New “measurement” techniques being used in advanced countries are **giving credible and reliable results**.
 - In 1980, the **Law Commission of India** noted the need to revise the act to bring it **in line with modern trends** in criminal investigation.
 - In 2003, the **Malimath Committee** recommended amending the Act to **empower the Magistrate to authorise** the collection of data such as blood samples for DNA, hair, saliva, and semen.
- **Objective:** To expand the **scope and ambit of the “measurements”** which can be taken under the provisions of law that will help in **unique identification of a person** involved in any crime and will **assist the investigating agencies** in solving the criminal case.

Key Features of the Act

- **Expands the ambit (Refer table):** The Act **expands** the **type of data** that may be collected, **persons from whom such data** may be collected, and the **authority that may authorise** such collection.
- **Retention of details:** The Act requires the details collected to be **retained in digital or electronic form for 75 years** from the date of collection. The record **may be destroyed** in case of persons who have **not been previously convicted**, and who are **released without trial, discharged, or acquitted** by the court, after exhausting all legal remedies.
- **Resistance to giving details:** As per the Act, resistance or refusal to give details will be **considered an offence under the Indian Penal Code, 1860**. In case of such resistance or refusal, police officers or prison officers **may collect details** in the manner prescribed **under rules made by the state government or the central government**.
- **Powers of Magistrate:** Under the Act, a Magistrate may **direct a person to give details** for the purpose of an investigation or proceeding under the CrPC (Code of Criminal Procedure).
- **Rule-making power extended to the central government:** The Act vested rule-making power **only in the state government**. The Act extends this power to the **central government as well**. The central or state government may make rules on **various matters** like the manner of collecting details.



Comparison of key provisions of the 1920 Act and the 2022 Act

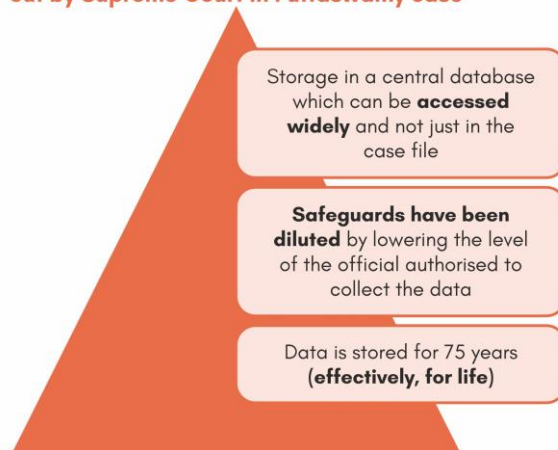
	1920 Act	Changes in the 2022 Act
Data permitted to be collected	<ul style="list-style-type: none"> • Fingerprints, foot-print impressions, photographs. 	<ul style="list-style-type: none"> • Iris and retina scan, physical, biological samples and their analysis, behavioural attributes including signatures, handwriting or any other examination referred to in section 53 or section 53A of the Code of Criminal Procedure, 1973.
Persons whose data may be collected	<ul style="list-style-type: none"> • Convicted or arrested for offences punishable with rigorous imprisonment of one year or more. • Persons ordered to give security for good behaviour or maintaining peace. • Magistrate may order in other cases collection from any arrested person to aid criminal investigation. 	<ul style="list-style-type: none"> • Convicted or arrested for any offence. However, biological samples may be taken forcibly only from persons arrested for offences against a woman or a child, or if the offence carries a minimum of seven years imprisonment. • Persons detained under any preventive detention law. • On the order of Magistrate, from any person (not just an arrested person) to aid investigation.
Persons who may require/ direct collection of data	<ul style="list-style-type: none"> • Investigating officer, officer in charge of a police station, or of rank Sub-Inspector or above. • Magistrate. 	<ul style="list-style-type: none"> • Officer in charge of a police station, or of rank Head Constable or above. In addition, a Head Warden of a prison.

- **Metropolitan Magistrate or Judicial Magistrate** of first class. In case of persons required to maintain good behaviour or peace, the **Executive Magistrate**.

Concerns about the Act

- **Act may violate right to privacy:** The information specified under the Act **forms part of the personal data** of individuals, thus protected under the **right to privacy**. Several provisions (Refer infographic) of Act may not meet the **necessity and proportionality standards laid out by Supreme Court in 2017**.
- **Differs from Law commission observation:** The Act expands the **set of persons whose data may be collected** to include persons convicted or arrested for any offence. This would include **someone arrested for rash and negligent driving**, which carries a penalty of a **maximum imprisonment of six months**.
 - It also **expands the power of the Magistrate** to order collection from any person (earlier only from those arrested) to aid investigation.
 - This differs from the observation of the **Law Commission (1980)** that the 1920 Act is based on the principle that the **less serious the offence, the more restricted should be the power** to take coercive measures.
- **Other issues:**
 - May also violate **Article 20(3)** of the Constitution, which is a fundamental right that guarantees the **right against self-incrimination**.
 - **Definition of measurements** to include several types of personal information, all of which have **varying degrees of reliability and usefulness** when it comes to criminal investigations, is **manifestly arbitrary**.
 - Concerns about the **need to conduct capacity building and training exercises** for individuals who will be collecting the measurements as **no standardised norms for collection** are prescribed.
 - **NCRB is ill-equipped** to deal with quality management for a database containing records of the proposed measurements, particularly of **biological samples and their analysis**.
 - **No limitations on the use** of the data collected and the term "**analysis**" is **left undefined**. **Lack of clarity** in the collection and usage of the 'measurements' **heightens the possibilities of misuse**.

Provisions that may not meet the standards laid out by Supreme Court in Puttaswamy case



Conclusion

A law that restricts fundamental rights must be sufficiently **clear and precise** in terms of the **extent, scope and nature** of the interference allowed, along with the **presence of sufficient safeguards** to prevent abuse of powers by authorities.

1.4. NATIONAL COMMISSION FOR SCHEDULED TRIBES (NCST)

Why in news?

Standing Committee on Social Justice and Empowerment highlighted that **National Commission for Scheduled Tribes (NCST)** has been **dysfunctional** for the last four years and has **not delivered a single report** to Parliament.

Need for NCST

- **Low literacy rate:** As per Census 2011, literacy rate of Scheduled Tribes (STs) was **59%** whereas the overall literacy rate was **73% at all India level**.
- **Poor health indicators:** For example, according to the NFHS 4, the **under-5 mortality** among the tribal population was **57.2 per 1000 live births** compared to **38.5 among others**, and the **infant mortality rate (IMR) 44.4 per 1000 live births** versus others of 32.156.

About NCST

- NCST was established by amending Article 338 and inserting a new **Article 338A** in the Constitution through the **Constitution (89th Amendment) Act, 2003**.
- By this amendment, the **erstwhile National Commission for Scheduled Castes and Scheduled Tribes** was replaced by **two separate Commissions** namely National Commission for Scheduled Castes (NCSC), and the National Commission for Scheduled Tribes (NCST) w.e.f. **19 February 2004**.

- **High incidence of poverty:** According to **Global multidimensional poverty index (MPI)**, 2018, **every second person** belonging to the Scheduled Tribes. Corresponding number is **only 15 per cent** in case of 'upper' castes.
- **Deprivation:** STs are the **most deprived sections** in India. According to the results of the Socio Economic and Caste Census 2011, nearly **79% of rural adivasi** households are **considered "deprived"**, compared to **61% for all rural households**.
- **High Displacement rate:** Though tribal people **constitute 8.6% of country's** population, they account for **40-50% of the overall displaced population** due to development projects.

Educational & Cultural Safeguards



- » **Article 15(4):-** Special provisions for **advancement of other backward classes** (which includes STs);
- » **Article 29:-** Protection of **Interests of Minorities** (which includes STs);
- » **Article 46:-** State shall promote, with special care, the **educational and economic interests** of the weaker sections of the people, and in particular, of the **Scheduled Castes, and the Scheduled Tribes**, and shall protect them from **social injustice** and all forms of exploitation;
- » **Article 350A:-** Instruction in **Mother Tongue**.

Social and Economic Safeguards



- » **Article 23:-** Prohibition of **traffic in human beings** and begar and other similar form of forced labour;
- » **Article 24:-** Forbidding **Child Labour**.
- » **Article 244:-** Clause(1) Provisions of Fifth Schedule shall apply to the administration & control of the Scheduled Areas and Scheduled Tribes in any State other than the states of **Assam, Meghalaya, Mizoram and Tripura** which are covered **under Sixth Schedule**, under Clause (2) of this Article.
- » **Article 275:- Grants in-Aid** to specified States (STs&SAs) covered under Fifth and Sixth Schedules of the Constitution.

Constitutional Safeguards available to STs

Political Safeguards



- » **Article 164(1):-** Provides for Tribal Affairs Ministers in Bihar, MP and Orissa;
- » **Article 330:-** Reservation of seats for STs in Lok Sabha;
- » **Article 337:-** Reservation of seats for STs in State Legislatures;
- » **Article 334:-** 10 years period for reservation (Amended several times to extend the period.);
- » **Article 243:-** Reservation of seats in Panchayats.
- » **Article 371:-** Special provisions in respect of NE States and Sikkim.

Safeguards under Various laws



- » Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 and rules framed there under.
- » Bonded Labour System (Abolition) Act 1976 (in respect of Scheduled Tribes);
- » The Child Labour (Prohibition and Regulation) Act 1986;
- » States Acts & Regulations concerning alienation & restoration of land belonging to STs;
- » Forest Conservation Act 1980;
- » Panchayat raj (Extension to Scheduled Areas) Act 1996;
- » Minimum Wages Act 1948.

Functions of the commission (as per Sub-clause (5) of the Article 338A)

- To **investigate and monitor** all matters relating to the **safeguards provided** for the Scheduled Tribes and to **evaluate the working** of such safeguards.
- To inquire into **specific complaints** with respect to the **deprivation of rights and safeguards** of the STs.
- To participate and **advise on the planning process** of socio-economic development of the Scheduled Tribes and to **evaluate the progress of their development**.
- To **present** to the President, annually and at such other times as the Commission may deem fit, **reports upon the working of those safeguards**.

- To make recommendations as to the **measures that should be taken for the effective implementation** of those safeguards and other measures for the protection, welfare and socio-economic development of STs.
- To discharge **such other functions** as the President may, subject to the **provision of any law** made.
- The Commission would also discharge the **following other functions** namely:-
 - Measures to be taken over **conferring ownership rights** in respect of minor forest produce to STs.
 - Measures to be taken to safeguard rights to the STs over mineral resources, water resources etc.
 - Measures to be taken for the **development of tribals** and to work for move viable livelihood strategies.
 - Measures to be taken to **improve the efficacy of relief and rehabilitation measures** for tribal groups displaced by development projects.
 - Measures to be taken to **prevent alienation of tribal people** from land and to **effectively rehabilitate such people** in whose case alienation has already taken place.
 - Measures to be taken to **elicit maximum cooperation** and involvement of Tribal Communities for protecting forests and undertaking social afforestation.
 - Measures to be taken to ensure full implementation of the **Provisions of Panchayats (Extension to the Scheduled Areas) Act, 1996**.
 - Measures to be taken to **reduce and ultimately eliminate the practice of shifting cultivation** by Tribals.

Issues of NCST highlighted by Parliamentary committee

- **Pending reports:** Reports of the Commission since 2018 are still **under process** in the Ministry of Tribal Affairs and have **not been presented to the Parliament** till date.
 - The pending reports include a study of the impact of the **Indira Sagar Polavaram Project** in Andhra Pradesh on the tribal population and a special report on **rehabilitation and resettlement of displaced tribals because of the Rourkela Steel Plant**.
- **Manpower and budgetary shortage:** Committee noted that **several posts are lying vacant** in the Commission. The recruitment in the Commission was constrained because of **lack of applicants** as the eligibility bar was **set too high** and the rules being tweaked to enable **many more candidates to apply**.
- **Other issues related to NCST**
 - As per the Commission's website, in the financial year 2021-22, it has **met only four times**.
 - Its **rate of pendency** of resolution of complaints and cases that it receives is also close to **50 per cent**.
 - The concerned Ministries/Departments **have not been very forthcoming** about the **status with regard to acceptance/non-acceptance** of recommendations/ the comments/ views /advice of the Commission on various policy related issues

Major recommendations of NCST

To **safeguard the rights of Tribal communities** over mineral Resources, commission has made following recommendations:

- Need to issue **clear guidelines** for giving preference to Scheduled Tribes in the grant of mining concessions in Scheduled Areas.
- Introduce a bill to give effect to the recommendations of the Bhuria Committee 1995 so that in **all industrial enterprises set up in the Scheduled Areas** (other than small ventures), the **community should be deemed to be the owner** with 50% shares in its favour by virtue of its **allowing the industry to use local resources** and getting established.
- The tribals should be given **vocational training and financial assistance** to enable them to be in a position to run the **mining operations**.
- To make specific legal provisions in Acts relating to mines and minerals making it **mandatory** for them to **consult Gram Sabhas** before of any lease about minor minerals.

Measures needed to strengthen NCST

- **Recommendations made by Parliamentary committee:** The committee recommended that necessary action be urgently taken in respect of **recruitment** of officials and **budgetary allocation** for the NCST.
- **Encouraging meaningful consultations:** Cabinet Secretariat and the Ministry of Law and Legal Affairs should be tasked with the responsibility of **ensuring meaningful consultations** with the NCST before concerned legislative proposals are **placed for consideration before the Council of Ministers**.
- **Follow up on reports in a time-bound manner:** It is very important that reports of the Commission are **laid in Parliament and the State Legislatures**, as the case may be, within a reasonable period of time i.e. **not exceeding three months**.
 - Further, **memorandum of action taken/ proposed** to be taken on its recommendations by the Ministry of Tribal Affairs/ the respective State Government should be separately laid in the Parliament/ State Legislature **within six months of such submission** of the report.

- **Feedback from the government:** Proper feedback will not only **enlighten the Commission** with the **final views** of the Government on such policy related issues, but also enable it to **report the effectiveness of its recommendations** and **refine its recommendations** in similar cases in future.

1.5. DRAFT INDIA DATA ACCESSIBILITY & USE POLICY, 2022

Why in news?

Recently, the **Ministry of Electronics and Information Technology (MeitY)** has released the Draft India Data Accessibility & Use Policy 2022.

Importance of Data in Digital Economy

- **Good governance:** To enhance efficiency of service delivery by streamlining inter- government data sharing and to improve overall compliance to data sharing and privacy policies and standards.
- **Harness the data:** With the rapid increase in digitisation and online engagement, India's ambition of becoming a \$5-trillion digital economy depends on its ability to harness the value of data.
- **Informed policymaking:** For more informed policymaking and efficient public services, it enables a new generation of start-ups to boost digital innovation for high-priority use cases and enter new markets, driving growth in the Indian economy.
- **Improve coordination:** Due to absence of a body for policy monitoring, technical tools, enforcement of data sharing standards, lack of consultation with academia, and industry requires an effective data policy intervention.

About Draft India Data Accessibility & Use Policy, 2022

- This policy aims to **radically transform India's ability to harness public sector data** for catalysing large scale social transformation.
- As per policy, any data sharing **shall happen within the legal framework of India**, its national policies and legislation as well as the recognized international guidelines.
- **Major Objectives of the policy include:**
 - Maximising access to and use of quality of Non-Personal Data (NPD) available with public sector.
 - Improving policy making, evaluation, and monitoring.
 - Building digital and data capacity, knowledge & competency of government officials.
 - Ensuring greater citizen awareness, participation, and engagement with open data.
- This draft policy comes in **the backdrop of a government committee formed in 2019**, headed by Infosys cofounder S Gopalakrishnan, to draft a **Non-Personal Data Protection Framework (NPDPF)**.
 - Goals of NPDPF include creating a **framework to unlock economic, social and public value from using data**, and **address concerns of harm** arising from use of such data.



Key features of the policy

Update with existing policies	• Provides an update to the existing government policies- National Data Sharing and Accessibility Policy and Open Government Data Platform India.
Applicability	• Applies to all data and information generated, created, collected or archived by central government and authorised agencies.
Institutional framework	• Set up India Data Office (IDO) to streamline and consolidate data access and sharing of NPD repositories across the government and other stakeholders.

	<ul style="list-style-type: none"> ○ IDO will notify protocols for sharing of non-personal datasets. ○ IDO shall be entrusted with responsibility of monitoring the implementation and enforcement of this policy. ● Every ministry/department should have Data Management Units, headed by Chief Data Officers, which will work closely with IDO to ensure the implementation of policy. ● India Data Council (IDC), shall be formed as a consultative body, to define frameworks for high-value data sets, finalising data and metadata standards, and review implementation of the policy, among others. ● Nomination of Departments and state governments in IDC shall be on rotation with a tenure of 2 years for one Department.
Integrated Data Portals	<ul style="list-style-type: none"> ● All data portals/dashboards maintained by line ministries/departments should be integrated through APIs or other appropriate integration mechanisms with the open government data portal.
Data-sharing toolkit	<ul style="list-style-type: none"> ● To assess and manage risks associated with data sharing and release. ● Data shall remain the property of the agency/department/ministry/entity which generated/ collected it
Government-to-Government data sharing	<ul style="list-style-type: none"> ● All Ministries/Departments to identify existing data assets and create detailed searchable data inventories.
Making data open by default	<ul style="list-style-type: none"> ● All government data will be open and shareable unless classified under a negative list of datasets. For restricted data sets, pricing will be decided by the owner government agency. <ul style="list-style-type: none"> ○ Negative List is list of datasets that are confidential in nature and/or are in the interest of the country's security in not opening to the public.
Data Anonymisation	<ul style="list-style-type: none"> ● All ministries/departments must comply with the anonymisation standards defined by IDO/MeitY or by any statute/act/policy issued by the government.

Issues with Data sharing and use policy

- **Privacy issue:** In absence of a personal data protection law, the envisaged interdepartmental sharing of data across the government departments may lead to a **massive violation of the privacy of citizens**.
- **Lack of proper standards and framework** on data anonymisation also makes it possible that such data may be reverse-engineered, thereby making re-identification of the generators of data very easy.
- **Ambiguity on concepts:** Few concepts have been defined in a **vague and ambiguous manner** which opens them up to misinterpretation.
 - For instance, it **doesn't clearly state overlapping areas of Personal Data Protection Bill and NPDF**, like how the consent and anonymisation of an individual's data that resides with government will be dealt with.
- **Other issues associated with data security:**
 - **Data breaches** can happen due to **cyberattacks, theft or loss of devices** containing protected information, **human errors** such as accidentally sending sensitive data to someone unauthorized to see it.

Major Data initiatives

- **Personal Data Protection Bill (PDPB), 2019**
 - Provides constitution of **Data Protection Authority (DPA)**.
 - Mandates fiduciaries to **give the government any non-personal data when demanded**.
 - **Amends Information Technology Act, 2000** to delete provisions related to compensation payable by companies for failure to protect personal data.
- **Non-Personal Data Protection Framework (NPDF)**
 - Any **data which is not personal data** (data pertaining to characteristics, traits or attributes of identity, which can be used to identify an individual) is **categorised as NPD**. It is classified into **three categories**
 - ✓ **Public NPD:** Data collected by government such as census, during execution of all publicly funded works.
 - ✓ **Community NPD:** Any data identifiers about a set of people who have either the same geographic location, religion, job, or other common social interests. **For example**, electricity distribution companies etc.
 - ✓ **Private NPD:** Produced by individuals which can be derived from application of proprietary software or knowledge.
- **Open government data (OGD) platform:** To provide open access through proactive release of data available with various ministries.
- **Open government data license:** To ensure that datasets released are not misused or misinterpreted.
- **API Setu:** To bring all APIs from Government to a single place and make them available for consumption by ministries and industry.
- **IUDX (India Urban Data Exchange):** Open-source data exchange that facilitates secure and authenticated exchange of data amongst various data platforms.

- **Insufficient Infrastructure:** Lack of data storage companies in India, leading to data being stored overseas and thus compromising national security.
- **Cloud security:** Due to Covid pandemic, cloud adoption has soared. But with cloud computing, data is stored in systems that are outside the traditional perimeter and thus vulnerable to theft.
- Talent shortage **limits government ability to reduce risk, detect threats** and respond to attacks.

Way forward

- **Interoperable digital architecture:** A data architecture that is inter-operable mandates adherence to strict data and meta-data standards and **creates robust enforcement structures** for standards across the data ecosystem.
- **Data skills and data- driven culture:** Skill investments within the government for building capacity in data science, analytics, emerging technologies, and ethics is crucial for ensuring the dissemination of high-quality data and its use.
- **Robust strategy:** A responsive policy on data accessibility and use is the need of the hour to **optimize principles of value to governance** (like privacy and safety of the data principal) and one that adopts a risk management approach over risk-avoidance.
- **Transparent mechanism:** To ensure that data officers do not reduce access of citizens to open public data which they need for transparency on utilization of taxpayers' money, implementation of various government schemes and projects, environmental impact assessments on development projects etc.

1.6. NEWS IN SHORTS

1.6.1. SC ENFORCES A LANDMARK RULING ON DEATH PENALTY

- Supreme Court, in **Chhannu Lal Verma vs. State of Chhattisgarh**, held that, before awarding death sentence, a **proper psychological/psychiatric evaluation is to be done by courts** to assess probability and possibility of reform of the criminal.
- In this case, **SC referred to various judgments:**
 - In **Bacchan Singh v/s State of Punjab (1980)**, SC established the **doctrine of “rarest of rare” crime in handing down capital punishment** while mandating a comparative **analysis of aggravating and mitigating circumstances** in connection to the accused.
 - In **Machi Singh vs State of Punjab (1983)**, SC **elucidated doctrine of “rarest of rare”** and set down some guiding principles in the death sentences cases.
 - ✓ **Aggravating circumstances included** the manner in which crime was committed, motive for committing the crime, severity of crime, and the victim of crime.
 - ✓ **Mitigating circumstances comprised of the possibility of reformation and rehabilitation of an accused**, his mental health and his antecedents.
 - In 2014, **SC ruled that unexplained delay in execution was a ground for commutation of death penalty**, and an inmate, his or her kin, or even a public-spirited citizen, could file a writ petition seeking such commutation.

1.6.2. WEARING HIJAB IS NOT ESSENTIAL RELIGIOUS PRACTICE RULES KARNATAKA HIGH COURT

- Ruling has come in the backdrop of **petition seeking the right to wear hijabs or head scarves** along with uniforms inside classrooms.
 - According to the Court, **wearing of hijab (head scarf) by Muslim women does not form a part of essential religious practices in Islamic faith** and is not protected under right to freedom of religion under Article 25 of Constitution.
 - Also, prescription of school uniform **does not violate either right to freedom of speech and expression under Article 19(1) (a) or right to privacy under Article 21.**
 - Further, **restriction against wearing of hijab in educational institutions is only a reasonable restriction constitutionally permissible.**
- **What is the essential religious practice test**
 - It was **evolved by Supreme Court (SC) in ‘Shirur Mutt’ case (1954)** to protect only such religious practices which were essential and integral to the religion.
 - Court held that term “religion” will cover all rituals and practices “integral” to a religion, and **took upon itself the responsibility of determining essential and non-essential practices of a religion.**
 - This **attempt to differentiate essential and non-essential practices** was taken up in various judgments.

1.6.3. CENSUS NEW RULES NOTIFIED

- Union government has amended **Census Rules, 1990, to include “electronic form” and “self-enumeration”** in the schedule of questions to be asked during census enumeration.
 - It will allow **online self-enumeration in the upcoming Census and National Population Register (NPR)**.
 - ✓ NPR is a **Register of usual residents of the country**. Its objective is to create a comprehensive identity database of every usual resident in the country.
 - **Section 8 of Census Act, 1948**, gives powers to the enumerator to ask questions regarding the Census and makes it obligatory for respondents to answer, with certain exceptions.
- Also, **“print media, electronic media, social media”, have been added to the list of modes for ensuring wide publicity** for the exercise. Earlier list only included radio, audio-visuals and posters.
- Earlier, first phase of Census 2021, and NPR exercise scheduled to be held in 2020 was **postponed indefinitely due to Covid-19**.
- Population Census is process of collecting, compiling, analyzing, disseminating **demographic, economic and social data** pertaining, at a specific time, **of all persons in a country or a part of a country**.
 - Conducted by: **Office of the Registrar General and Census Commissioner under Ministry of Home Affairs**.

Census history

- A systematic and modern population census, in its present form was **conducted non synchronously between 1865 and 1872** in different parts of the country.
- This effort culminating in 1872 has been popularly labeled as the **first population census of India**.

- However, the **first synchronous census in India was held in 1881**. Since then, censuses have been undertaken uninterruptedly once every ten years.

1.6.4. MINISTRY OF INFORMATION AND BROADCASTING (I&B) HOLDS CONSULTATION WITH FILM INDUSTRY ON PROPOSED AMENDMENTS TO CINEMATOGRAPH ACT

- Cinematograph Act, 1952 made **provision for the certification of cinematograph films for exhibition and regulating exhibitions by means of cinematographs**.
 - Under it, **Central Board of Film Certification (CBFC)**, a statutory body under Ministry of I&B, **regulates the public exhibition of films**.
- **Key Provisions of Cinematograph (Amendment) Bill 2021**
 - **Empowering government to direct CBFC to reconsider certification** it has issued to a film.
 - **Subdividing the U/A category** to U/A 7+, U/A 13+ and U/A 16+
 - **Adding Section 6AA to curb piracy** by introducing penal provisions.
- **Concerns raised against the bill**
 - Central Government would have the **power to revoke or recall certification of films** that have already been cleared by CBFC.
 - It is against the **recommendations of Mudgal Committee (2013) and Shyam Benegal Committee (2016)** on film certification.
 - Film fraternity held that some provisions **stifle creativity** by being hinderance to open expression and discussion.
- **Suggestions:** Encouraging self-regulation, Limiting the extent of censoring power of the state, increased usage of content warnings involving explicit material etc.



SMART QUIZ

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



2. INTERNATIONAL RELATIONS

2.1. RUSSIA-UKRAINE WAR

Why in News?

Started on 24th February, the Russia-Ukraine war is becoming more violent, taking the number of refugees from Ukraine to **11.4 million** with increasing **sanctions** on Russia.

About Ukraine and the present Russia-Ukraine War

- Russia-Ukraine ties go back to **late 1700s**, when **Catherine the Great** brought most of the present Ukrainian territory under the Russian empire.
- After a brief period of **autonomous existence** (1917-20), Ukraine became part of the **Soviet Union**.
- Finally, in **1991** it declared its independence as the **Soviet Union** collapsed.
- The present-day war traces its root to above three points, i.e.
 - Attempts **by Ukraine** to end cultural ties built with **Russia**,
 - Protect the **autonomous existence of Ukraine**, and
 - **Growing influence of North Atlantic Treaty Organization (NATO)** in erstwhile Soviet Union region with Ukraine as a major remaining territory between direct Russia-NATO faceoff.



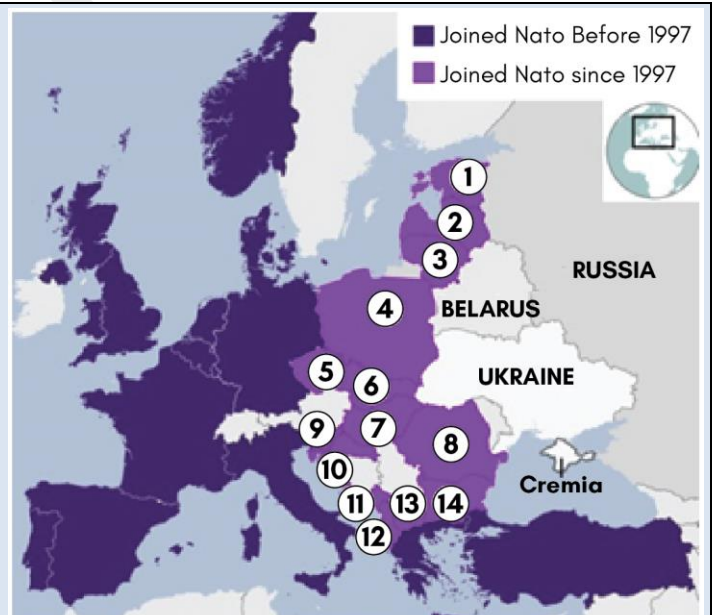
Present Position of Ukraine and Russia

Ukraine

- Needs to join **Association Agreement (AA)** with the European Union (EU), equivalent to Eurasian Economic Union (EAEU) from Russia, for early integration of its political and economic relations with EU.
 - It will eliminate most tariffs on trade in goods under the **Deep and Comprehensive Free Trade Agreement (DCFTA)**, opening the gates for EU legislation membership.
- **North Atlantic Treaty Organization (NATO) membership** is essential for its national security policy, especially after the **Russian annexation of Crimea in 2014**.

Russia

- Ukraine **should not join** NATO as a member.
- NATO should **return to 1997 position**, i.e., position before signing of **NATO-Russia Founding Act**, no new infrastructure building to station troops from NATO in these regions etc.
- Marginalization of **historical cultural-ties** and of people of Russian identity must stop.
 - E.g., in 2019, Ukrainian language was made mandatory for public sector workers with a special status. Also, the Russian language was not included even in exceptions for minority languages regarding print media despite the large **Russian speaking population in Eastern Ukraine**.



- | | | | |
|-------------|------------------|--------------|-------------------|
| ① Estonia | ⑤ Czech Republic | ⑨ Slovenia | ⑬ North Macedonia |
| ② Latvia | ⑥ Slovakia | ⑩ Croatia | ⑭ Bulgaria |
| ③ Lithuania | ⑦ Hungary | ⑪ Montenegro | |
| ④ Poland | ⑧ Romania | ⑫ Albania | |

*Russia annexed Crimea in 2014

2.1.1. RESPONSES TO THE WAR

The **Minsk Agreement's** failure in bringing conclusion to the **geopolitical tension** between Russia and Ukraine highlights the need for a **permanent peaceful solution**. But the world seems to be more divided to respond to the challenge.

Response from Western Nations

- With Ukraine **yet to become a NATO member**, the response from the U.S. and the European allies is driven by **sanctions against Russia** and providing **military hardware, cash, and diplomatic support** to Ukraine.
- **Resolutions against Russia** at the United Nations General Assembly (UNGA), UN Security Council (UNSC), International Atomic Energy Agency (IAEA) etc., **use of sanctions and diplomacy** to put pressure on others, including India.

India's Response

- India has maintained an independent response based on its **national interest** and **principles** rather than pressure of any nation (see image).
 - **India abstained from voting** in all resolutions.
- These principles work towards a **safe and sustainable solution** based on **international norms and principles**.
- It does not vilify any side but provides **humanitarian relief and assistance** to people rather than arms to them. E.g.
 - India sent **90 tonnes** of humanitarian assistance to **Ukraine**.
- It highlights **strategic autonomy** in times of a global upheaval and to reach a peaceful resolution through shared responsibility.

Challenges to India's Response

The UN Secretary General praised Indian efforts due to its **respect** as a **nation across the board** and **ability to reach out to both sides** over the current situation. But it comes with its own challenges in a **globally interdependent world**:

- **Closeness with USA:** India-USA share common understanding on many **strategic issues**, especially on the **eastern side of India** such as the **Indo-Pacific Ocean**. E.g., formation of **QUAD**.
- **Supply of Vital Import Items:** The Ukraine-Russia war and growing sanctions against Russia, makes it difficult for India as it has good trade relations with both countries.
 - **Sanctions against Russia includes-** Freezing of Russia's central bank assets; Blocking of major Russian banks from the international **SWIFT payment transfer network**; barring Russian airlines from airspace over the EU, UK, US, and Canada etc.
- **Arms Trade with Russia:** Russia remains the major arms supplier of India, but the war has once again increased US threats of application of CAATSA.
 - As per SIPRI data, Russia contributed **46%** of India's total arms imports in **2017-21** (**69%** in **2012-16**).

Minsk Agreement – I (2014)

- A **12-point ceasefire agreement** signed between Russia, Ukraine Organisation for Security and Cooperation in Europe (OSCE) and the pro-Russia leaders from Donetsk and Luhansk at **Belarus**.

Minsk Agreement – II (2015)

- Also known as **Normandy Four**, it was signed between **France, Germany, Ukraine, and Russia** after failure of Minsk Agreement-I.
- It gave **13-point package** to facilitate implementation of Minsk Agreement.

PRINCIPLES BEHIND INDIA RESPONSE



Countering America's Adversaries through Sanctions Act (CAATSA), 2017

- It is a **US federal law**, passed in 2017, to **impose sanctions** on Iran, North Korea, and Russia. From USA perspective, it aims to
 - Countering **Iran's Destabilizing** activities,
 - Countering **Russian Influence** in Europe and Eurasia, and
 - **Korean Interdiction** and Modernization of Sanctions.
- Under the law, the US can impose **strict sanctions on countries** that **buy defence hardware** from Russia to economically hurt it. E.g., it imposed sanctions on **Turkey** on purchase of **S-400 Triumf surface-to-air missile defence system** from Russia.
- India also faced **sanction threats** on its US\$5 billion S-400 missile system deal with Russia.

2.1.2. GLOBAL GEOPOLITICAL CHANGES AND INDIA

The Russia-Ukraine war has amplified the long-held Western world obsession against Russia. Use of coercive tactics has further divided nations into two **geopolitical blocs**. As the war progresses, it can lead to significant geopolitical changes across the world including changing dynamics of India's relations with major powers.

Potential Changes/Threats in different Regions

- **Europe:** Relations likely to expand towards **Africa** and **Asia-pacific** to diminish its dependence on Russia for oil and other commodities.
- **Caucasus and Central Asia:** Close neighbors of Russia-Ukraine; it will enhance trade difficulties for them. E.g., **5 central Asian countries are landlocked** and freely floating naval mines are reported from **Black Sea-** maritime access of Caucasus.
- **Western Hemisphere:** Facing high inflation pressure, higher oil prices can cause instability in Central American and Caribbean region. The exporters of oil, metals and agriculture products like Brazil, Chile etc. might mitigate the impact.
- **Sub-Saharan Africa:** Already in hard phase of **minimum policy space** due to pandemic, the dependence on wheat imports from Russia or Ukraine will intensify socio-economic pressures.
- **Middle East and North Africa:** The rising food prices will give rise to food insecurities with risks of **political instability** similar to **Arab Spring**. E.g., Egypt imports 80% of its wheat from Ukraine.
- **Indo-Pacific:** The growing **Chinese aggression** (e.g., Taiwan) makes the region vulnerable to unilateral changes to the status quo with force.

India's Current Approach and its Geopolitical Equations with Major Powers

- **India's approach:**
 - India has adopted the **strategic autonomy** approach to maximize its policy space. E.g.
 - ✓ **Priority to National Interest over bloc politics** helped India in getting discounted oil, fertilizer, and other commodities from Russia,
 - ✓ **Diplomatic Activism** helped India to evacuate over 22,500 Indians and foreign nationals from 18 countries in a mission mode (**Operation Ganga**).
 - But lot of future depends on continuity of **Geopolitical Pragmatism** and India's **geopolitical equations** with major powers. Presently, it shares good relationship with almost all major powers except China, due to reasons like tensions on India-China border.
- **Emerging differences:** But shadows of ongoing Ukraine crisis loom large over its relationship with western world because of differing perception. E.g.
 - **EU and UK** have cordial relationship with India with ongoing trade, climate change and Indo-pacific as areas of common interest. But **expectation gaps have increased because of different perspectives on Ukraine crisis**.
 - **India-USA** partnership is a **Comprehensive Global Strategic Partnership** covering multiple areas (Indo-Pacific, terrorism and violent extremism, drug-trafficking, cyberspace etc.) based on shared interests. But USA wants to nudge India away from Russia and shift towards USA on major areas such as **defence and oil**.
- **The desire and dynamism to accommodate these differences** will play a significant role in India's equation with western world, especially when Russia is a time-tested friend (with Treaty of Peace, Friendship and Co-operation) since 1971.

2.1.3. SOCIO-ECONOMIC IMPACT OF WAR

Traditionally, wars have caused damaging impacts on nations going to war through-

- **Economic** – Loss of GDP, High Inflation, Rise in Debt, damage to Buildings, Infrastructure etc.
- **Socio-Cultural** – Loss of education, health, and cultural heritage, and
- **Psychological impacts** on its people and nation.

But in modern interconnected world, the impact of the Russia-Ukraine war is felt across the world. **India is also not untouched with significant socio-economic impacts** felt or to be felt such as:

- **Oil Prices:** Sanctions on Russia have pushed oil prices to above US\$100/barrel. With India being the **3rd largest oil importer** after China and USA, every **1-dollar price rise** increases India's import bill by **₹10,700 crore** on annualized bases.
 - A corollary of oil price rise is the **rise in Global Inflation** which will **hurt India's growth** with increased cost of living and disturbance to other macroeconomic variables.
- **Gas Prices:** Gas prices have increased over **50%** this year after a **fivefold** rise last year. This price rise increases India's import bill and the **current account deficit**.
- **Agriculture:** Russia and Ukraine are major global suppliers of some commodities (see **image**). Also, Russia accounts for **15%** of global **nitrogenous fertilizer** trade and **17%** of global **potash fertilizer** trade.
 - On one hand it has opened new opportunities for India in wheat export and on the other hand it has caused hardships over fertilizer availability and **sunflower oil** as **Ukraine accounts for 1.4 MT** of India's imports out of total **1.9 MT** import every year.
- **Metals:** Russia is a major producer of Titanium, Palladium, Scandium, Rough Diamond etc. Due to war and sanctions, it will have negative impact on India's **diamond industry** (reduced imports) and supply chain issues for semiconductor industry, **automobile companies** etc.
- **Export Concerns:** Russia and Ukraine are major export destinations of Indian pharmaceutical industry. Also, Russia accounts for 18% of Indian tea exports.

Way Forward

“Wisdom is to live in tune with the mode of the changing world.”

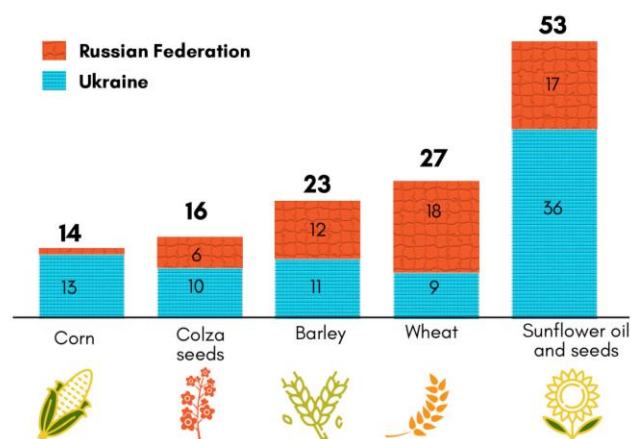
-Thiruvalluvar

The global impact of the Russia-Ukraine war points toward a **highly paradoxical world** with **strong interdependence**. India also needs to live in tune with the ongoing **global upheaval** maintaining optimal relationship with all major powers. Emphasis needs to be given on following areas-

- **Handle Financial Volatility** from inflation, mounting trade costs and disruption by reconfiguring the complex global supply chain for sustainable development.
- **Overcome social impacts** by improving overall prosperity to emerge as a stronger geopolitical actor.
- **Reduction of its dependence** on other nations for its defence and critical supply needs i.e., taking forward the idea of Atmanirbhar Bharat.



Russian Federation and Ukraine: Global players in agrifood markets (Percentage)



Source: UNCTAD calculations, based on 2020 data from United Nations Comtrade Database.
*Harmonized System codes are 1001 (wheat), 1003, (barley) 1005 (corn), 120510 (colza seeds) and 120600 and 151211 (sunflower seeds and oil).

- **Work towards end of Cold War Mentality** by engaging with all major stakeholders on multiple forums and making efforts to strengthen global institutions.
- **Building upon the UN Charter**, international law and respect for sovereignty and territorial integrity to ensure a common and sustainable legal order.

United Nations Charter: Preamble

WE THE PEOPLES OF THE UNITED NATIONS DETERMINED

- to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and
- to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small, and
- to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and
- to promote social progress and better standards of life in larger freedom,

AND FOR THESE ENDS

- to practice tolerance and live together in peace with one another as good neighbours, and
- to unite our strength to maintain international peace and security, and
- to ensure, by the acceptance of principles and the institution of methods, that armed force shall not be used, save in the common interest, and
- to employ international machinery for the promotion of the economic and social advancement of all peoples,

HAVE RESOLVED TO COMBINE OUR EFFORTS TO ACCOMPLISH THESE AIMS

Accordingly, our respective Governments, through representatives assembled in the city of San Francisco, who have exhibited their full powers found to be in good and due form, have agreed to the present Charter of the United Nations and do hereby establish an international organization to be known as the United Nations.

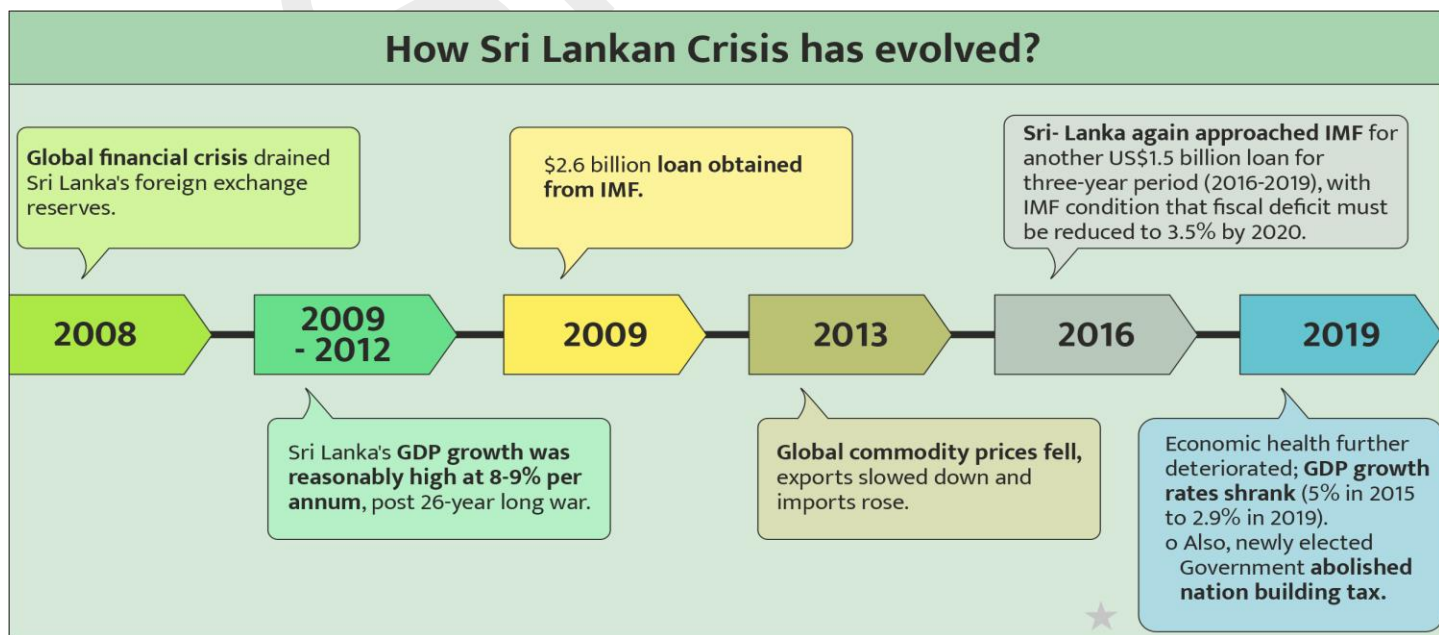
2.2. SRI- LANKA CRISIS

Why in news?

Recently, India has extended financial assistance for purchasing fuel, food, and medicines, to help Sri Lanka tackle a massive economic and energy crisis.

More in news

- India has assured its **continued cooperation in coping with the unprecedented economic crisis in the Sri Lanka**.
- Sri Lanka has also **asked India if it can reach out to some of its bilateral and multilateral partners** like the US, Japan, Australia, and ASEAN, and play “guarantor” to seek financial help for Sri Lanka.
- Sri Lanka **has been going through a severe economic crisis caused in some measure** by a shortage of foreign exchange resulting in lengthy power cuts, price spirals and a shortage of essential items.



Reasons for the Sri-Lanka crisis

- **Default on foreign debt:** Economic mismanagement has **depleted most of Sri Lanka's foreign reserves**. Sri Lanka defaulted on its foreign debt worth \$51 billion as it faces the worst economic crisis, for the first time since its independence in 1948.
 - Sri Lanka's **high dependency on imports for essential items like sugar, pulses, and cereals may result further in the economic meltdown** as Sri Lanka lacks foreign reserves to pay for its import bills.
 - The situation was further aggravated due to additional **tax cuts which ended up hurting Government Revenue**.
- **Debt Trap Diplomacy:** It is claimed that Sri Lanka was caught in a **vicious web of money lending by China** for infrastructure projects (Hambantota Port) and were unable to pay them back.
- **Fall in tourism:** The rise of the Covid-19 pandemic and **Easter bomb blast 2019** led to a **fall in tourism revenues**, as loss of visitors from three key countries- India, Russia and UK.
 - Tourism earnings fell from **\$4.4 billion in 2018 to \$506.9 million in 2021**.
 - Tourism is Sri Lanka's **third largest foreign exchange earner**.
- **Agriculture crisis:** In 2020, due to **ban on chemical fertilizers** and switching overnight to make agriculture 100% organic had a negative impact on the economy, especially in rice and sugar production.
 - In just one year, the state of agriculture productivity totally devoid of any fertiliser and pesticide fell into ruins as **farmers were unprepared for the sudden shift to organic farming**.
 - The government **revoked the fertiliser ban in November 2021**, but by then the damage had already been done as food security of the nation had totally broken down due to a Sri Lanka's agricultural land remaining unused due to a **lack of timely availability of fertilizers leading to fall in productivity**.
 - According to estimates, **Sri Lanka's paddy, tea and rubber production are dependent on chemical inputs in a range of 90-94%**.
 - Organic farming can do more harm than good if implemented in a hurry without preparing the infrastructure and the farmer mindset and most importantly ensuring that food security is not adversely compromised due to its adoption owing to **low yield than conventional farming**.
- **War-induced inflation:** The ongoing Russia-Ukraine war resulted in **steep price inflation of crude oil, sunflower oil and wheat**.
 - Crude oil prices hit a record high in 14 years with prices soaring over \$125/barrel.
 - As per the Central Bank of Sri Lanka, **headline inflation rose to 18.7%** and food inflation stood at 30.2% in March 2022.
- **Fall in FDI:** Foreign direct investment (FDI) has **drastically decreased to \$548 million in 2020** as compared to \$793 million and \$1.6 billion in 2019 and 2018, respectively.
- **Weak currency:** In 2022, Sri Lankan Rupee **depreciated by more than 50 percent** against the US dollar, 31.6 percent against Indian Rupee.

Measures taken by Sri Lanka to control the crisis

- **Banned import of luxury vehicles**, chemical fertilisers and food items like turmeric to prevent foreign currency outflows.
- **Enhancing remittance inflow** by establishing a contributory pension scheme for migrant employees, etc.
- Government has made provisions for **Special Deposit Accounts** to boost investors' confidence.
- **Assistance from bilateral partners** like Bangladesh, India and China.
 - So far, India has provided financial assistance of US\$ 2.4 billion.

Impact of Sri Lanka crisis on India

- **Refugee crisis:** Due to lack of comprehensive refugee policy, an influx of refugees in India can **increase supply-side shock and competition** in labor market, strain healthcare services due to emergence of vector-borne and infectious diseases if refugee camps lack proper sanitation.
- **China's influence:** Sri Lankan has asked for USD 2.5 billion emergency aid from China, there is threat that China may gain its **influence in the island country**.
- **Impact on trade:** India relies considerably on Colombo port for global trade as it is a trans-shipment hub. Thus, any disruption in Colombo port operations makes India vulnerable to an increase in costs and congestion issues.
 - Imposition of curbs on spot trading and foreign contracts have negative implications for India's exports to the country.

- **Rise of rebel groups:** Tamil rebels and dissident group like **Sinhalese population can take up arms** in the time of crisis and can led to civil war in island nation.
- **Investment:** Ongoing crisis pauses **threat to investment and operations of multiple Indian companies** like Indian oil, Airtel, Tata communications etc. which in turn can impact the revenues of these viz a viz negatively impact Indian economy.

Role of India in Sri Lanka crisis

- **Enhance production:** India can boost the essential medicines production, and later **develop Indian pharmaceutical production facilities in the short-term**, while working to build the capacity of Sri Lanka's own industry.
 - As of now, 85% of all pharmaceutical products in Sri Lanka are imported, which makes them vulnerable to price spikes.
- **Investment:** The credit lines and currency swaps will help Sri Lanka address its immediate concerns, and investments approach will provide a long-term solution.
- **Counter China:** Any disillusionment in Colombo with Beijing eases India's effort to keep the Lankan archipelago out of **China's 'string of pearls' game in the Indo-Pacific**, as witnessed by cancellation of the Chinese energy projects in the Jaffna Peninsula.
- **Global exports:** Amid worsening crisis and decline in production and shipment, can **provide opportunities for Indian exporters to export products** such as tea, textile products and increase market share.
- **Defence:** India is offering a free-Floating Dock Facility and a Dornier Reconnaissance Aircraft to Sri Lanka, along with a training team. This will further help **boost security in the Indian Ocean region**.
- **Infrastructure:** India has an opportunity to have a **major role in infrastructure creation in Sri Lanka** as highlighted by renewable energy projects in Mannar and Pooneryn in north, port development etc.
 - Indian businesses can build supply chains that intertwine the Indian and Sri Lankan economies in goods and services ranging from tourism to information technology services.
- **Resolving past issues:** Crisis should be used as an opportunity for New Delhi and Colombo to thrash out a **solution to the Palk Bay fisheries dispute**, a longstanding irritant in bilateral ties.
 - Also, India should ensure that the present crisis is not used to step up smuggling activities and trafficking in both countries.

Conclusion

Neither Sri Lanka nor India can afford to have strained relations. India needs to engage with Sri Lanka even more closely in line with India's Neighborhood First Policy and step-up people-centric developmental activities while scrupulously clear of any interference in Colombo's domestic affairs.

2.2.1. EXTERNAL DEBT CRISIS

Why in News?

Facing its worst economic crisis, the Sri Lankan government has suspended its normal debt servicing of external public debt pending an IMF bailout package due to its critically low forex reserves.

About External Debt Default and

- **External debt** refers to the **portion of a country's debt** which is **borrowed from foreign lenders** such as commercial banks, governments, or international financial institutions (IMF, World Bank etc.).
- Government can take it to finance **excess expenditures, build additional infrastructure, financial recovery from natural disasters**, or to **repay previous external debt**.
 - When a nation fails to make **required interest or principal repayments** on a debt (loan or a security), it is known as **External Debt Default** or **sovereign default**.
- External debt is at **higher risk for sovereign default** as it is to be paid back in the currency in which it is borrowed and the government **cannot inflate or print its way out** of the debt.
- It is **usually caused** by a combination of reasons such as **economic mismanagement, high debt burden, economic stagnation, political instability**, or a **banking crisis**.

Consequences of External Debt Default

With an overall external debt of around **\$51 billion**, the defaulted debts from Sri Lanka include **all international bonds, all bilateral loans** excluding **swaps** between the **Central Bank** and a **foreign central bank**, **all loans with commercial banks** and **institutional lenders**. It can have serious consequences on the nation such as:

- **Impact on economic variables:**
 - **Economic Recession or Currency Devaluation** due to the withholding of future releases of assets by lenders and reduced access to debt markets for years to come.
 - **Downgrade of Sovereign Rating** by rating agencies, which further reduces the ability to raise funds and ability to attract Foreign Investments.
 - **Rise in Interest Rates**, to tackle high inflation, leading to lower economic growth due to reduced investments.
- **Impact on ground-level economic scenario:**
 - **Inability to import even necessary items** such as food, oil, pharmaceuticals etc. with long queues for essentials.
 - **Increased Cost of Living** due to high inflation, reducing people's ability to save.
 - **Loss of Jobs and lower spending on Health, education** etc. due to the **Austerity Measures**.
- **Impact on politico-economic connections:**
 - **It can cause collapse of financial institutions or political unrest** in the country, which can turn into civil war or revolution.
 - **Erodes the confidence** of foreign and domestic creditors, making it more difficult and costly to refinance debt.

External Accounts Pressure: Lessons from India

- Despite its high fiscal deficit and trade imbalance, India has a history of zero sovereign default.
- The worst of crisis faced by India are- **Balance of Payment Crisis (1991)** and the **Asian Financial Crisis (1997)** - due to the **political uncertainties, strained foreign exchange reserves, high interest-rates**, and issues of **bad loans**.
- Indian efforts to overcome these **internal and external challenges**, provides number of lessons to others such as:
 - **Focus on Fundamentals** and **performance on macro-variables** such as growth rate, inflation, framework to reduce fiscal deficit such as FRBM Act, 2003 etc.
 - **Low External debt to GDP ratio** (21.1% by end of March 2021).
 - **Forex Reserves** to cover total external debt including the short-term debt from private sector apart from sovereign external debt.
 - Preference to **non-debt creating flows**,
 - **High Debt Service Ratio** (8.2 in 2021) for higher repayments.
 - ✓ Debt Service Ratio is the **ratio of a country's debt service payments (principal + interest) to its export earnings**.

Way Forward

Overcoming external debt default and its future recurrence depends on the ability of nations to stay away from the **Vicious Cycle of External Debt**, i.e., the cycle of continuous borrowing, accumulating payment burden, and eventual default. This can be done through measures such as:

- **Addressing Structural Vulnerabilities**, i.e., reducing fiscal deficits and inflation through fiscal consolidation and tighter monetary policy for stronger and sustainable growth.
- **Restoring Balance of Payments** through economic transformation to reduce imports (to conserve foreign reserves) and increase exports (to enhance foreign reserves).
 - Higher taxes on non-essential imports as well as other import items can help in it.
- **Restoring debt sustainability** by strengthening domestic revenue mobilization and constant watch over developments that may adversely affect exchange markets.
 - E.g., the impact of currency depreciation on banks' balance sheets.
- **Competition and productivity enhancement** through reforms and investments. E.g., investments in agriculture for higher productivity amid rising food prices.
- **Strengthening Prudential Regulations** to cover all risks, keeping in view the international best practices and specific requirements of the country.
- **Strong political commitment to transparency and accountability** to gain people's trust and avoid issues of corruption, inefficient investments etc. People's trust can also lead to increased remittances/help from Diaspora.

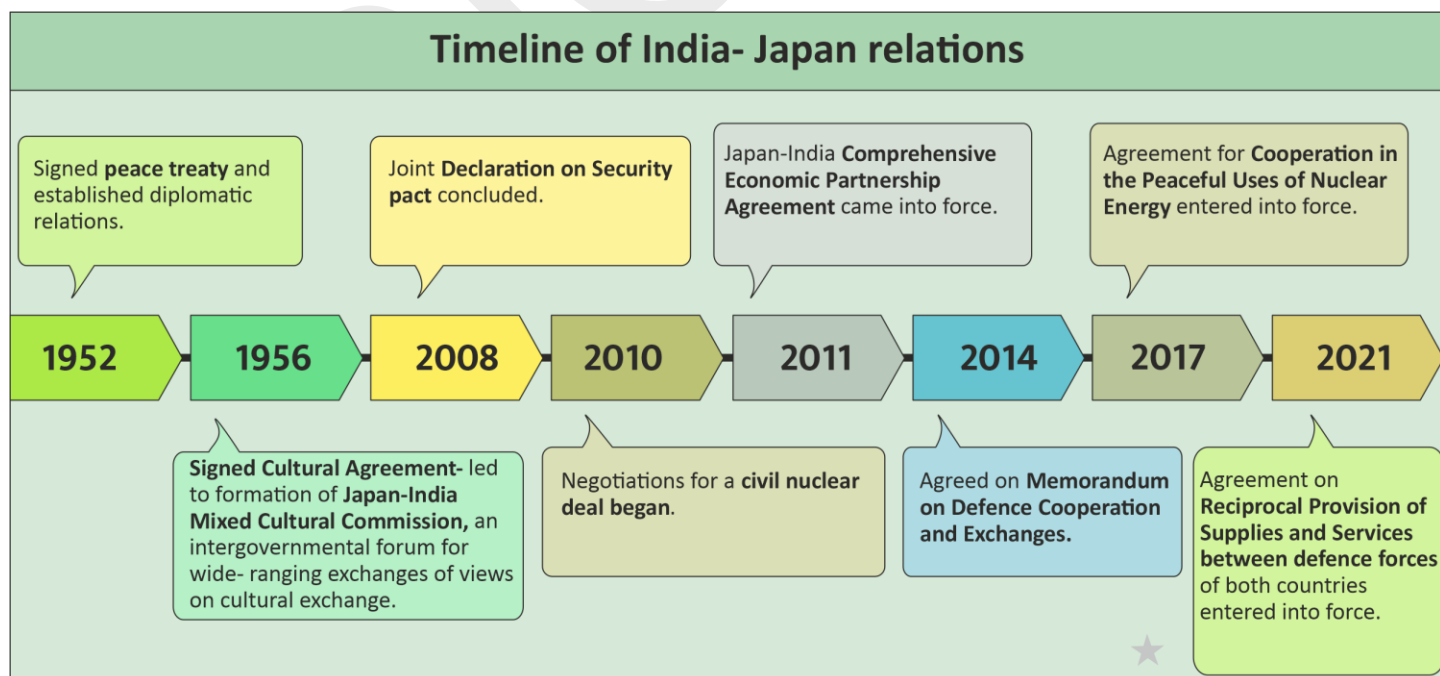
2.3. INDIA-JAPAN RELATIONS

Why in news?

- Recently, Prime Ministers of India and Japan held **14th India Japan Annual Summit in New Delhi**.
- Also, year **2022 marks the 70th anniversary** of the establishment of their **diplomatic relations**.

Key Highlights of the summit


Initiative/cooperation	Features
Clean Energy Partnership (CEP)	<ul style="list-style-type: none"> • Launched under the overall ambit of the 'India-Japan Energy Dialogue' established in 2007 for cooperation towards achieving sustainable economic growth, addressing climate change and ensuring energy security.
Joint Crediting Mechanism (JCM)	<ul style="list-style-type: none"> • Established for implementation of Article 6 of the Paris Agreement related to private capital flow to developing countries. <ul style="list-style-type: none"> ○ Article 6 of Paris Agreement recognizes that some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity.
Sustainable development	<ul style="list-style-type: none"> • Both countries signed Memorandum of Cooperation (MoC) on Sustainable Urban Development such as decentralized domestic wastewater management, intelligent transport management system etc.
Climate initiative	<ul style="list-style-type: none"> • Japan would be joining the Indian-Swedish climate initiative LeadIT to promote heavy industry transition. <ul style="list-style-type: none"> ○ LeadIT (Leadership Group for Industry transition) is a voluntary initiative for promoting low-carbon transition especially in the hard-to-abate sectors like Iron & Steel, Aluminium, etc.
Development of Northeast India	<ul style="list-style-type: none"> • Both sides agreed to launch 'Sustainable Development Initiative for the Northeastern Region of India' which includes both ongoing projects and possible future cooperation in connectivity, healthcare, new and renewable energy, as well as initiative for strengthening bamboo value chain.
Seat at UNSC	<ul style="list-style-type: none"> • Indian Prime Minister reiterated India's support for Japan's candidature for a non-permanent seat at the UNSC for the term 2023-2024.
Investment	<ul style="list-style-type: none"> • Japan to invest Rs. 3.2 lakh crores in India over next five years. Both sides are working as 'One team -One project' on Mumbai-Ahmedabad high-speed rail corridor.
Cybersecurity	<ul style="list-style-type: none"> • MoC signed in the field of cybersecurity for information sharing, capacity building programs and cooperation.




Significance of India- Japan relations

- **Multilateral cooperation:** Both countries are part of the **Quad, G-20 and G-4** and expressed their commitment to promote peace, security, and prosperity at global level.
 - **G20** comprises Argentina, **Australia**, Brazil, Canada, China, EU, France, Germany, **India**, Indonesia, Italy, **Japan**, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, UK, and **USA**.
 - **G4** is a grouping of **Brazil, Germany, India, and Japan** which are aspiring to become permanent members of United Nations Security Council (UNSC).
- **Economic cooperation:** Japan is the largest **Official Development Assistance (ODA)** partner for India.
 - In 2011, two countries signed a **Comprehensive Economic Partnership Agreement (CEPA)** to facilitate growth in bilateral trade.
 - During 2019-20, bilateral trade between both countries totalled **US\$ 11.87 billion**.
 - In 2020, **India was the 18th largest trading partner for Japan**, and **Japan was 12th largest trading partner for India**.
 - Earlier, India and Japan signed **currency swap agreement**.
- **Defence cooperation:** Both countries engage in **bilateral exercises**- Dharma Guardian (Army), Shinyuu-Maitri (Airforce), JIMEX (Navy).
 - Since 2015, in **Malabar exercises**, Japan has also become a permanent participant along with India and US.
 - Both countries signed **Acquisition and Cross-Servicing Agreement (ACSA)** to exchange supply and services during bilateral exercises and training, UN Peacekeeping Operations, and other Humanitarian activities.
- **Strategic Cooperation:** Japan welcomes the **Indo-Pacific Ocean's Initiative (IPOI)** announced in 2019 at **East Asia Summit (EAS) in Bangkok** for promoting safe, secure, and stable maritime domain, sustainable use of marine resources, and disaster prevention and management.
 - To **counter China's dominance of supply chain in Indo-Pacific region**, both countries launched the Supply Chain Resilience Initiative (SCRI). The initiative aimed at promoting trade facilitation by identifying supply chain risks and mapping out the complementarities among the countries.
 - **Asia-Africa Growth Corridor (AAGC)** between both countries is characterized as a response to China's Belt and Road Initiative (BRI).
- **Science & technology:** India-Japan Digital Partnership is running smoothly, for **digital transformation and opportunities for Indian IT professionals** as well as collaboration in the area of AI, IoT and other emerging technologies.
- **Historical ties:** Exchange between Japan and India is said to have begun in **6th century when Buddhism was introduced to Japan**. Indian culture, filtered through Buddhism, has had a great impact on Japanese culture, and this is the source of the Japanese people's sense of closeness to India.


CURRENCY SWAP

WHAT IS CURRENCY SWAP: 


One country exchanges its national currency for that of another or even a third one

INDIA-JAPAN SWAP: 

India can acquire yen or dollars from Japan up to \$75 billion in exchange for rupees. The exchange has to be reversed after an agreed period

TERMS OF AGREEMENT: 

The facility is entered into between central banks of two countries. The terms of the swap and its cost are also included. The exchange rate is typically fixed for a transaction. The borrowing bank pays interest for use of funds

How Does It Help 

- RBI's \$393-billion chest gets a one-shot \$75 billion boost
- There is no immediate cost; only when an amount is drawn
- Short-term liquidity mismatches can be met quickly
- It improves market sentiment, curbs speculative pressure on the rupee
- Foreign investors will draw comfort from the arrangement

Concerns with respect to India- Japan relations

- **Trade:** Strategic partnership needs stronger economic ties as India-Japan trade languishes at around \$15 billion in 2017, a quarter of trade with China while Japan-China trade is around \$300 billion.
 - **Key factors that hinder services exports from India to Japan** include linguistic barriers, Japan's unique industrial organisation system, lengthy visa procedures, lack of Mutual Recognition Agreements, etc.
- **Asia and Africa Growth Corridor (AAGC) Skepticism:** The weaker economic and military engagements with African countries pose a challenge to the stable environment on which an Asia and Africa Growth Corridor depends.
- **Different interest:** India's exit from Regional Comprehensive Economic Partnership (RCEP) was understandable given the trade deficits and domestic opposition, but from Japan's view, India's return to RCEP would contribute to

strengthening the Australia-India-Japan security network vis-à-vis the rising Chinese military presence in the Indo-Pacific region.

- **Common ground:** India and Japan relation is developing in backdrop of rising China but not because of mutual grounds of development such as- trade, science & technology cooperation etc.
- **Pending projects:** Despite progress in bilateral economic cooperation, flagship bullet train project between Ahmedabad and Mumbai is still a work-in-progress with land acquisition still not complete.

Way forward

- **Investment:** Improved logistics, a more open, stable and consistent trade policy regime, and the establishment of a 'centralized single window clearance system' will increase India's attractiveness for Japanese investors.
- **Robust trade:** Both leaders must recognize the need for enhancing bilateral trade and encourage further review of the implementation of CEPA through existing mechanisms.
- **Counter China:** The annual trilateral **Malabar exercise**, which also includes United States, can give a vision where the three nations can combine militarily to counter the Chinese threat in the region.
- **Energy security:** Both countries should aim to develop stronger partnerships in various areas such as ensuring energy security through a **Green Energy Partnership** and **creating new innovative partnerships** in Manufacturing and MSME sectors.

2.4. INDIA-AUSTRALIA RELATIONS

Why in news?

Recently, the **2nd India-Australia Virtual Summit** was held between India's and Australia's Prime Minister.

More about News

- This summit followed the first Virtual Summit in 2020 when **the bilateral relationship was elevated to a Comprehensive Strategic Partnership (CSP)**.
- Both countries have developed a **substantial progress in deepening political, economic, security, cyber, technology and defence cooperation**.
- A significant outcome of the summit was the decision to **hold annual summits at the level of the Heads of Government under the CSP**.

Recent Developments in India-Australia relations

Key Highlights of the summit	
Economic and trade cooperation	<ul style="list-style-type: none"> • Both countries agreed to establish annual summits between PMs under CSP. • Both countries will aim to finalise Comprehensive economic cooperation agreement (CECA) at the earliest for economic security. • Increase cooperation between India's National Investment and Infrastructure Fund and Australia's Future Fund, which is a sovereign wealth fund. • Renewal of India-Australia MoU on Tourism Cooperation.
Climate, energy, science, technology and research cooperation	<ul style="list-style-type: none"> • Australia to invest over AUD 280 million to drive collaboration in areas such as clean technologies, maritime shipping, disaster resilience, information sharing space, innovation etc. • Extension of Australia-India Strategic Research Fund (AISRF) – a pillar of collaboration on science, technology and research. • MoU on Australian critical minerals project between Khanij Bidesh India & Australia's critical minerals facilitation office to mine critical minerals. • Cooperation on cyber governance, cyber security, capacity building, cybercrime, digital economy, and critical and emerging technologies via inaugural India-Australia Foreign Ministers' Cyber Framework Dialogue. • Agreement to establish India-Australia Centre of Excellence for Critical and Emerging Technology Policy in Bengaluru.
People-to-people ties	<ul style="list-style-type: none"> • Establish Taskforce on Education Qualifications Recognition to improve arrangements for recognition of qualifications for access to higher education, and support employment opportunities.
COVID-19 cooperation	<ul style="list-style-type: none"> • Promote fair, timely and equitable access to high quality, safe, effective and affordable COVID-19 vaccines, treatments and critical medical supplies globally.

Security and defence cooperation	<ul style="list-style-type: none"> Establish Young defence officer exchange program to boost military cooperation, improve training opportunities and enhance capabilities.
Regional and multilateral cooperation	<ul style="list-style-type: none"> Cooperation between Quad members on advancing its positive and ambitious agenda to promote regional stability and prosperity. <ul style="list-style-type: none"> Quad, informal strategic forum comprising four nations (India, Australia, US and Japan), work for a free, open, prosperous and inclusive Indo-Pacific region. Quad met for the first time in 2007 on sidelines of Association of Southeast Asian Nations (ASEAN).

Other important developments

- Economic Cooperation and Trade Agreement (ECTA):** It was signed recently and is **first free trade agreement (FTA) of India with a developed country** after more than a decade.
 - It will **boost bilateral trade in goods and services to \$45-50 billion over five years**, up from around \$27 billion, and generate over one million jobs in India.
- SAIEP (Study Australia Industry Immersion Program):** Launched by Australian Trade and Investment Commission for current Indian students at Australian universities to enhance their employability.
- Maitri Scholars Program:** Announced by Australian Foreign Minister to **provide over USD 11 million for four years to support Indian students** to study in Australia's world-leading universities.

Economic Cooperation and Trade Agreement (ECTA)

TRADE IN GOODS	TRADE IN SERVICES
<div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>Labour-intensive Indian sectors such as textiles, gems and jewellery, leather, food and farm produce and automobiles to benefit</p> </div> </div> <hr/> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>Australian coal, mineral ores and wines to get easier entry</p> </div> </div> <hr/> <div style="display: flex; align-items: center;"> <div> <p>Working group to explore market access issues for both sides in whisky and other alcoholic beverages</p> </div> </div>	<div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>Indian students in Australia to get work visas for two to four years</p> </div> </div> <hr/> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div> <p>Australian firms in business, communication, construction and engineering services to gain</p> </div> </div> <hr/> <div style="display: flex; align-items: center;"> <div> <p>Fast track approval for patented, generic and biosimilar medicines</p> </div> </div>

Significance of India-Australia relations

- Trade:** Australia is **17th largest trading partner of India**, while **India is Australia's 9th largest partner**.
- Minerals and Agriculture:** India has committed to **invest \$6 million jointly with Australian government** as it explores **lithium and cobalt mines** in Australia. The move helps India to secure supplies of key minerals for its electric vehicle plans.
 - India - Australia Grains Partnership**, announced in 2021, to use Australia's expertise in post-harvest management to strengthen rural grain storage and supply chains so as to reduce losses and wastage.



- Strategic partnership:** CSP is based on mutual understanding, trust, common interests, shared values of democracy and rule of law, and reflects strong commitment of both countries to address challenges like COVID-19.
- Multilateral engagement:** Australia supports India's candidature in UN Security Council. Both countries are members of **Quad, G-20, IOR-ARC, ASEAN Regional Forum, Asia Pacific Partnership on Climate and Clean Development**.
 - In 2021, both countries along with Japan have launched **Supply Chain Resilience Initiative (SCRI)** for sustainable, balanced and inclusive growth in the region.
- Defence and Energy security:** Defence exercises like **AUSTRAHIND, AUSINDEX** increase military inter-operability, promotes peace, security and stability in Indo-Pacific region through their mutual logistics support agreement.
 - In 2014, both countries signed the **Civil Nuclear Cooperation Agreement** paving way for uranium sales to India and thus address India's energy concerns.

Challenges associated with India- Australia relations

- Trade issues:** The negotiation for CECA between both countries was started in 2011 to provide fillip to trade and investments between the countries. Still, both sides are **'too far apart' to conclude bilateral CECA** in near term.

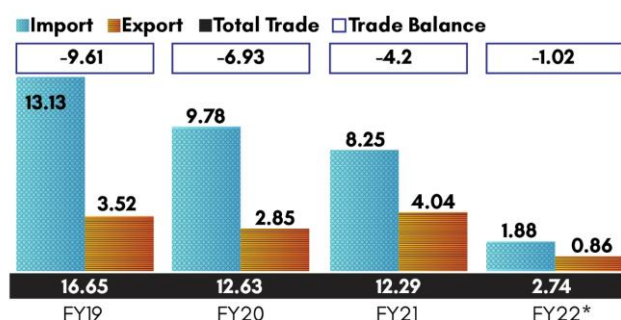
- **India's nuclear status:** Though Civil nuclear agreement has been signed in 2014, defence relation is constrained by India's status as a nuclear power despite not being a signatory of Non-Proliferation Treaty (NPT).
- **Agriculture:** India is keeping sensitive dairy and agriculture items out of the India-Australia FTA to protect Indian products from highly competitive Australian dairy sector.
- **Perception of Indo-pacific:** There is no coherent Indo pacific strategy as countries do not have one definitive vision for the region. It is largely seen as global construct to arrest China's rise.

Way Forward

- **Shared interests:** Both sides need to formulate a comprehensive shared Indo pacific vision which ensures inclusivity, transparency, openness and a rule-based order. Both sides should share the benefits of increased cooperation equally.
- **Economic cooperation:** India has to remove various governance bottlenecks and ensure speedy engagement. CECA need to be concluded immediately in order to realize the untapped trade potential.
- **Work together on maritime border protection:** The protection of maritime borders against terrorist activities and other threats is a major shared concern. Both countries should work together to further develop systems to identify maritime threats across the Indian Ocean.
- **Focus on humanitarian and disaster relief:** Both sides should develop a cooperative system with other concerned states for responding to natural disasters in eastern Indian Ocean.
- **Cooperate in international groupings:** Both nations need to work together to make Indian Ocean Rim-Association for Regional Cooperation (IOR-ARC) and Indian Ocean Naval Symposium (IONS) groupings more effective. The two countries should also cooperate in international initiatives to curtail the proliferation of weapons of mass destruction.

NARROWING GAP

Indian-Australian trade (\$bn)



2.5. INDIA-UAE CEPA

Why in News?

Recently, India placed **India-United Arab Emirates (UAE) CEPA** in public domain.

About Trade Agreements (TAs) and CEPA

- Trade Agreement (TA) is an arrangement through which countries provide **preferential treatment** to each other.
- It helps them in **ease-of-trade** by eliminating tariff and non-tariff barriers to trade, movement of **capital** and of **labor**.
- CEPA, i.e., Comprehensive Economic Partnership Agreement is a comprehensive TA covers:
 - Negotiations on **trade tariff and Tariff rate quotas (TQR) rates**,
 - Trade in **services and investment**,
 - Other areas of **economic partnership** such as **customs cooperation, competition, and Intellectual Property Rights (IPR)**; including the **regulatory aspects** of trade.
- India has already signed a CEPA with **Japan and South Korea**.

India-UAE CEPA and its significance





Built over the foundations of 50 years of **strong bilateral ties**, it is the **first deep and full** Free Trade Agreement (FTA) signed by India with any major trading partner in last decade.

- **Providing a more favorable climate** for the promotion and development of economic and trade relations as it covers almost all the tariff lines dealt in by India (11,908 tariff lines) and the UAE (7581 tariff lines) respectively.
 - It will benefit **tariff lines** which account for **99% of Indian exports** to the UAE in value terms. Presently, Indian products are subjected to **5% import duty**.

- India will offer preferential access to UAE on over **90%** of its **tariff lines**.
- **Protecting public welfare objectives**, such as health, safety, environmental protection, conservation of living or non-living exhaustible natural resources, etc.
 - India-UAE CEPA cover all aspects of trade such as **Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Government Procurement, IPR**, etc
- **Facilitating access to Indian Pharmaceuticals** products through automatic registration and marketing authorization in 90 days for products meeting specified criteria.
- **Promoting greater regional economic integration** with benefits limited not only between the members but for the region as well. E.g.
 - It will **open gateways** for India to markets of **Gulf Cooperation Council** and **Middle Eastern Countries, Africa, CIS countries** and some **European countries**.
- **Supporting harmonious development and expansion of world trade** by promoting efficient and transparent customs procedures to reduce costs and ensure predictability.
 - It can help India to achieve its target of **\$1 trillion** goods exports by **2030**.
- **Creating new employment opportunities** in India as well as in UAE, raising the living standards of people and general welfare.
 - A strong Indian diaspora of nearly **3 million** people lives in UAE.

Challenges

But achieving this target requires India to overcome challenges faced by India with regard to Free Trade Agreements (FTAs):

INDIA-UAE PARTNERSHIP	
50 YEARS OF STRONG BILATERAL TIES	
ECONOMIC PARTNERSHIP UAE is India's third-largest trading partner with bilateral trade of \$59 billion in 2019-20.	 ENERGY UAE is an important supplier of crude, LNG and LPG . UAE is the first international partner to invest by way of crude oil in India's Strategic Petroleum Reserves Program .
CLIMATE ACTION Both nations have agreed to establish joint Hydrogen Task Force with special focus on Green Hydrogen .	FOOD SECURITY Resilient and Reliable food supply chains with focus on infrastructure and logistics .
FOOD SECURITY Resilient and Reliable food supply chains with focus on infrastructure and logistics .	 SECURITY COOPERATION Regular high level exchanges and holding of Annual Defence Dialogue for further co-operation on security and defence. E.g. Zayed Talwar 2021 .
 INVESTMENTS 8th largest investing country in India with cumulative FDI equity inflows of US\$ 11.19 billion (from April 2000 to March 2021). In 2021, UAE committed to invest US\$75 billion sovereign funds in India	
TECHNOLOGIES Increasing Cooperation in field of Space, Cyber Security and other Science and Technology sectors including startups in Emerging Technologies .	 OTHER AREAS OF COOPERATION Shared Cultural Heritage with large Indian Diaspora in UAE. Growing cooperation in Health and Education .

LOW UTILIZATION OF FTAs With less than 25% utilization in most estimates: <ul style="list-style-type: none"> ● Indian exports to FTA countries largely fail to outperform overall export growth. ● Rise in Indian imports is mostly greater than rise in Indian exports. E.g. after CEPA with South Korea and Japan, the trade deficit increased with exception of Sri Lanka FTA. 	INCONSISTENCIES OF FTAs <ul style="list-style-type: none"> ● Multiplicity of Trade Agreements. E.g. India has bilateral TAs with Singapore, Malaysia and with ASEAN as well, increasing discrepancies. ● Use of Non-tariff Barriers by developed countries such as product standards, Sanitary and phyto-Sanitary Measures etc.
FTA CHALLENGE FOR INDIA	
OTHER ISSUES <ul style="list-style-type: none"> ● Lack of awareness in corporate about other countries market, benefits of FTAs, ● Lack of focus on India's strong points such as services due to mutual recognition agreements. ● Low domestic safety and quality standards. ● Administrative issues with poor check on exports from other countries on rules of origin etc. 	SUPPLY SIDE BOTTLENECKS Domestic issues of: <ul style="list-style-type: none"> ● Higher Logistics Cost which reduces competitiveness, ● Energy Shortage and lesser Ease of Doing Business. ● Greater sensitivity of Indian exports to price changes and global demand.

Way Forward

India-UAE CEPA has opened opportunities for India to fill some of the damaged **Global Supply Chains** and **Global Skills Mobility** due to pandemic. India can tap these opportunities through:

- **Capacity Building** of local administration to ensure faster compliance and ease of doing business. E.g., better **Centre-State coordination** can help to sort out issues of infrastructure, energy, and logistics cost.
- **Benchmarking of domestic safety and quality standards** with global standards for quality manufacturing and avoiding dumping of lower quality hazardous goods in India.
- **Diversifying Indian exports** in terms of **markets** and the **products and services** to achieve **scale** and to overcome **demand and price sensitivity issues**.
- **Strengthening coordination between exporters and government** through hand-holding approach to provide guidance on UAE market and CEPA.
 - For instance, Indian Missions in UAE and its diaspora can be used for market awareness and in building networks.

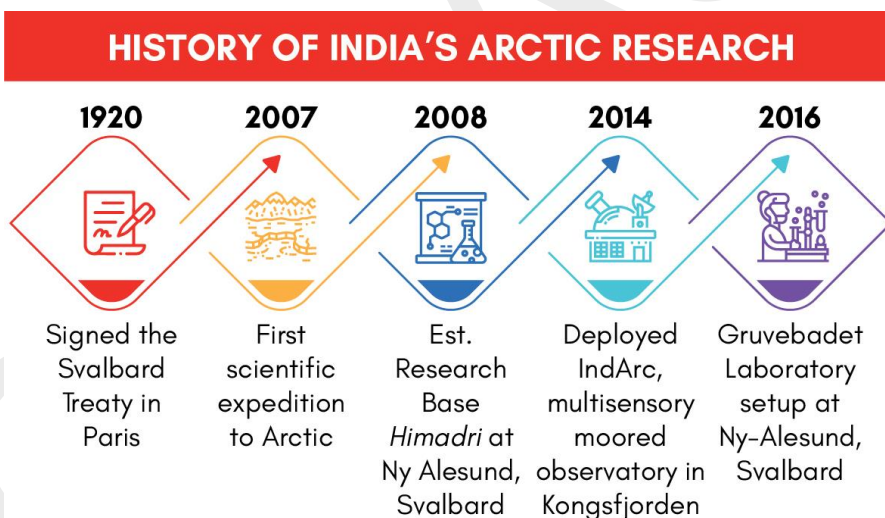
2.6. INDIA'S ARCTIC POLICY

Why in news?

The **Ministry of Earth Science (MoES)** has released the India's Arctic policy titled '**India and the Arctic: building a partnership for sustainable development**'.

About the policy

- **India's Arctic policy approach:**
 - Increase India's **participation in Arctic Council**.
 - **Harmonize polar research** with third pole- the Himalayas.
 - **Deepen cooperation** between India and countries of Arctic region under various Arctic forums.
 - Contribute **better analysis, prediction, and coordinated policymaking on the implications of ice melting** in Arctic on India's economic, military, and strategic interests.
- The policy will involve **multiple stakeholders, including academia, research community, business, and industry**.
- **National Centre for Polar and Ocean Research (NCPOR) in Goa**, an autonomous institute under MoES, is the nodal institution for India's Polar research programme, which includes Arctic studies.
- India's Arctic policy lays down **six pillars**:



Six pillars of the policy and its Objectives					
Science and Research	Climate and Environmental Protection	Economic and Human Development	Transportation and Connectivity	Governance and International Cooperation	National Capacity Building
<ul style="list-style-type: none"> • Strengthening existing research base at Himadri. • Encourage research to align with International arctic priorities. • Channelise and harness existing 	<ul style="list-style-type: none"> • Engage with partners to improve earth system modelling to support weather and climate predictions. • Contribute towards environmental management in 	<ul style="list-style-type: none"> • Explore opportunities for responsible exploration of natural resources and minerals. • Identify opportunities for investment in Arctic infrastructure. 	<ul style="list-style-type: none"> • Collaborate in the field of ship building with partners who have relevant expertise. • Promote opportunities for Indian seafarers to 	<ul style="list-style-type: none"> • Improve understanding of complex governance structures in the Arctic. • Actively participate in international climate change and 	<ul style="list-style-type: none"> • Strengthening institutional and human resource capacities. • Build indigenous capacity in building ships of ice-class standards.

<p>expertise across disciplines such as geo-engineering, cold biology, and microbial diversity.</p> <ul style="list-style-type: none"> • Establish satellite ground stations in Arctic for optimal exploitation of Indian satellites in polar orbits. • Expand remote sensing capability to Arctic and engage with Arctic nations for mutually advantageous sharing of India's RESOURCESAT data for land and water management. 	<p>the Arctic-methane emissions.</p> <ul style="list-style-type: none"> • Promote the use of high environmental standards while engaging in scientific and economic activities in the region. • Enhance India's engagement with Arctic region on fulfilling UN SDGs. • Engage with Arctic Council Working Groups - Conservation of Arctic Flora and Fauna and Protection of Arctic Marine Environment and promote exchange of knowledge, nature-based solutions and circular economy. 	<ul style="list-style-type: none"> • Undertake cultural and educational exchanges between indigenous community of glacial regions of Himalayas and Arctic. • Develop fail-safe seed storage facilities in cryospheric regions. • Establish digital partnerships with Arctic nations for promoting e-commerce. • Encourage Indian participation in sustainable tourism in Arctic. • Explore collaboration in traditional systems of medicines. 	<p>crew ships engaged in Arctic transits.</p> <ul style="list-style-type: none"> • Work towards linking of International North-South corridor with Unified deep-water system and its further extension to Arctic. 	<p>environmental treaty frameworks relating to the Arctic.</p> <ul style="list-style-type: none"> • Promote security and stability in the Arctic. • Uphold international law in particular UNCLOS, including rights and freedom contained therein. • Promote intergovernmental and other exchanges with Arctic nations, expert bodies and organisations. 	<ul style="list-style-type: none"> • Expand the capacity and awareness of Arctic related research by strengthening NCPOR. • Widen pool of experts in sectors like minerals, oil and gas, blue-bio economy in Arctic. • Expand India's trained manpower in maritime insurances.
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Need of Arctic policy

- **Rising Sea Level:** The **land ice loss due to global warming** is a major contributor to global sea-level rise, it can have a significant impact on **marine biodiversity**.
 - From 1971 till 2019, Arctic snow cover and extent of Arctic-sea ice have shrunk by 21 percent and 43 percent respectively.
- **Glacial melt in Himalayas:** It'll help the scientific community to better understand the glacial melt in Himalayas, which is the source of Ganga and Brahmaputra rivers, basins of which support a population of about 600 million.
- **Monsoons:** Changes in Arctic have a huge impact on global weather, climate and ecosystems including **Indian monsoons which impacts agriculture**, primary source of livelihood for about 58 percent of population and contributes around 20 percent to the GDP.
- **Mineral Resources and Hydrocarbons:** To potentially address India's **energy security needs and deficiency of strategic and rare earth minerals**, as Arctic region has rich deposits of coal, gypsum and substantial reserves of zinc, lead, placer gold etc.

Significance of Arctic for India

- **Arctic Council:** Since 2013, **India has been an Observer nation** and maintains that all human activity should be sustainable, responsible, transparent, and based on respect for international laws.
- **Connectivity:** The **Northern Sea Route (NSR)** which would connect the **North Atlantic to the North Pacific**- linking Europe with Asia in the north- through a short polar arc is the most tempting.
- **Resource-rich:** Melting ice opens up new opportunities like energy exploration, mining, food security and shipping. Arctic Sea is estimated to have as much 10 to 20 percent of the world's oil and nearly 30% of natural gas.
- **Regulate temperature:** Arctic helps to circulate the world's ocean current, moving cold and warm water around the globe, thus **distributing heat from surplus to deficit regions.**

- **Research:** Scientists are monitoring Arctic glaciers for their mass balance, in order to draw comparisons and **understand glacial behaviour in Himalayan region**. This makes the Arctic research crucial to India, which has begun to experience hints of global warming, disturbed climatic changes, uneven rainfall pattern, temperature differences, etc.

Concerns associated with changes in Arctic

- **Risks of irreversibility:** Impact of climate on Arctic, such as loss of sea ice and glaciers, may lead to system changes that scientist expect would be irreversible on a human timescale, even if temperatures stabilize.
- **Abrupt change risks:** Thawing of permafrost region can release dormant bacteria and viruses, which can lead to global pandemic (COVID-19). Also, release of radioactive waste from cold war nuclear reactors and submarine can led to radiation poisoning.
- **Increasing warming:** Melting of permafrost regions can release green-house gases (CO₂ and methane) decreasing ice caps can reduce reflection of insolation, thus exacerbate global warming.
- **Territorial claim:** There are unresolved boundaries between the Arctic States. A large portion of the arctic international waters as well as the north pole is claimed by both Greenland (Denmark) and Russia.
 - For instance, **US has continental shelf overlap** with Canada and Russia, while Russia and Canada themselves have differing continental shelf claims.

About Arctic

- It is **northernmost Polar region** on Earth, an **icy ocean surrounded by land**. (Antarctica is land surrounded by ocean.)
- Primary residents of Arctic include the **Eskimos (Inuits), Saami and Russians**.



About Arctic Council

- It was established by **eight Arctic States** through the **Ottawa Declaration of 1996**. These are— **Canada, Denmark** (including Greenland and the Faroe Islands), **Finland, Iceland, Norway, Russia, Sweden, and United States**. (India has **Observer Status**.)
- It is the **leading intergovernmental forum** promoting **cooperation, coordination and interaction among Arctic States**, indigenous peoples on issues of sustainable development and environmental protection in the Arctic.
- All **decision-making happens through consensus** between eight members, and in consultation with permanent participants.
- The Council does **not prohibit the commercial exploitation of resources** in the Arctic.
- It **not a treaty-based international legal entity** like UN bodies or trade, military or regional groupings like WTO, NATO, or ASEAN.

- Also, Canada and Denmark have a dispute over Hans Island.
- **Growing presence of China:** China, describes itself as a **Near-Arctic state**, projecting the Polar Silk Road as an extension of Belt and Road Initiative, and has invested heavily in ports, energy, undersea infrastructure and mining projects.

Way forward

- **Enhanced cooperation:** India should have close partnerships with countries of the Arctic region and other international partners to ensure sustainable development, peace and stability in the Arctic region.
- **Expert committee:** Constituting a dedicated expert committee to plan, monitor, steer, implement and review India's Arctic policy may help streamline the country's approach in a better manner.
 - India must also **officially appoint an 'Arctic ambassador/representative'** who will represent and voice India's perspectives on Arctic affairs.
- **Collaboration to diversify the sources:** As India does have a growing demand for energy, procurement of Natural Gas or newer resources like methane hydrates, from the Arctic region in collaboration with countries, will diversify its energy imports.
- **Global orientation:** Policy needs a more global orientation. International sensibilities towards evolving collaborations in scientific research needed to be incorporated. For instance, India's MoU with Canadian High Arctic Research Station is not mentioned in the document.

Related News

Polar Science and Cryosphere Research (PACER) scheme

- **PACER** scheme has been approved for continuation **during 2021-2026.**
- **About PACER scheme:**
 - Comprises the **Antarctic program, Indian Arctic program, Southern Ocean program and Cryosphere and Climate program.**
 - Implemented through **National Centre for Polar and Ocean Research (NCPOR)**, an autonomous institute under the **Ministry of Earth Sciences.**
- **Achievements:**
 - Executed **39th& 40th Indian Scientific Expedition to Antarctica** (41st ongoing).
 - **Automatic Weather Station (AWS)** systems installed at Baralacha La, in the **Spiti region.**
 - **IndARC** mooring system was deployed in **Kongsfjorden, Svalbard.**
 - Executed **11th Indian Southern Ocean Expedition.**

2.7. BENGAL INITIATIVE FOR MULTI-SECTORAL TECHNICAL AND ECONOMIC COOPERATION (BIMSTEC)

Why in news?

The **fifth summit** of the regional grouping, the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)**, held virtually in **Colombo.**

Important outcome of the Summit

- **Adoption and signing of the BIMSTEC Charter** presents BIMSTEC as “an **inter-governmental organization**” with “**legal personality.**” The grouping now views itself **not as a sub-regional organisation** but as a **regional organisation.**
- To **re-constitute and reduce the number of sectors of cooperation** from 14 to a more **manageable seven.** Each member-state will **serve as a lead for a sector (Refer table).**
- Adoption of the **Master Plan for Transport Connectivity** applicable for 2018-2028 which lays out a guidance framework for connectivity related activities in the region in the future.

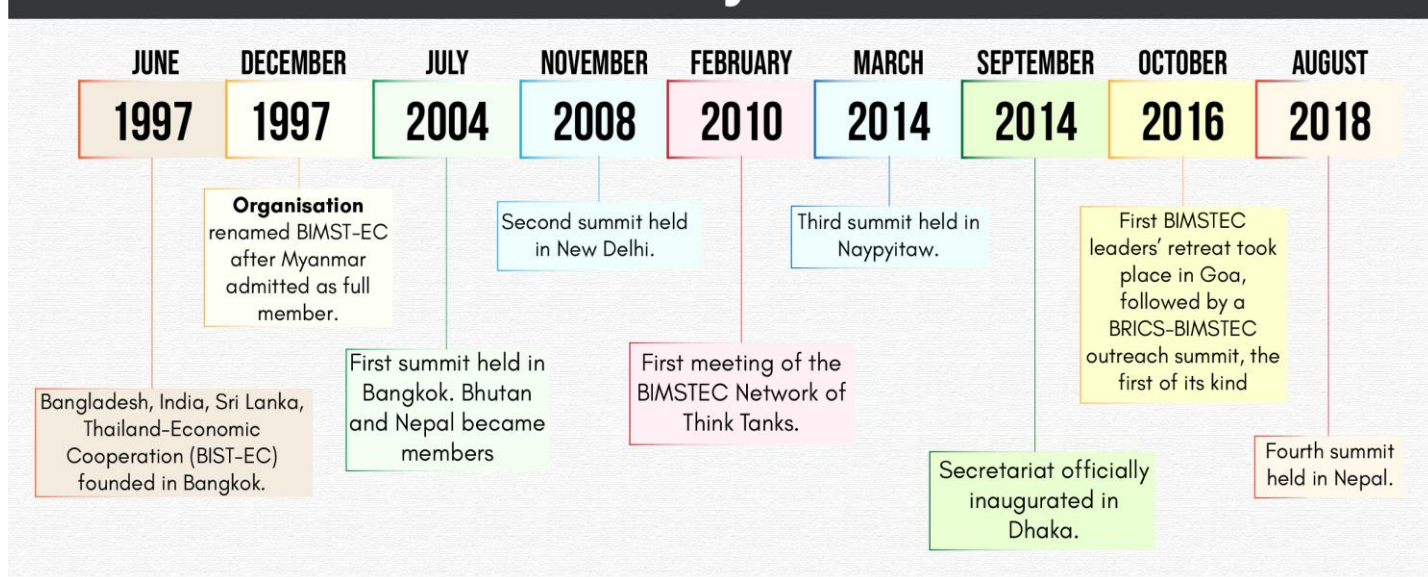
Lead	Sector
Bangladesh	Trade, investment and development
Bhutan	Environment and climate change
India	Security, including energy
Myanmar	Agriculture and food security
Nepal	People-to-people contacts
Sri Lanka	Science, technology and innovation
Thailand	Connectivity

- **Three new agreements** signed by member states:
 - BIMSTEC Convention on **Mutual Legal Assistance** in Criminal Matters;
 - BIMSTEC Memorandum of Understanding on Mutual Cooperation in the field of **Diplomatic Training**;
 - Memorandum of Association on Establishment of BIMSTEC **Technology Transfer Facility**.

About BIMSTEC

- BIMSTEC is an **inter-regional grouping** that seeks to foster **regional and economic cooperation** among its **7 member nations** in the **littoral and adjacent areas** of the Bay of Bengal — India, Thailand, Myanmar, Nepal, Bangladesh, Sri Lanka and Bhutan.
- The Bay of Bengal (BoB) region is home to **1.68 billion people**, accounting for **almost 22 percent** of the world population, with a **combined GDP of US\$ 3.7 trillion**.
- **BIMSTEC's principles**: Respect for **sovereign equality, territorial integrity, political independence, no-interference** in internal affairs, **peaceful co- existence, and mutual benefit**.
 - Cooperation within BIMSTEC will constitute **an addition** to and **not be a substitute for bilateral, regional, or multilateral cooperation** involving the Member States.
- **Objectives of BIMSTEC**
 - To create an **enabling environment** for rapid **economic development** and to accelerate the **economic growth and social progress** through joint endeavors,
 - To promote **active collaboration and mutual assistance** on matters of common interest,
 - To provide **assistance to each other** in the form of training and research facilities in the **educational, professional and technical spheres**,
 - To cooperate **more effectively** in joint efforts that are supportive of and complementary to national development plans of Member States,
 - To maintain **close and beneficial cooperation** with existing international and regional organizations,

BIMSTEC's Major Milestones



Significance of BIMSTEC

- **Strategic**: The Bay of Bengal has grown in **strategic significance within the Indo-Pacific**, especially due to the **contest between India and China**. It is now poised to become a zone of **geopolitical competition** among major powers and especially in the context of overarching initiatives like **Belt and Road Initiative (BRI)**.
 - For India, BIMSTEC is key to fulfil the **country's strategic aspirations** to cater to the wider concept of **'Indo-Pacific'** and an **Indian Ocean community**. The grouping brings together **India's strategic peripheries** (South, East and North).

- **Economic:** For both India's **eastern coastal states and the Northeastern region**, and for the **Indian economy in general**, growth and development are seen to hinge on the **degree of connectivity with Southeast Asian markets**.
 - The Bay of Bengal is the **largest bay** in the world and is the route for about **25 percent of global trade**. The Bay also has **huge reserves for natural gas** which is an untapped source of energy.
- **Regional cooperation:** Due to **setbacks to the South Asian Association of Regional Cooperation (SAARC)**, particularly when its **2016 summit was suspended** after member countries declined to participate, BIMSTEC has emerged as the **"preferred platform" for regional cooperation in South Asia**.
 - India had long felt that the **potential of SAARC was being under-utilised**, and opportunities were being missed due to lack of response and/or an **obstructionist approach from Pakistan**.
 - BIMSTEC seeks to act as a **bridge between South and Southeast Asia**, making it a **natural platform** to fulfil our key **foreign policy priorities** of 'Neighbourhood First' and 'Act East'.
- **Security:** Bay of Bengal has enormous significance from the security point of view as it borders the **Strait of Malacca** which is the **main energy lane** for the **eastern and Southeast Asian nations**. The security relevance of BIMSTEC has been growing especially **after the Easter Sunday bombings in Sri Lanka in 2019**.
 - It also presents an opportunity to enhance India's **Blue Economy and Maritime Security**. **Piracy and trafficking, depleting fish stocks, and irregular migration** are some issues, which plague the bay and **require regional cooperation** in their dealing.
 - India will **steer the security pillar** of BIMSTEC and is expected to **coordinate region wide security cooperation** on jointly agreed issues, thus further **propagating its idea of being a Net Security Provider**.



Challenges with BIMSTEC

- **Untapped potential:** Despite its status as a **key maritime hub** and huge economic promise, the **Bay of Bengal's potential is hamstrung** by a **lack of close internal economic integration** among the countries that call the region home. BIMSTEC as an organisation has **remained largely dormant** for the better part of its existence **due to factors** such as:
 - **Absence of any immediate threat** which may spur cooperation amongst member countries;
 - **Domestic political issues overshadowing** the requirement for multilateral engagements.
- **Physical infrastructure:** The BIMSTEC region is beleaguered by **poor road and rail connectivity**, insufficient last-mile links and **cumbersome customs and clearance procedures** which hampers **trade and people-to-people interactions**.
- **Asymmetries among members:** **Significant asymmetries** among members cannot be overlooked while **conducting negotiations as well as implementations**. For instance, Myanmar is possibly the **most unreliable** in terms of its domestic politics **due to the Rohingya crisis**, Bhutan is **understandably protective about the conservation of its environment** and so on.
 - The momentum that BIMSTEC seems to be gaining needs to be maintained **taking cognizance of these asymmetries** so that the strengths of individual member countries **can be leveraged** for the success of the organisation.

- **Free Trade Agreement (FTA):** Despite signing a framework agreement for a **comprehensive FTA** in 2004, BIMSTEC stands **far away from this goal**. The **protectionist economies** of South Asian countries and so-called national interests are making free trade an **unattainable objective**.
- **Perception of Indian hegemony:** There is an impression that it is an **India-dominated bloc**, a problem that India faced for a long time in **SAARC too**. This perception of Indian hegemony, coupled with **over-dependence of BIMSTEC Countries on China**, seems to be a **major impediment** in its success.

Road Ahead

- **Strengthening political engagement:** The personal engagement of the political leadership could be **stepped up**. The decision taken in Colombo to host a **summit every two years** is welcome if implemented.
- **Enhancing connections and connectivity:** This can be done by encouraging people to people contacts and simultaneously accelerating work on the already started multilateral connectivity projects.
- **Community-based deliberations:** BIMSTEC needs a **robust and inclusive mechanism** to identify its **cultural roots** and explore its **own vocabulary** for decision-making. Ideally, BIMSTEC should adopt an approach that **involves negotiations, regular meetings** and free and fair discussions.
 - Community-based deliberations will help **foster a closer relationship** amongst the member states and enhance **mutual trust**, creating a **strong sense of community**.
- **Engaging with other regional organisations:** BIMSTEC should seek to involve other regional institutions in some of its key initiatives. Building on the 2017 BRICS outreach summit, BIMSTEC must develop more **regular channels of communication** with various **counterparts** active in the Bay of Bengal region.
 - This includes leveraging **strategic partnerships with ASEAN** and similar connectivity **efforts by the ADB** (particularly the SASEC), the **World Bank and its regional country offices**, MGC and CMLV initiatives.
 - India's turn to **host the G20 leaders' summit** can be **leveraged optimally** to impart greater visibility to BIMSTEC by inviting all its members as the **chair's special guests**.

Major connectivity initiatives

- **Kaladan Multimodal project:** The project envisages connecting **Kolkata to Sittwe port** in Myanmar, and then Mizoram by **river and road**.
- **IMT Trilateral Highway:** It will connect India and Thailand through Myanmar. The highway will run from **Moreh in Manipur to Mae Sot** in Thailand **via Myanmar** thereby establishing connectivity between **India and Southeast Asian countries**.
- **Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement (MVA):** With Bhutan continuing to sit out, other three countries are discussing steps in operationalizing the agreement for the **free flow of good and people** between them.

2.8. BANGLADESH-BHUTAN-INDIA-NEPAL (BBIN) MOTOR VEHICLES AGREEMENT (MVA)

Why in News?

India, Bangladesh, and Nepal have finalized the enabling **Memorandum of Understanding (MoU)** to implement the **BBIN MVA**, pending ratification by Bhutan.

More on News

- The member nations agreed to expedite the **Passenger and Cargo Protocols** for early implementation of BBIN.
- These protocols are important to regulate **Passenger, Personal and Cargo Vehicular Traffic** between them.
- Bhutan attended the meeting as an **observer**.

About SASEC Program

- It brings together **Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, and Sri Lanka** for project-based partnership.
- The member countries share common aspirations of economic growth, economic diversification, inclusive growth and sustainability, and energy access and security.
- **Aim:** To promote regional prosperity, improve economic opportunities, and build a better quality of life for the people of the sub-region.
- **SASEC Operational Priorities Sector:** Transport, Trade Facilitation, Energy and Economic Corridor Development.
- **Asian Development Bank (HQ: Metro Manila, Philippines)** serves as **SASEC secretariat**.
- As of March 2022, SASEC member countries have signed and implemented 72 ADB-financed investment projects worth over \$17.28 billion in priority sectors.

- **Asian Development Bank** is providing technical, advisory and financial support to it as part of its assistance to **South Asian Subregional Economic Cooperation (SASEC)**.
- The **World Bank** has also announced its **interest to support BBIN MVA**.

About BBIN MVA

- It was launched in **2015** after the failure of agreement on regional MVA among **South Asian Association Regional Cooperation (SAARC)** in **2014** due to concerns associated with Pakistan.
 - In 2017, **Bhutan opted out temporarily** as its parliament didn't ratify the agreement due to environmental and project sustainability concerns.
- BBIN provides for **regulation of passenger, personal and cargo vehicular traffic**.
- **Each country will bear its own costs** arising from implementation of agreement.

Once implemented, it will provide- **Safe, Economical, Efficient and Environmentally** sound road transport in the region.

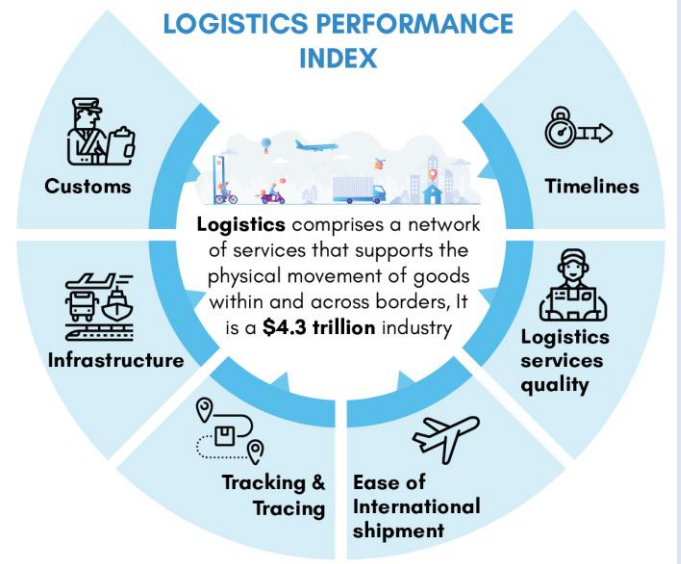
Major Benefits of BBIN MVA

- **Strategic Significance:**
 - **Improved Investment and Cooperation** in critical sectors such as energy, water management etc.
 - **Bring Growth and Development** in Northeast India as it will connect member nations in and through the **Northeastern region of India**.
 - **Counter China's Belt and Road (BRI) Initiative** by reducing Nepal's geopolitical dependency on China by helping it avoid **Debt-trap** diplomacy from China.
 - **Help India in strengthening its role as a First Responder** to any natural disaster or security hazard in Himalayan countries.
 - **Help in Act East Policy** by connecting it with **India-Myanmar-Thailand Trilateral Highway** for unhindered movement and boost the trade and commerce with ASEAN countries.
- **Socio-Economic Significance**
 - **Enhanced Economic Integration** by enabling seamless cross-border movement of goods, vehicles, and people. According to World Bank, the MVA has the potential to **increase regional trade traffic by 60%**.
 - Realize the full potential of trade and people-to-people contact through **promotion of Sub-regional Cooperation**. E.g., India is the largest trade partner of Nepal with 74% of its total exports.
 - **Improved Logistics Performance Index (LPI)** by improving the trade and transport efficiency in the region. E.g., the **Petrapole-Benapole border crossing** between India-Bangladesh Border suffers from the problem of slow exports due to long queue times.



About the International Logistics Performance Index (LPI)

- The **International LPI (World Bank)** is an indicator of logistics sector performance to benchmark and compare the performance of different countries' logistics sector.
- It measures the performance of **six core components of logistics** in any nation (see image); rated from **1 to 5** with 1 lowest and 5 as best in that component.
- In **2018**, the **International LPI score of India** was **3.18** (ranked **44**, globally).
- Other BBIN nations had even lower LPI scores: **Bangladesh**- Rank 100, **Nepal**- Rank 114 and **Bhutan**- Rank 149.



Challenges in implementation of the agreement

- **Slow pace of development** in overcoming the shortcomings on access, understanding, interpretation and application of various procedures, rules, and regulations among officials.
- **Technical issues** such as customs and tariff, absence of integrated check posts at border crossings etc.
- **Geographical Challenges** such as **Himalayan Mountains, multiple river channels, ecologically sensitive coastal areas etc.** with continuous threats from natural hazards.
- **Underdeveloped supporting infrastructure** such as Energy, Information and Communication Technology etc. for smooth flow of goods, services and people.
- **Clear Ideological divide** among political parties against India (citing the issue of India's dominance in such agreements) in Nepal and Bangladesh, increasing need of continuity from friendly political dispensation.

Way Forward

In 2021 and 2022, South Asia is projected to grow at **7.1%** (World Bank). In such circumstances, BBIN MVA can act as a gateway to surpass it through greater access to ASEAN and East Asian nations as well. Following steps can be considered to reap the benefits and overcome the challenges-

- **Fix timelines with early signing** of Passenger and Cargo Protocols to overcome slow pace.
- **Become signatory of International Conventions** on road traffics (e.g. **Vienna Convention on Road Traffic, 1968**) to address technical issues and be on par with international standards.
 - It will help in harmonizing of domestic policies on transport and transit facilitation.
- **Hire Professional experts** or learn from the experience of other countries to overcome geographical difficulties by enhancing the technical knowledge.
- **Build and upgrade** roads, rails and waterways along with the supporting infrastructure for smooth flow of goods, services and people.
- **Promote discussion on mutual benefits** of the project in neighboring countries to overcome ideological differences as well as bring Bhutan back as member.

2.9. COVID-19 VACCINE AND IP WAIVER

Why in news?

The US, EU, India and South Africa are closing in on a draft "compromise agreement" on waiving Intellectual Property (IP) rights for Covid-19 vaccines.

More on news

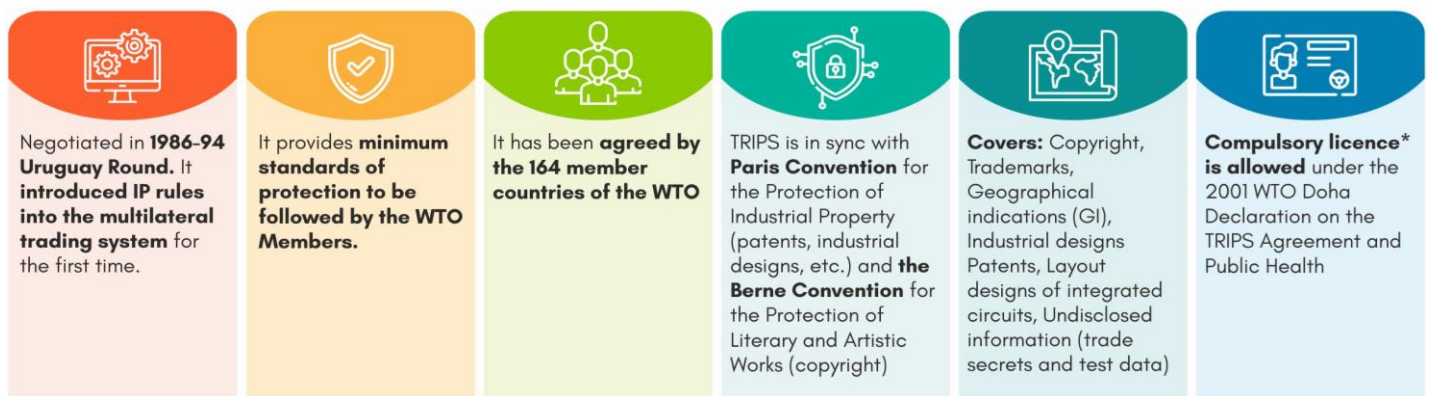
- Earlier, **India and South Africa had proposed a temporary waiver** on IP rights for Covid-19 vaccines and other Covid-related technologies at the World Trade Organisation (WTO) **until global herd immunity is achieved**.

- This proposal has come to be known as the **TRIPS waiver**.
- The waiver would **enable the manufacturing of generic versions of Covid-19 vaccines**. It temporarily “removes” the protections provided by the WTO.
 - **About 100 of the WTO’s 164 countries have supported** India’s proposal, including the United States.
 - However, to come into force, the proposal **must be approved by all of WTO’s member nations, as WTO works on consensus**.

About Intellectual Property (IP)

- IP pertains to any **original creation of the human intellect** such as artistic, literary, technical, or scientific creation.
- **Intellectual Property Rights (IPRs)** are the rights given to persons over the creations of their minds. They usually give the creator an **exclusive right over the use of his/her creation for a certain period of time**.
 - The protection is usually given for a finite term (typically **20 years in the case of patents**).
- The World Trade Organisation (WTO) Agreement on **TRIPS**, which came into effect in 1995, is the **most comprehensive multilateral agreement on IP**.

Trade-Related Aspects of Intellectual Property Rights (TRIPS)



Arguments in favour of IP waiver

- **Vaccine inequities:** According to WHO, nearly 80% of Covid-19 vaccines were administered in just 10 rich countries last year, while more than 2.5 billion people await their first shots. It is despite the repeated warning by the WHO that vaccine inequities – richer countries have more vaccines and vaccination rates – are the biggest hurdle in ending the pandemic and protecting millions of the world’s poor.
- **Vaccine nationalism:** The “vaccine nationalism” exemplified by pre-orders of vaccines by many wealthy states (including the U.S., UK and EU) has been blamed for reducing the availability of vaccines in low- and middle-income countries (LMICs) and criticised for offering too generous terms to the existing vaccine manufacturers.
- **Affordability:** The waiver of patent protections could allow countries with fewer resources (e.g., Middle Africa) to reduce the price necessary to produce large quantities of vaccine. Despite the productive effort of countries like India (considered 'the vaccine hub of the world'), their cost still does not make them accessible to all low-income countries.
- **Ending pandemic:** Furthermore, repeated waves of COVID with different strains has made it more clear that the pandemic will not end until global vaccination reaches a sufficient level. Mass immunization should be considered as a global battle in which no country can be left behind, in particular the low-income countries.

Arguments against IP waiver

- **May not resolve the issue of inaccessibility:** Remedying this failure in global health requires addressing many complex issues, such as the logistics for administering the vaccination in low-income countries. A change in the IP framework could only be **one piece of the broader puzzle that decision-makers** and many operators on the ground must solve to achieve global vaccine equity.
- **Cannot address the urgency of the pandemic:** Negotiations will take time given the consensus-based nature of the institution and the complexity of the issues involved. This is an implicit acknowledgement that the TRIPS solution to be negotiated (for example the exact scope of the waiver regarding the IP rights affected, the products/technologies

covered, its duration, safeguards, etc.) will not respond to the urgency of the pandemic. Thus, waiver will only have effects in the medium and long term.

- **Implementation Challenges:** Indeed, a waiver at WTO level would only remove an obligation for the countries to guarantee IP protection to the many medical products that could help in the fight against Covid-19. It will not remove possible reliance by private parties on their acquired IP protection.
 - To remove the possibility for private parties to rely on their existing IP rights, **the adoption of the waiver at WTO level would have to be followed by adequate national legislation in the relevant WTO states.** Thus, the **legal effects of a waiver (between WTO states) for the private actors would be delayed.**
- **No guarantee for accessibility of vaccines for other disease:** The recent focus on the Covid-19 vaccination should not hide the broader vaccination issues in the Low-Middle-Income-Countries (LMICs). As of 2018, 74 of 194 WHO member states had no adult vaccination programme for any disease; fewer than 11% of countries in Africa and South Asia reported having any such programme. COVID-19 Vaccine centred approach may not resolve health crisis related to other diseases.

Way Forward

- **Improving manufacturing capabilities in LMICs:** Massive investment are needed in manufacturing capabilities and removal of the bottlenecks for mass-producing vaccines that have shown sufficient efficacy.
- **Supply of raw material:** One obstacle to increasing production is the supply of raw materials needed to make and deploy these vaccines. The almost instantaneous tripling of demand for specialised materials is placing huge pressure on many pharmaceutical and medical supply chains. This needs to be fixed, not just to help with the production of authorised COVID-19 vaccines, but also to ensure we don't delay testing and approving vaccines still in development.
- **Easing the export of vaccines:** Lifting or simplifying some requirements for the exports of Covid-related pharmaceutical products (not only vaccines) produced under a compulsory license for at least three years.
- **Set up massive vaccination campaigns in LMICs:** This may require, for example, huge investments in logistics (for the transport and conservation of vaccines doses as many vaccines require ultra-cold chains and have short shelf-lives), setting up call centres, and the immediate launch of awareness campaigns through various media.
- **Global alliance for enhancing accessibility:** One of the further possible solutions is represented by **the solidarity by several governments or other agencies.** This strategy is pursued, for example, by the program for *COVID-19 Vaccines Global Access* (COVAX). The latter is supported by Global Alliance for Vaccines and Immunization (GAVI), Coalition for Epidemic Preparedness Innovations (CEPI), and the World Health Organization (WHO).

2.9.1. PANDEMIC TREATY

Why in news?

Members of the World Health Organisation (WHO) held the first round of negotiations towards the pandemic treaty.

More on News

- In December 2021, the **World Health Assembly (WHA) agreed to start a global process to draft the pandemic treaty.**
- **WHA adopted a decision titled "The World Together"** at its second special session since it was founded in 1948.
 - Under the decision, WHO **established an intergovernmental negotiating body (INB) to draft and negotiate the contents of the pandemic treaty** in compliance with Article 19 of the WHO Constitution.

World Health Assembly (WHA)

- The World Health Assembly is **the decision-making body of WHO.**
- It is attended by delegations from all WHO Member States and focuses on a specific health agenda prepared by the Executive Board.
- The main functions of the World Health Assembly are **to determine the policies of the Organization, appoint the Director-General, supervise financial policies, and review and approve the proposed program budget.**
- The Health Assembly is held annually in Geneva, Switzerland.

Article 19 of WHO Constitution

- It **gives the World Health Assembly the authority to adopt conventions** or agreements on matters of health.
 - A **two-third majority is needed** to adopt such conventions or agreements.
- The **WHO Framework Convention on Tobacco Control was set up under Article 19** and it came into force in 2005.

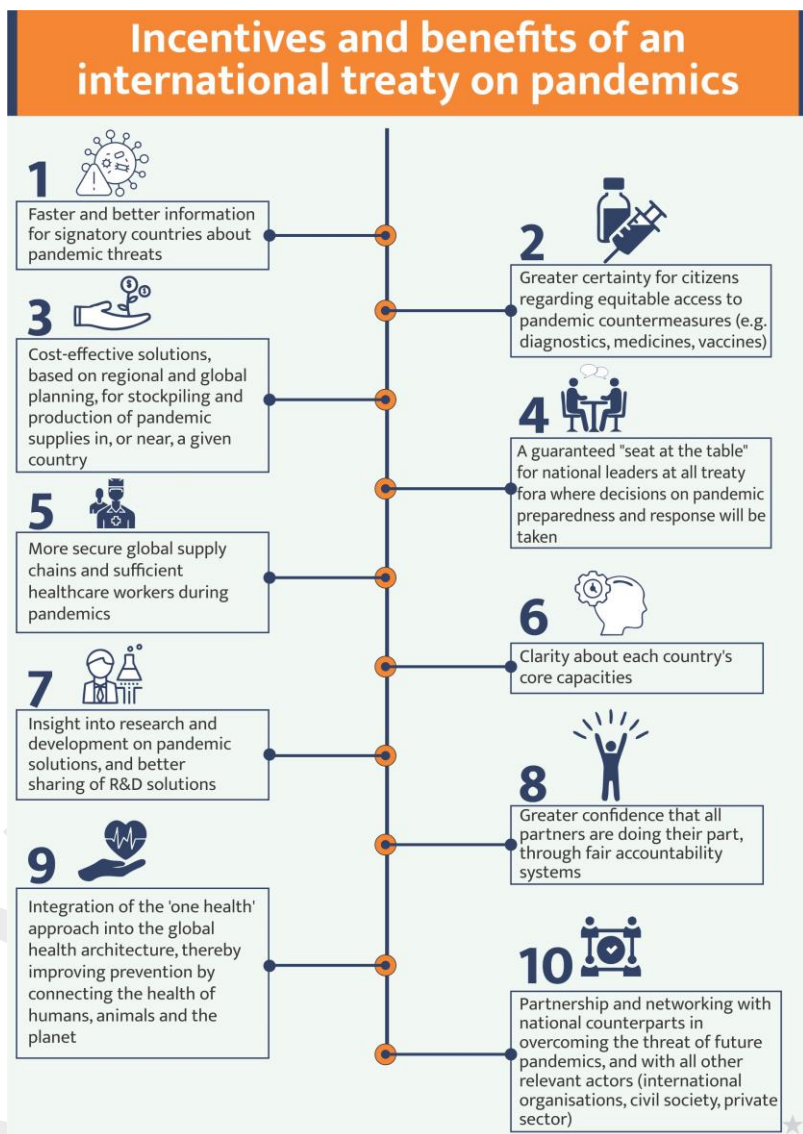
About Proposed Treaty

- The main goal of this treaty would be **to foster an all-of-government and all-of-society approach**, strengthening national, regional, and global capacities and resilience to future pandemics.

- It is expected to cover aspects like **data sharing and genome sequencing of emerging viruses and equitable distribution of vaccines and drugs** and related research throughout the world.
- **European Union (EU) also wants a ban on wildlife markets** to be included in the treaty.
- While the **EU wants the treaty to be legally binding**, the U.S., Brazil and India have expressed reservations about the same.

Need for a Pandemic Treaty

- **Strengthen capacities:** It would enable countries to **strengthen national, regional, and global capacities and resilience** to future pandemics.
- **Structure the necessary collective action:** It would set out the **objectives and fundamental principles** in order to structure the necessary collective action to fight pandemics.
- **Such a treaty will**
 - Ensure **higher, sustained and long-term political engagement** at the level of world leaders of states or governments.
 - Define **clear processes and tasks**.
 - Enhance **long-term public and private-sector support** at all levels
 - Foster **integration of health matters across all relevant policy area**
- **It would support and focus on:**
 - **Early detection and prevention of pandemics.**
 - **Resilience** to future pandemics.
 - **Response** to any future pandemics, in particular by ensuring **universal and equitable access** to medical solutions, such as vaccines, medicines and diagnostics.
 - A **stronger international health framework** with the WHO as the coordinating authority on global health matters
 - **"One Health" approach**, connecting the health of humans, animals and our planet.



Concerns raised against the proposed pandemic treaty

- It **lacks focus, clarity, and coherence on what issues countries should prioritize** (among surveillance, outbreak notification, the sharing of genetic sequence information, trade and travel measures etc) in a treaty and why.
- It **distracts from the demands for better access to vaccines and treatments**, and instead tries to create a narrative that a lack of rules prevented the world from mounting an effective international response to the COVID-19 pandemic.
- **Most of the provisions** that the proposed treaty look forward to including in the proposed pandemic treaty, **are available under the International Health Regulations (IHR)**. There is a need for effective implementations of those provisions.

About International Health Regulations (IHR)

- IHR are an **instrument of international law that is legally-binding** on 196 countries, including the 194 WHO Member States.
- IHR provide an overarching **legal framework that defines countries' rights and obligations in handling public health events** and emergencies that have the potential to cross borders.
- They create **rights and obligations for countries**, including the requirement to report public health events.
- It also **outlines the criteria to determine whether a particular event constitutes a "public health emergency of international concern"**.

- Government responses to COVID-19 have purportedly violated or manipulated many treaties and **critics doubt that a new treaty will generate the commitment.**

Conclusion

COVID-19 pandemic is the biggest challenge to the global community since the 1940s. There will be other pandemics and other major health emergencies. No single government or multilateral agency can address this threat alone.

To that end, nations should work together towards strengthening the existing WHO's mechanisms for handling a pandemic and also a global discussion on the need for a pandemic treaty to reinforce global health security, in particular on preparedness and response to health emergencies, in light of lessons learnt from the pandemic.

2.10. NEWS IN SHORTS

2.10.1. 5TH NSA LEVEL MEETING OF THE COLOMBO SECURITY CONCLAVE (CSC) HELD

- CSC, renamed version of **National Security Advisor (NSA) Level Trilateral on Maritime Security** (formed in 2011), helps member nations **to build capacity on common security threats.**
 - **Founding members are Maldives, India and Sri Lanka.** Mauritius is added as the newest member in the recently concluded meeting.
 - Bangladesh and Seychelles have **observer status.**
- 5th meeting also identified following **five broad areas of cooperation to strengthen regional security:**
 - **Maritime safety and security,**
 - **Countering terrorism and radicalisation,**
 - **Combating trafficking and transnational organised crime,**
 - **Cyber security,** protection of critical infrastructure and technology, and
 - **Humanitarian assistance** and disaster relief
- The roadmap will facilitate robust mechanisms for **coordinated responses, capacity building and strengthening information flow** between member states.
- CSC is **seen as other step by India to enhance its maritime security.**
 - Maritime security **broadly classifies issues in maritime domain** comprising national security, marine environment, economic development, and human security.
 - Besides world's oceans, it also deals with **regional seas, territorial waters, rivers and ports.**

Other Steps taken to improve maritime security

- **SAGAR (Security & Growth for All in the Region) policy** to deepen economic and security cooperation with its maritime neighbours and assist in building their maritime security capabilities.
- **Indian Ocean Naval Symposium (IONS)** to enhance maritime cooperation among Navies of the littoral states of the Indian Ocean Region and helps to preserve peaceful relations between nations.

- **India's Neighbourhood First policy** focuses on creating mutually beneficial, people-oriented, regional frameworks for stability and prosperity.

2.10.2. ORGANISATION OF ISLAMIC COOPERATION (OIC)

- India has hit out at the OIC for inviting the Hurriyat chief to attend its foreign ministerial meeting in Islamabad.
- **About OIC:**
 - It is **2nd largest inter-governmental organisation** after the United Nations.
 - It **endeavors to safeguard and protect the interests of the Muslim world** in the spirit of promoting international Peace and harmony among various people of the world..
 - **Membership:** 57 states.
 - **Headquarters:** Jeddah, Saudi Arabia.
 - **India is not its member.**

2.10.3. FINANCIAL ACTION TASK FORCE (FATF)

- FATF has **retained Pakistan on its terrorism financing "grey list".**
 - Pakistan has been on the **grey list since June 2018** for failing to check money laundering, leading to terror financing.
 - Also, **UAE has been added** to the grey list.
- FATF is an **inter-governmental body** established in 1989 to combat **money laundering, terrorist financing and other related threats** to the integrity of the international financial system.
- **Members:** 37 (**including India**) and 2 regional organizations-European Commission and Gulf Cooperation Council.
- **FATF issues two lists:**
 - **Black list** (as High-Risk Jurisdictions subject to a Call for Action)
 - **Grey list** (referred to as Jurisdictions Under Increased Monitoring).

2.10.4. BUCHAREST NINE (B9)

- Bucharest Nine rejected the Russian claim about the eastward “expansion” of NATO.
- B9 is a **group of 9 NATO countries in Eastern Europe** that became part of the US-led military alliance after end of Cold War.
 - It was founded in 2015, and takes its name from Bucharest, the capital of Romania.
 - All members of B9 are part of European Union (EU) and North Atlantic Treaty Organisation (NATO).
 - B9 members are **Romania, Poland, Hungary, Bulgaria, Czech Republic, Slovakia, and three Baltic republics of Estonia, Latvia, and Lithuania.**

2.10.5. BLACK SEA

- Black Sea shipping route has been choked in the backdrop of the Russia-Ukraine conflict.
- Black Sea is an **inland sea between southeastern Europe and the Anatolian peninsula (Turkey).**

- It is **connected to the Atlantic Ocean via the Mediterranean and Aegean Seas** and various straits.
- **Bosporus strait connects it to the Sea of Marmara, and strait of the Dardanelles connects it to the Aegean Sea region of the Mediterranean.**
- To the north, it is **connected to the Sea of Azov** by the Kerch Strait



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फाउंडेशन कोर्स सामान्य अध्ययन

प्रारंभिक एवं मुख्य परीक्षा 2023

इनोवेटिव क्लासरूम प्रोग्राम

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

DELHI: 5 APR, 9 AM | 1 FEB, 1 PM

LUCKNOW: 17 MAY | 9 AM **JAIPUR: 10 MAY | 4 PM**

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3. ECONOMY

3.1. BANK RECAPITALISATION

Why in News?

Centre has announced to recapitalise weak Public Sector Banks (PSB) as part of Rs 15000 cr capital infusion.

More on News

The money will help the banks augment capital to the required level and save it from coming under the prompt corrective action (PCA) framework.

About Bank Recapitalisation

- Bank recapitalization means **infusing more capital in state-run banks** so that they meet the capital adequacy norms.
 - **Capital adequacy ratio (CAR)** or capital to risk-weighted assets ratio (CRAR) is the **ratio of regulatory capital funds to risk-weighted assets**.
- **Primary responsibility of recapitalisation of PSBs often devolves on the Government**, being the majority shareholder in these banks.

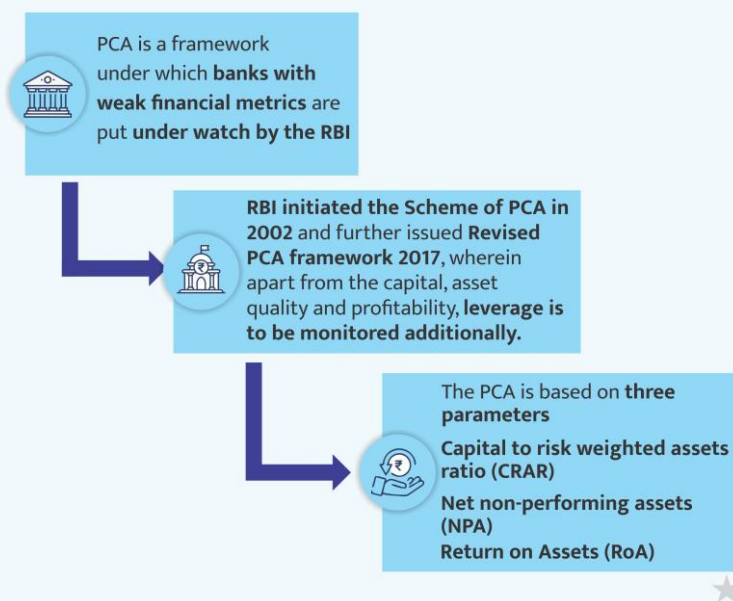
Drivers of Bank Recapitalisation

- **To meet regulatory requirements of capital adequacy:** The regulatory architecture is globally framed by the Basel Committee on Banking Supervision. So far, three sets of Basel norms have been issued (refer box).
- **Credit Growth:** To create a virtuous cycle of investment and jobs, the banks should be healthy enough to lend to healthy firms and borrowers.
- **Tackling NPAs:** Any recapitalisation will strengthen the capital base of the banks. It will help them write-off bad loans.
- **Stimulus to Economy:** It will pull down lending rates, spur aggregate demand, put idle factories to work, exhaust capacity and spark investment.
- **Saving important banks:** Bank bailouts, mainly via recapitalisation, have historically been undertaken to protect failing banks that are large and systemically important.

Concerns raised against recapitalisation

- **Fiscal deficit:** Bailing out public-sector banks will either increase the fiscal deficit or lead to cuts in welfare and capital expenditures.

About Prompt Corrective Action (PCA) framework.



About Basel Norms

- Basel Norms are the norms issued by the Basel Committee on Banking Supervision (BCBS) for the international banking regulations.
 - The goal of these norms is to coordinate banking regulations around the world and strengthening the international banking system.

Basel Norms

- Basel I Norms**
 - ▶ Issued in 1988 to provide, for the first time, a global standard on the regulatory capital requirements for banks.
- Basel II Norms**
 - ▶ Introduced in 2004, further strengthened the guidelines for risk management and disclosure requirements.
 - ▶ This called for a minimum capital adequacy ratio (CAR) which all banks with an international presence were to maintain.
 - ▶ These norms were revisited again in 2010—known as Basel III norms—in the wake of the sub-prime crisis and large scale bank-failures in the US and Europe.
- Basel III Norms**
 - ▶ Emphasized on capital adequacy to protect shareholders' and customers' risks and set norms for Tier I and Tier II capital.
 - ▶ Tier I capital consists mainly of share capital and disclosed reserves. It is deemed to be of the highest quality because it is fully available to cover losses. Hence, it is also termed as core capital.
 - ▶ Tier II capital, also known as supplementary capital, consists of certain reserves and specific types of subordinated debt. Tier II's capital loss absorption capacity is lower than that of Tier I capital.

- **No intrinsic change in governance:** Public funds or taxpayer money is being provided year after year to a set of intermediaries, without any intrinsic changes in the governance of these lenders.
- **Impact working culture:** Banks will not take adequate precautions when they are lending when they know that the government will step in to help if the loans turn sour.
- **No Accountability:** Neither linked to the banks' performance nor efficiency, bank recapitalisation has been ad-hoc and without absence of any accountable policy guidelines.

How government plans to recapitalise public sector banks?

- For the recapitalisation programme, funds will be mobilised through issuing of bank **recapitalisation bond, through budgetary allocation and fund-raising from the markets.**
- **Bank Recapitalisation Bonds**
 - The government issues **bonds which are subscribed by banks.**
 - The money collected by the government goes bank to banks **in the form of equity capital as government increases its share of equity holding,** thereby shoring up banks' capital reserves.
- The money invested by banks in recapitalisation bonds is **classified as an investment which earns them an interest.** This helps the government in maintaining its fiscal deficit target as no money directly goes out from its coffers.

Way forward

- **Structural Reforms:** A key recommendation of the **P.J. Nayak committee** was that the government should form a Bank Investment Company for professionalising the running of these banks and their boards.
- **Criteria for infusion:** Criteria for fund infusion, once finalized, may be **consistently applied** across all PSBs, however in case of variation, reasons should be well documented.
- **Better Monitoring:** There should be an **effective monitoring system** in place and this system should ensure fulfilment of the intended objectives of fund infusion.
- **Autonomy for banks:** For a durable remedy to NPAs, PSBs must be given adequate **functional autonomy and operational flexibility** and bureaucratic and political interference must be consciously minimized.
- **Modern HR management:** **Re-skilling** the existing staff, along with direct recruitment of specialists, is needed to address the talent issue, especially in domains like forex, treasury, IT, data, and research etc.

Reasons for weak PSBs

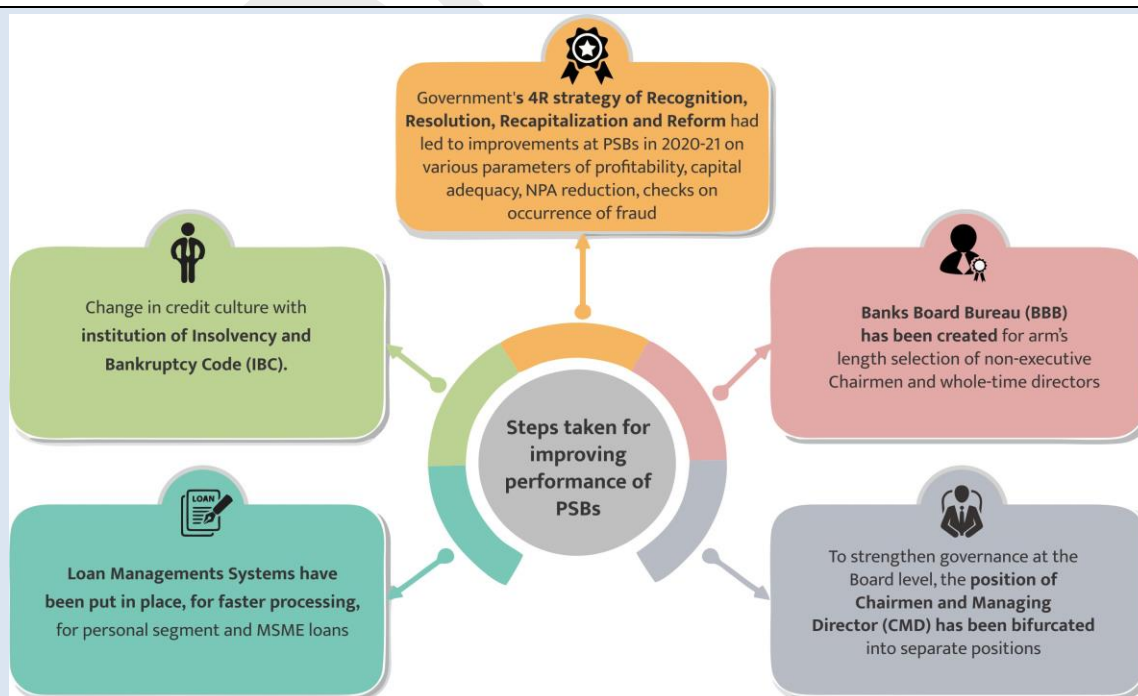
- **High level of Non-Performing Assets (NPA):**

Problem of high loan write-offs and NPAs, combined with low asset growth, is more severe for PSBs than private banks. Bad debts adversely affect profitability.

- **Powers of the RBI in case of PSBs:** RBI had stated that some powers available to the RBI under the Banking Regulation Act, 1949 are not available in the case of PSBs.

- These include removing and appointing Chairman and Managing Directors of banks, superseding the Board of Directors, and granting licences.

- **The quality of boards:** The quality of PSB boards is not uniform; most directors lack vision and many are there to broker loan deals for the borrowers and not guide the senior management with vision.



- **The quality and tenure of the CEO:** Till recently, the appointment process for managing directors and executive directors of these banks was opaque, and it was influenced by industrial houses, political parties in power and bureaucrats.
- **Poor pay structure of the executives of PSBs:** It comes in the way of hiring the right talent and keeping them wedded to ethics.

3.2. DEVELOPMENT FINANCIAL INSTITUTIONS (DFIS)

Why in News?

With government backed **National Bank for Financial Infrastructure and Development (NaBFID)** to start operation from Q1 of FY23, **₹1 trillion** infrastructure lending target is set for the year.

More on News

- **NaBFID (HQ: Mumbai)** is established as a **Development Financial Institution (DFI)** under the National Bank for Financial Infrastructure and Development Act, 2021.
- It has **authorized share capital of ₹1 lakh crore.**
- RBI will regulate and supervise it as an **All-India Financial Institution (AIFI)** under **Sections 45L and 45N** of the **Reserve Bank of India Act, 1934.**
 - It will be the **5th AIFI** after **EXIM Bank, NABARD, NHB and SIDBI.**

DFIs: Objectives and their Significance

DFIs play serve important objectives (refer infographic) by extending credit (**patient capital**) for overall economic development. Funding from them is even more significant in developing countries because:

- **Financing:** They provide funds to projects from **Medium to Long Gestation periods** with greater risks- in comparison to the acceptable limits of commercial banks and other financial institutions.
 - It is significant as long-term financing carries risks of delays or failure of projects, systemic concerns from banks due to asset-liability mismatch caused by long-term financing on banks balance sheet and lack of depth in the corporate bond market.
- **Support Function:** Apart from financial help, many DFIs provide financial, managerial, and technical advice and consultancy to business firms for overall economic growth of the nation.
- **Diversity of Options:** Based on DFIs functional classification, enterprises can get funds through **bonds and debentures** of the companies, **underwriting of securities**, **refinancing** of loans, and **credit guarantee** for loans from other foreign and domestic sources.

DEVELOPMENT FINANCIAL INSTITUTIONS (DFIS)

MEANING

Also known as **Development Bank** or a **Development Finance Company**, DFI is an institution that provides **medium to long term project finance.**



CATEGORIES OF DFI'S

Based on the **Geographical Coverage of operation**, they are categorized into:

- All India DFIs,
- State DFIs, and
- Regional DFIs

Functional Classification of All India DFI

Term-lending Institutions	Refinancing Institutions	Specialized Institutions	Investment Institutions
They extend long-term finance to different industrial sectors. E.g. NCI Ltd., IDFC Ltd. etc.	They refinance banking and non-banking intermediaries who finance to agriculture, SSIs and housing sector E.g. NABARD, SIDBI and NHB.	Sector-specific institutions. E.g. ERNA Bank, TFCI Ltd., RFC Ltd., HUDCO Ltd., IRMA Ltd., PFC Ltd., IRFC Ltd.	They invest in bonds, equity or other means used to raise money. LIC, GIC, etc.

FUNDING SOURCES OF DFI'S

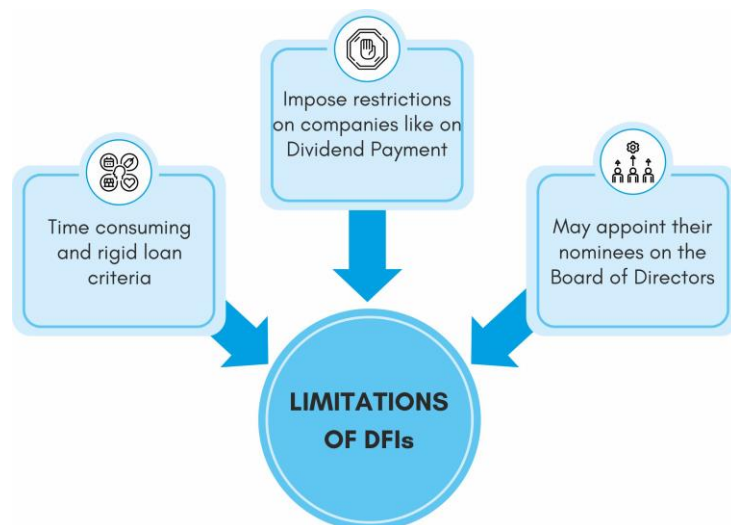
- Government Grants,
- Borrowing from Government and RBI (e.g. DFIs use Long Term Operation)
- Loans from Multilateral Institutions such as World Bank
- Issuance of Bonds from DFIs (Banks can invest in them to meet SLR requirements).



OBJECTIVES OF DEVELOPMENT FINANCIAL INSTITUTIONS

Support Infrastructure Development	1	6	Revive Sick Units/Businesses
Promote Industrial Growth	2	7	Technical Support for better Management of Industries
Encourage Import Substitution and Increase Export	3	8	Develop Backward Areas and Remove Regional Disparities
Bring Modernization and New Technology	4	9	Promote Technology in New Areas through Risk Capital
Promote Employment, including Self-Employment	5	10	Improve Capital Market Quality of the Country

- **Building Goodwill:** Loan from DFIs help companies in building goodwill, helping them to borrow from capital market and other sources as well.
- **Crisis Funding:** DFIs help companies even in crisis or times of recession when other sources are not available or have high costs attached.
- **Lesser Repayment Burden:** Through moratorium and easy repayment options for loan, the loan repayment burden on businesses is lesser than from other sources of funds.



Challenges in DFIs Financing

At the same time, financing from DFIs carry certain limitations (refer infographic) with other challenges faced by DFIs themselves such as:

- **Governance issues:** As DFIs are primarily owned by the Government, they are vulnerable to **political interference** affecting their decision making.
- **Competence:** DFIs are supposed to be ahead of time with a strategy to meet the ambitious societal and economic change goals as well as the risks; raising such capabilities and skills within the management is a challenging task.
 - Additionally, for public DFIs it becomes difficult to compete with private players in attracting and retaining talented people due to wide pay gaps.
- **Financial Sustainability issues:** DFIs have important role of development and often it takes precedence over profitability, leading to losses. E.g.
 - After initial success, DFIs have faced **survival challenges** leading to merger with banks such as **Industrial Credit and Investment Corporation of India with ICICI Bank** (in 2002) and **Industrial Development Bank of India with IDBI Bank** (in 2004).
- **Intense Competition:** Increased flow of foreign funds and options to raise money from outside has increased challenges for DFIs to retain their low-cost advantage, withstand competition etc.
- **Other Challenges:** Issues of corruption, lack of clarity on DFI mandates leading to lower operational efficiency, limited flexibility in fund raising, inadequate performance assessment or transparency etc. have also increased the difficulties for DFIs.

Way Forward

- **Allow Flexible Organisation Structure**, a prerequisite for agile organisation and to **meet intense competition** through operational flexibility. E.g.
 - The Company structure possesses far more operational flexibility when compared with a statutory DFI.
- **Improve Quality of Board Deliberation** for correct positioning and a business strategy to establish clear mandates and meet future goals.
 - **Use of annual business plans** to outline key socio-economic targets can help in achieving this.
- **Operational autonomy** to overcome issues of political interference in selection policies and compete with others in talent acquisition and retention. E.g., **Performance-based remuneration** can help in retention of high-performing staff.
- **Provide Adequate Safeguards** for decision-making to address risk-aversion or fear of extra compliance. E.g. the recent NaBFID act provides for prior sanction for investigation and prosecution- a safety net for decisions made in good faith.
- **Capacity Building** to maintain operational efficiency under changing environment and impart new set of skills to remain competent as well as provide better support to others.
- **Embed Financial Sustainability principles** in product structures and pricing to help DFIs in targeting **private (retail) investors** looking for low yield, low risk, and long-term assets.
- **Adoption of Broad Corporate Governance principles** by unlisted DFIs as well based on SEBI guidelines to incorporate best good governance practices and have greater **coordination and cooperation** within DFIs for greater synergies in the sector.

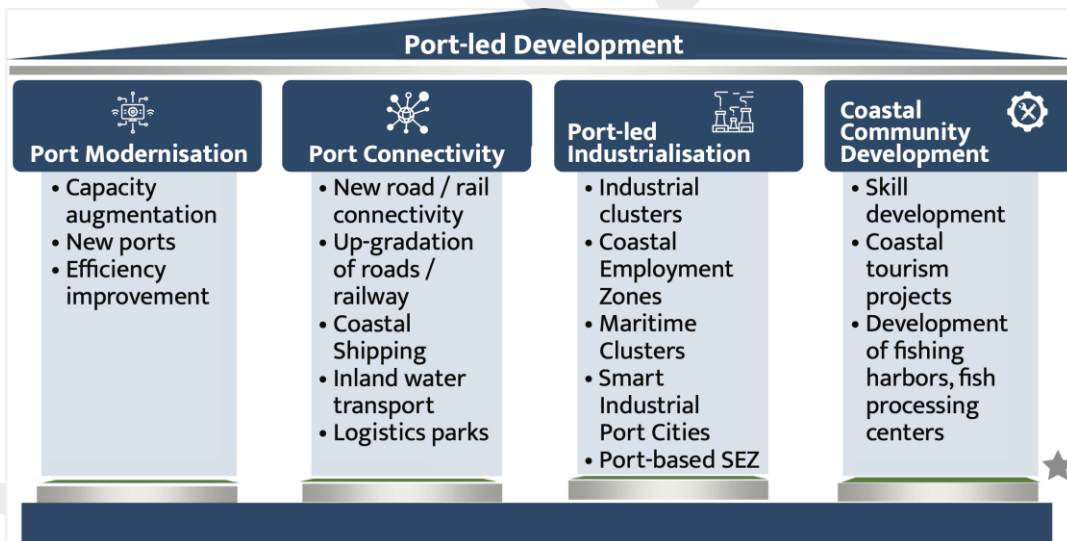
3.3. SAGARMALA PROGRAMME

Why in News?

Sagarmala, the flagship programme of the Ministry of Ports, Shipping and Waterways completed seven years.

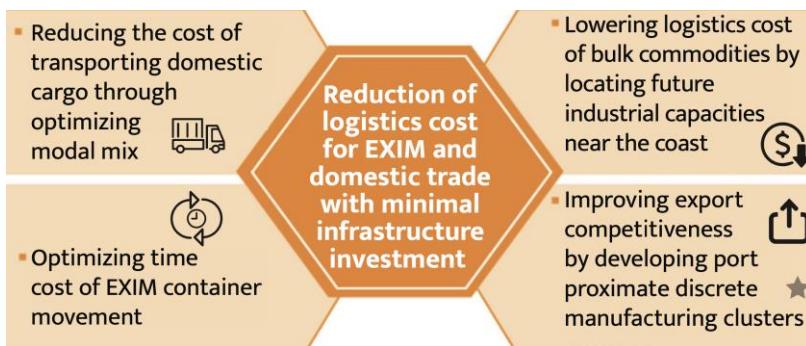
About Sagarmala

- The Sagarmala is a series of projects to leverage the country's coastline and inland waterways to drive industrial development.
- The concept of Sagarmala was approved by the Union Cabinet on March 25, 2015. As part of the programme, a **National Perspective Plan (NPP) for the comprehensive development of India's 7,500 km coastline, 14,500 km of potentially navigable waterways** and the maritime sector was prepared which was released in April, 2016, at the Maritime India Summit 2016.
- It aims to achieve
 - port modernization and new port development
 - port connectivity enhancement
 - port-led industrialization
 - coastal community development
- Implementation of the projects identified under the Sagarmala Programme will be taken up by the relevant Ports, State Governments / Maritime Boards, Central Ministries, mainly through private or **Public Private Partnership (PPP)** mode.
- The **financial assistance is provided to State Government and other MoPSW agencies** for port infrastructure projects, coastal berth projects, Road and Rail projects, fishing harbours, skill development projects, cruise terminal and unique projects such as Ro-Pax ferry services etc.
- 802 projects worth Rs. 5.48 lakh Crore under the Sagarmala program targeted to be executed by 2035 out of which 194 projects worth Rs. 99,000 Crore have been completed.



Significance of sagarmala program

- **Reduce the logistic cost:** The core vision of the Sagarmala programme is to reduce the logistics cost for EXIM and domestic trade with minimal infrastructure investment.
 - Under Sagarmala Programme, endeavor is to provide enhanced connectivity between the ports and the domestic production/consumption centers.
- **Increasing Efficiency**
 - **Modern governance of major ports:** A new era has begun for the administration of major ports in India, in which they will have greater autonomy in decision making, adopting the 'Landlord Model' of development and providing world class port infrastructure.



- **Ease of Doing Business (EODB) in Major Ports and Shipping Sector**
 - ✓ **Seamless Cargo movement:** It also aims at **simplifying procedures used at ports for cargo movement and promotes usage of electronic channels for information exchange** leading to quick, efficient, hassle-free and seamless cargo movement.
 - ✓ **Improvement of operational efficiency:** It aims to undertake business process re-engineering to simplify processes and procedures in addition to modernizing and upgrading the existing infrastructure and improved mechanisation.
- **Aid Economy:** Strong marine sector will aid economy. Sagarmala meets all the critical elements of a Blue Economy – port efficiency and modernisation, port connectivity, port-linked industrialisation and coastal community development.
 - Sagarmala could boost India's merchandise exports to \$110 billion by 2025 and create an estimated 10 million new jobs (four million in direct employment).
 - Development of port-based smart cities and other urban infrastructure to improve standards of living.
- **Aid Regional growth:** India's consolidation of strategic intent in the Indian Ocean region is a signal to the global trade community that, as a member of the global community, it will strive to keep international shipping channels free from any threats.
 - The Sagarmala initiative will also allow India revive its old trade links with traditional African, West Asian and South-east Asian entrepots.
- **Coastal Community Development:** Promoting sustainable development of coastal communities through skill development & livelihood generation activities, fisheries development, coastal tourism etc.
 - It also aims to **create a community development Fund** to provide funding for such projects and activities.
- **Promote Skill development: Deen Dayal Upadhyay-Grameen Kaushalya Yojna Sagarmala Convergence Programme,** under Ministry of Rural Development, to enable skilling of coastal population, trained more than 1,900 candidates.

Initiatives under Sagarmala Programme to unlock the potential of Waterways

- **Licensing relaxation to foreign flag vessels** for carrying transshipment containers, empty containers, fertilizers and agricultural, fisheries, animal husbandry and horticultural commodities on coastal routes.
 - The licensing Relaxation for coastal shipping to special vessels such as Ro-Ro, Hybrid Ro-Ro, Ro Pure Car Carriers, Pure Car and Truck Carriers, LNG Vessels and Over-dimensional or Project Cargo is extended till 2021.
- **Under coastal berth scheme,** financial assistance up-to 50% of total project cost or maximum funding limit can be provided to the implementing agency for creation of infrastructure to promote movement of cargo/passengers by sea/National Waterways.
- **Under Project Unnati, global benchmarks were adopted to improve the Key Performance Index (KPI) of efficiency and productivity for 12 major ports.**
- **Minimum 40% discount is offered by major ports on vessel and cargo related charges** to coastal vessels.
- **Development of a new deep draught port at Vadhavan,** on the north coast of Maharashtra is taking shape.
- To promote inland water transport (IWT) in the country, **111 (including 5 existing and 106 new) National Waterways (NWs) have been declared** under the National Waterways Act, 2016.
- **For Port-led industrialization, 14 Coastal Economic Zones (CEZ) were envisaged** including three in the state of Tamil Nadu.

Difference between Bharatmala and Sagarmala

- Bharatmala is an umbrella programme to **enhance road connectivity across country** while Sagarmala is the government's flagship programme to **develop and modernise ports along the coast line.**
- Under the 'Bharatmala Project', construction or upgradation of about 35,000 kilometres of national highways is to be undertaken by 2022. In addition, under the the 'Sagarmala Project', a network of good-quality roads is being constructed in coastal areas and areas adjoining ports.

Challenges

- **Resource mobilization:** According to a study by ICRA, mobilisation of the investments in a timely manner, allocation and availability of adequate budgetary support impedes the project.
- **Multiple Taxes:** The shipping industry in India is subjected to multiple taxes as compared to leading maritime nations due to which shipping companies are not attracted to invest in India.
- **Poor coordination:** The **Parliamentary Standing Committee on Transport, Tourism and Culture** expressed dismay regarding the poor coordination between the Ministry of Ports, Shipping and Waterways and the implementing

agencies. The Government is extending timelines for execution of these projects instead of emphasising upon their timely and speedy completion.

- The panel has recommended a **dedicated monitoring mechanism to ensure completion within the approved cost and designated timeline.**
- **Rise in crude prices:** The rise in crude prices is further aggravating the trouble for the shipping lines, as the bunkering costs have gone up by 40-50 per cent in the last one year.
- **Environmental issues:** Serious concerns are raised about the environmental effects on the coasts with issues like **coastal erosion, coastal accretion as well as severe problems of dredging** and the effects on the seabed.
 - The massive increase in ports and coming in of huge projects under Sagarmala is not in coordination with the requirement and the feasibility of having a huge number of ports.
 - The ill effects of the **Enayam port which is an upcoming port in Tamil Nadu** is considered to be unviable and will lead to displacement in a thickly populated coastal district.
- **Security Issue:** The creation of around 200 small ports all along the coastline may enhance the security issues for India.

Conclusion

India's maritime sector is widely believed to be on the cusp of a revolution and is expected to grow significantly with increases in international and domestic trade volumes. Modernisation of port infrastructure has been the focus of the Government under the Sagarmala Programme and ports have taken several initiatives under it. Also, requisite technologies and laws are in place to promote the working of this sector, much more needs to be done on both the cargo and cruise fronts to ensure continued progress in this regard.

3.4. BHARATNET

Why in News?

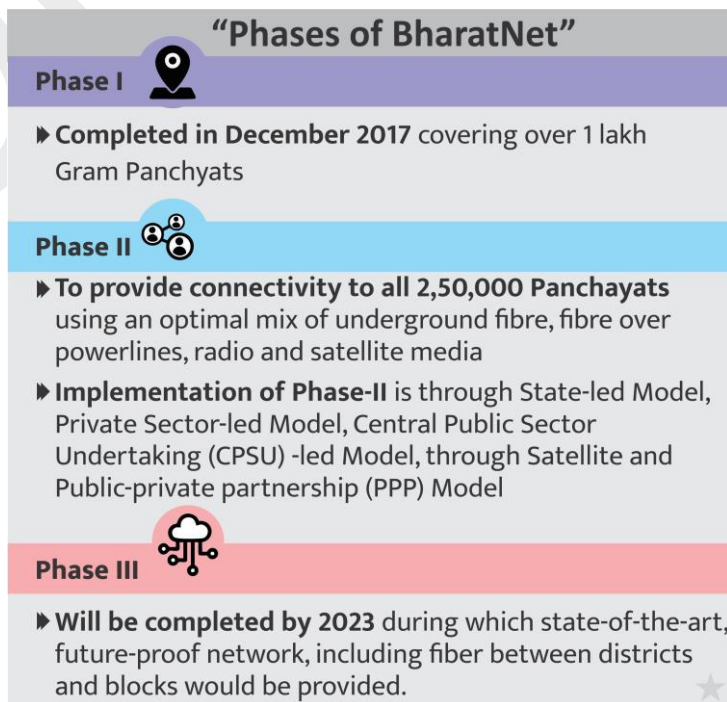
Government is planning to come out with a revised public-private partnership (PPP) model for BharatNet project.

About BharatNet

- BharatNet project is the **new brand name of NOFN (National Optic Fibre Network)** being implemented in a phased manner to provide broadband connectivity to all the Gram Panchayats (approx. 2.6 lakh) in the country.
- It is being **implemented by a special purpose vehicle named Bharat Broadband Network Ltd. (BBNL)**, under the Department of Telecommunication (DoT).
- It is being **funded by the Universal Service Obligation Fund (USOF).**

Importance of BharatNet project

- **Bridging digital divide:** In both the segments (wired/Mobile broadband), subscribers are mostly located in urban areas. BharatNet aims to reduce this digital divide and provide internet connectivity to the nook and corner of the country.
- **Access to services:** It will facilitate access to government welfare schemes, citizen-centric services, e-governance, telemedicine, e-education, and other digital services at the primary level of village administration.
- **Enabler for change:** BharatNet forms the important pillar of **Digital India programme** and has a critical importance towards achieving its mission.



- **Driving GDP:** A study has suggested that every 10 per cent usage of Internet in India drives up GDP by 3.3 per cent. It is meant to create **local employment opportunities and drive socio-economic growth** in rural areas.

Issues faced in implementing BharatNet Project

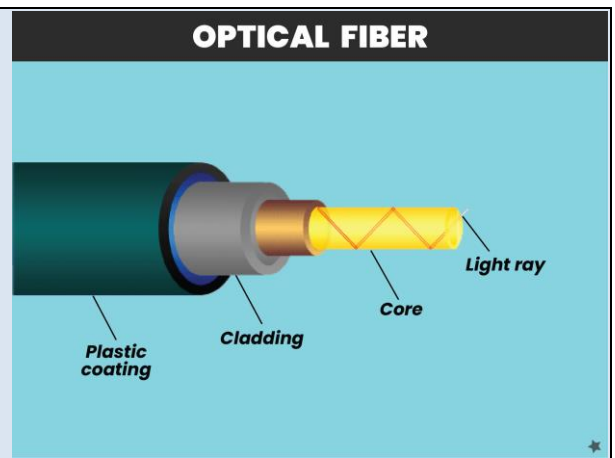
- **Right of Way (RoW) Challenge:** Despite the agreements signed between the Department of Telecommunications, State Governments and BBNL to facilitate 'free' RoW for laying optical fibre under the project, a number of issues came up in the implementation stage which led to delays.
- **Quality of services:** Panchayats across India have long complained of frequent line faults, excessive downtime, and the near-customary lack of response to service requests.
- **Role of Common Service Centres (CSC):** A draft report by CAG stated that despite a huge payment to CSC, the maintenance of cable and other infrastructure was not found efficient in various circles which resulted in a poor quality of service at a gram panchayat or village block level.
- **Lack of single window clearance:** It has contributed to a delay in implementation, due to issues such as availability of land, clash with existing infrastructure work and the multiple agencies involved in both implementation and giving permissions.
- **Delay in implementation:** Because of deficiencies in various aspects such as planning, design, procurement, and non-participation of states. Also, slow progress being made by State Governments under State-led model.
- **Poor infrastructure:** Unreliable electricity and inadequate space to house and secure equipment and assets made it even more difficult to provide internet connectivity to rural residents.
- **Non-lucrative for private players:** Currently, per user data consumption on BharatNet is around 1 Gb per month, which is not enough to incentivize private operators to start providing services.

Way forward

- **Reshape the mandate of BBNL:** BBNL should function as a coordinating authority, rather than performing full implementation functions.
- **More robust project management:** This is likely to involve an overhaul of the existing workflow for operations and maintenance, and the institution of a stringent system of oversight and accountability for suppliers.
- **States as equal partners:** The centre should limit its role to funding, monitoring and coordination between different union departments and allow states to deal with on-ground implementation.
- **Flexibility to concessionaires** in terms of route for laying optical fibre, choice of construction, topology and technology in order to ensure technical as well as **economic efficiency**.
- **Involvement of private sector:** BharatNet must incentivise the private sector in every way possible to ensure PPPs come into effect, and private players assume the onerous task of expanding, operating, maintaining, and utilising the network.
- **RoW clearance:** The state governments need to facilitate RoW to the private partner in a streamlined and time bound manner.
- **Emphasis should be given to employment generation**, particularly in states like Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and North-eastern states.

About fiber optic technology

- Fiber optics is the technology used **to transmit information as pulses of light through strands of fiber** made of glass or plastic over long distances.
- Usually, a fiber optic communication system consists of three main components: **optical transmitter, fiber optic cable and an optical receiver**.
 - Optical transmitter **converts the electrical signal** to the optical signal.
 - Fiber optic cable **carries the optical signal** from the optical transmitter to the optical receiver.
 - Optical receiver **reconverts the optical signal** to electrical signal.
- **Optical fibers are used as a medium for telecommunication and networking because it is flexible and can be bundled as cables.**



Advantages of Optical Fiber Cable

- **Greater Bandwidth:** allows advantage of amount of information that can be transmitted per unit time of fiber over other transmission media.
- **Low Power loss and less interference** allows for longer transmission distances.
- **Small size and light weight** make them easy to install.
- **Flexibility:** An optical fiber has greater tensile strength than copper or steel fibers of the same diameter. It is flexible, bends easily and resists most corrosive elements.
- **Secure:** Optical fibers are difficult to tap. As they do not radiate electromagnetic energy, emissions cannot be intercepted.

Disadvantages of Optical Fiber Cable

- **Fragility:** Usually optical fiber cables made of glass make them more fragile than electrical wires.
- **Difficult to install:** It's not easy to splice (join or connect) fiber optic cable. And if you bend them too much, they will break.
- **Attenuation & Dispersion:** As transmission distance getting longer, light will be attenuated and dispersed, which requires extra optical components to be added.
- **Cost:** Cost is higher than copper cable.
- **Special Equipment:** Special Equipment is often required to ensure the quality of fiber optic transmission.

3.5. LITHIUM SUPPLY

Why in news?

Lithium has been among the **most sought-after mineral** during the past few years, largely on the back of its usage in battery manufacturing.

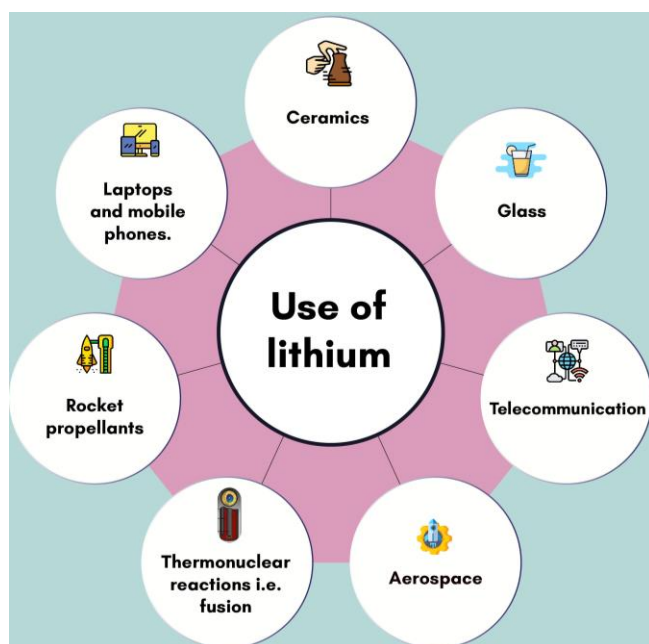
About Lithium supply

- **Global Production and Demand:** Lithium is currently produced from **hard rock or brine mines**. **Australia** is the **world's biggest supplier**, with production from **hard rock** mines. **Argentina, Chile and China** are mainly producing it from **salt lakes**.
 - Total global production, measured as **lithium carbonate equivalent**, was forecast in December 2021 at 485,000 tonnes which will grow to **821,000 tonnes in 2023**.
 - Overall, the global lithium battery market is **projected to grow substantially** in coming years, from 30 billion U.S. dollars in 2017 to over **100 billion U.S. dollars by 2025**.
 - Global production has so far not fulfilled the global demand, causing a global **supply shortage** of the metal.
- **Lithium in India:** The ancient igneous rock deposits in the **Karnataka's Mandya district** holds the **first traces of Lithium ever to be discovered** in India. The preliminary find is relatively small: a mere 1,600 tonnes of lithium deposits.
 - The presence in Mandya's rocks is also **mere inference** at this point, with **mining and extraction many months away**.
 - India currently **imports all its lithium needs**. Over **165 crore lithium batteries** are estimated to have been imported into India between 2016-17 and 2019-20 (up to November 30, 2019), at an estimated **import bill of upwards of \$3.3 billion**.

Significance of secured Lithium supply

India has unveiled plan for developing a **battery storage ecosystem**, which involves setting up at least **50-gigawatt hour manufacturing capacity** for advanced chemistry cell batteries.

- The union government has also announced a **₹18,100 crore production-linked incentive (PLI) scheme** to make **lithium-ion cells** to promote e-mobility in India.
- In such a scenario, securing lithium supplies will play a critical role in the pivot **towards a greener economy**.



- Demand is further expected to rise as Lithium is a **key element for new technologies** and finds its use in various industries (Refer infographic).

Concerns associated with import reliance of Lithium

- **Concentration of reserves: Chile, Argentina and Bolivia (Lithium triangle)** in South America is believed to account for **more than 50%** of the world's proven Lithium reserves. **Australia and China** are the two other geographies that claim the **top spot**.
- **China's dominant position and inevitable geopolitical race:** China has a **huge head start** on India in terms of **securing lithium deposits**, which are a critical component of **electric vehicle batteries**. This could **slowdown India's efforts to become self-sufficient** in the EV era.
 - Around **three-quarters of battery cell manufacturing capacity** is in China, and Chinese companies have **unparalleled control** of required domestic and foreign battery **raw materials** and processing facilities.
 - Chinese companies have pursued **mine investments in both Australia and Latin America** to ensure an overall command of lithium supply chain. In this backdrop, Indian strategic experts believe that India and China are locked in an **inevitable geopolitical race**.
 - World's four biggest mining firms currently control **77% of the global lithium market**. This has set off a **race between India and China** which is considered a repetition of the **contestation that played out** when they went looking for **overseas oil and gas fields**.

Steps taken by India to ensure secured lithium supply

- **Exploration projects:** Apart from the discovery in Karnataka's Mandya district, the Geological Survey of India has taken up seven other lithium exploration projects in **Arunachal Pradesh, Andhra Pradesh, Chhattisgarh, Jharkhand, Jammu and Kashmir and Rajasthan**.
 - The Atomic Minerals Directorate for Exploration and Research under the department of atomic energy has also undertaken lithium exploration in **Karnataka and Rajasthan**.
- **Collaboration with other countries:** In March 2019, India signed a **MoU with Bolivia to explore and extract Lithium**. India has also signed **bilateral agreement with Argentina** for securing strategic minerals, which will be operationalized via Khanij Bidesh India Ltd (**KABIL's contract with three state-owned organizations** in Argentina).
 - India and the US are also looking at setting up an **alternative supply chain** for lithium.
 - KABIL is also exploring the **direct purchase** of cobalt and lithium.
- **Lithium plant:** India's **first Lithium plant** has been set up **at Gujarat** in 2021, where a private company has planned investment of Rs 1000 crore to **set up a refinery**. The refinery will use Lithium ore to **produce base battery material**.

Measures that can be taken for a secured Lithium supply

- **Focus on recycling:** Apart from intensifying exploration, India should explore the opportunities to **re-purpose and recycle used lithium-ion batteries**. Reports suggest battery recycling as a solution to meet surging lithium-ion batteries demand, recovering **80-90% of lithium, cobalt, nickel, manganese and graphite**.
 - Recycling is also significant because of the **environmental and human rights concerns** surrounding the mining of these precious metals.
 - Lithium-ion battery recycling will also help in our goal of **circular economy** apart from ensuring a **supply security**.
- **Looking for alternatives to Lithium-ion battery: Solid-state batteries** are a promising option due to their **high energy density** and **wide operating temperature**. They are expected to become commercially viable within the next 5-10 years.
 - Also in the race are **aluminium-air batteries** (Al-air batteries) and **sodium-ion batteries**.

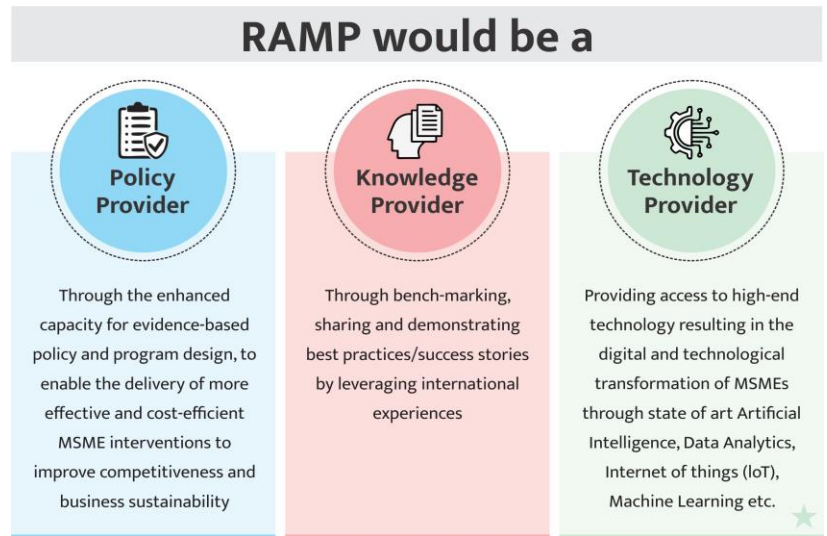
3.6. MSMES

Why in news?

The Union Cabinet has approved a World Bank assisted Central Sector Scheme "Raising and Accelerating MSME Performance" (RAMP).

About the Scheme

- The scheme is being launched under the Ministry of Micro, Small and Medium Enterprises (MoMSME) for supporting various COVID-19 Resilience and Recovery Interventions.
 - It was formulated and proposed by the Government of India, for strengthening MSMEs in line with the recommendations made by **U K Sinha Committee, KV Kamath Committee** and Economic Advisory Council to the Prime Minister (PMEAC).
- Aim:**
 - Improving **access to market and credit, strengthening institutions** and governance at the Centre and State.
 - Improving Centre-State linkages** and partnerships.
 - Addressing issues of delayed payments and greening of MSMEs.
- Outlay:** The total outlay for the scheme is Rs.6,062.45 crore out of which **Rs.3750 crore would be a loan from the World Bank** and the remaining Rs.2312.45 crore Million would be funded by the Government of India (GoI).



About MSMEs

- In India they are defined/classified as follows

MSMEs definition in India			
Classification	Micro	Small	Medium
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover; not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover ; not more than Rs. 250 crore ★

- Economic contribution:**
 - It contributes **29% of the Indian GDP**.
 - It employs over 11 crore people** (second largest employer after agriculture).
- However, their viability remains questionable due to various chronic and modern challenges:
 - 5,907 businesses registered with the Union Ministry of MSME as MSMEs were shut during financial years 2020-21 and 2021-22 (till March 9, 2022) in the country. Of this, **99.1 per cent were micro enterprises**, 0.75 per cent were small businesses.
 - This number could be **higher if one takes into account entities that are not registered as MSMEs**.

Challenges faced by MSMEs in India

- Finance**
 - Delayed payment:** Four years after MSME SAMADHAAN portal was set up to help enable faster payments and improved cash flows to India's MSMEs, the number of applications filed for relief on the portal are piling up closer to one lakh.

- The total amount of delayed payments under these applications is nearing a whopping Rs 25,000 crore. However, it could take several years before each of these pending applications could be disposed of.
 - **Credit gap:** MSMEs still find access to formal credit a challenge. Roughly 40 per cent of MSME lending is done through the informal sector (in 2018), where interest rates are at least twice as high as in the formal market. The reason for the enormous credit gap is two-fold:
 - **Lack of assets** among MSMEs such as land and building etc. to secure asset-based financing or secured loans.
 - **Credit risk assessment challenges** faced by financial institutions in owing to lack of financial data and credit history among small businesses.
- **Infrastructural bottlenecks:**
 - **Land:** Due to high cost of land, the circle rate of Industrial area is usually high making it unaffordable for the MSME entrepreneur.
 - **Power & water:** Delay in getting access to power and water connection. Lack of adequate power supply in few parts of the country.
 - **Logistics:** Lack of a cost effective and efficient logistics/supply chain infrastructure as well as lack of dedicated infrastructure i.e. ready to move-in, built-in factories with plug and play facilities.
 - **Poor infra for capacity building:** Lack of access to R&D Centres, Product and Prototype Development Centres, Testing Laboratories, etc.
 - **Poor marketing strategy:** MSMEs because of their size are unable to achieve economies of scale or hire a marketing specialist who can guide them to have robust marketing strategy. Also, they do not have adequate foot print on digital marketing platform.
- **Access to Technology:** Though India has a vast pool of technical talent with well-developed intellectual capability, the country still scores low in terms of developing, commercializing and adopting new and innovative technologies.
- **Women specific issues:** The number of women-led MSMEs in India has jumped from 2.15 lakh to 1.23 crore in just a decade. However, they face a **finance gap of \$158 billion and largely rely on informal sources**. About 90 per cent of SMEs owned by women in the country still rely on informal ways of securing capital or loans. Besides, social attitude, and socioeconomic constraints also hold women back from becoming entrepreneurs

Initiatives taken by the government to promote MSMEs

- **Prime Minister Employment Generation Programme (PMEGP):** It aims at providing financial assistance to self-employment ventures, in order to generate employment opportunities for unemployed youth and traditional artisans.
- **Credit Guarantee Trust Fund for Micro & Small Enterprises (CGT SME):** Collateral free loan up to a limit of ₹ 100 lakh is available for individual MSE on payment of guarantee fee to bank by the MSE.
- **ZED Certification scheme:** It aims at enabling MSMEs towards manufacturing quality products by inculcating Zero Defect & Zero Effect practices, to safeguard the continuous improvement thereby supporting the Make in India initiative.
- **Online Portal "Champions":** This covers many aspects of e-governance including grievance redressal and handholding of MSMEs.
- **Micro & Small Enterprises - Cluster Development Programme (MSE-CDP):** The scheme aims at the growth of MSEs by addressing advancements in sustainable & green manufacturing technology, market access, skills & quality, etc. Creating infrastructural facilities in existing Clusters of MSEs and Industrial Areas.

Way head

- **Assessing the challenge:** No survey has been undertaken yet to assess the impact of Covid-19 on small businesses in the informal sector where most of the MSMEs are concentrated. Hence, assessing the loss faced in the informal sector is a prerequisite to understand the gravity of the problems being faced by the MSMEs enterprises.
- **Reorient SAMADHAAN:** SAMADHAAN portal should be focused to prevent the delay in the payment instead of working as a post-facto problem solving mechanism. For this to happen, the portal should provide a large number of standardized contract templates that can serve all types of business deals and transactions.
- **Cash flow-based lending by financial institutions:** Cash flow-based loans are generally working capital loans required for short-term to manage operational expenses in a business such as rent, salaries, raw material purchase, and more. Such lending would help MSMEs to access formal financial institutions even if they lack assets to mortgage.

- **Cluster Development to overcome infrastructure bottleneck:** MSME Clusters have been effective in promoting industrial growth all over the world. The success of these clusters is largely due to the individual small firms of the cluster closely collaborating and collectively sharing resources for various business processes like marketing, technology, etc.
- **Marketing support for MSMEs:** Facilitate the marketing side of innovation and assist MSMEs to on-board 'B2B' and 'B2C' e-commerce market places. Technology tools like SMS, digital newsletter and electronic direct mail can be used efficiently to target segmented population by MSMEs. Facilitate MSMEs in procuring complete and low-cost ICT solutions.
- **Strengthen Government policies:** The Parliamentary Standing Committee on Industry has recommended following recommendation to the government
 - **Emergency Credit Line Guarantee Scheme (ECLG):** Extend the loan repayment period under the ECLG for MSMEs up to seven-eight years (currently, the repayment period of three-four years including the moratorium period). The parliamentary panel also asked for **at least a two-year moratorium period** on the principal amount.
 - **Setting up a Central Market Intelligence Centre:** This body shall work to replace goods imported by MSME with domestic manufacturing.
 - **Ease of certification:** Using existing Technology Centres for subsidised testing and certification of regional MSMEs. The Ministry should also devise a **mechanism to tie up with global Testing Centres** whose certificates are acceptable in respective countries/regions to ease the testing process, reduce cost, and encourage innovation among new entrepreneurs.
 - **Forming separate policies for medium enterprises** vis-a-vis micro and small enterprises based on their divergent needs.
- **Resolving issues related to women:** For women entrepreneurs, many policy packages and schemes are available yet their impact on the ground remains to be seen. It is important now, more than ever, that the government agencies, Non-Government Organizations (NGOs), civil society engage to foster women's education and encourage funding institutions to accept and grant loans to women entrepreneurs.

Related news

Ministry of Micro, Small & Medium Enterprises launched MSME Innovative Scheme (Incubation, Design and IPR)

- The scheme is a holistic approach that **combines innovation in incubation, design intervention and protect IPR** to create awareness amongst MSMEs about India's innovation and motivate them to become MSME Champions.
 - **CHAMPIONS (Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength)** is basically for making the smaller units big by helping and handholding, in particular, by solving their problems and grievances.
- **Details of MSME Innovative Scheme**

Incubation	<ul style="list-style-type: none"> • Objective: To promote and support untapped creativity and to promote adoption of latest technologies in MSMEs. • Financial assistance: Up to Rs. 15 lakh per idea and up to Rs. 1.00 crore for relevant plant and machines.
Design	<ul style="list-style-type: none"> • Aim: To provide expert advice and cost-effective solution on real time design problems for new product development, its continuous improvement and value addition. • Financial assistance: Up to Rs. 40 lakh for design project and up to Rs. 2.5 lakh for student project.
IPR (Intellectual Property Rights)	<ul style="list-style-type: none"> • Objective: To improve the IP culture in India with a view to enhance the awareness of IPRs amongst the MSMEs. • Also aims to take suitable measures for the protection of ideas, technological innovation and knowledge-driven business strategies developed by MSMEs. • Financial assistance will be provided for Foreign Patent, Domestic Patent, GI Registration etc.

3.7. NATIONAL DIGITAL TOURISM MISSION

Why in news?

The Ministry of Tourism has invited final comments from the stakeholders on draft report for setting up of National Digital Tourism Mission (NDTM).

Background

- Ministry of Tourism had constituted an **inter-ministerial task force for NDTM in July, 2021** to undertake consultations with the tourism industry and domain experts, define the **context, mission, vision, objectives, and overall scope of the NDTM**.
- The Task Force has prepared a draft report which inter-alia lays down **domain and technology principles, standards, digital stack, governance structure and plan for implementation** of the envisaged NDTM.
- The draft notes that most of the tourism systems developed by Central Government, State Governments, Public sector and Private sector function in silos.
 - As a result, the tourism ecosystem is unable to harvest the combinatorial benefits of information exchange. Data systems currently don't interact with each other using a common language, thereby curtailing data analytics and resultant policy-making.

Key highlights of the Draft NDTM

Vision:

- The National Digital Tourism Mission envisages to achieve the objective of **harnessing the full potential of digitization in tourism sector** by facilitating exchange of information and services in tourism sector spreading across national and state tourism organizations, tourism service providers, tourism destinations, products, experiences and tourists.
- The vision of NDTM is to **bridge the existing information gap amongst different stakeholders of tourism ecosystem** through digital highways.

Principles of National Digital Tourism Mission

The Tourism Ecosystem and its ICT services may comply with the following relevant principles of India Ecosystem Architecture.

Domain Principles	Design and Architecture Principles	Technology Principles
<ul style="list-style-type: none"> Value-driven with central focus on interest of beneficiaries. Unifying Services to realize the goal of a connected ecosystem. 	<ul style="list-style-type: none"> Ecosystem Thinking spanning across Centre and States, public and private and other systems. Assured Service levels for all participating stakeholders. Federated Architecture build around the constructs of Single-Source-of-Truth and System-of-Records. 	<ul style="list-style-type: none"> Data as an asset. Data sharing. Standards: Specify the existing technology and data standards applicable

Performance of India's Tourism Sector

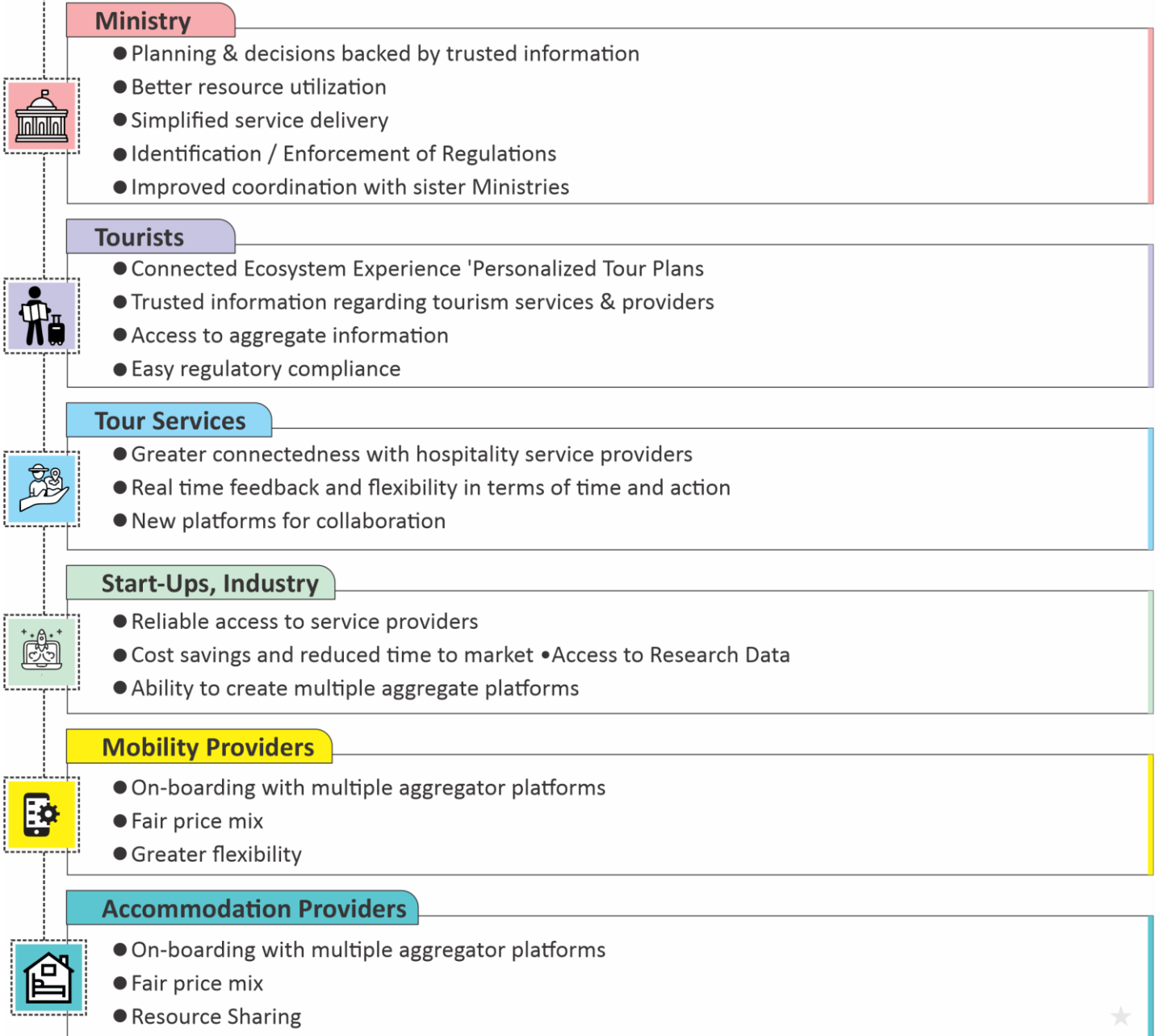
- India ranked 34th** in WEF's World Travel and Tourism Competitiveness Index (WTTCI) ranking.
- Contribution to GDP:** Approximately 5% in 2018-19. The GDP has grown at CAGR of 10.7% over 2015 to 2018 period
- International Tourist Arrivals (ITAs):** With 17.9 million ITAs in 2019, India is at 23rd position in the world in terms of ITAs. ITAs have grown with a CAGR of 6.4% over 6 years from 2014 to 2019.
- Contribution to Employment** Both direct and indirect jobs in tourism sector contributed to **12.5% of total jobs in the country in 2019**.
- Contribution to Foreign Exchange Earnings (FEE):** With 2.12 lac crore FEE in 2019, India is at 12th position in the world. Foreign Exchange Earnings from Tourism have grown with a CAGR of 12.1% CAGR over 6 years from 2014 to 2019.

Current Status of Digitization in Tourism Sector

- Widespread use of technology in travel and tourism:** Digital disruptors like social media, mobile devices and accessible information enable destination marketers to engage with consumers and stakeholders on a larger scale than ever before.
- Development of travel portals and platforms:** Such platforms by the private sector, cater to various needs such as transport, accommodation, etc.
- Hyper-personalization:** By capturing personal data from customers and learning more about their behavioural patterns.
- Efforts of the Ministry of Tourism**
 - A multi-lingual '**Incredible India**' website and mobile application assist international and domestic tourists.
 - A platform namely **National Integrated Database of Hospitality Industry (NIDHI)** for registration and classification of tourism service providers.
 - Digitization of Swadesh and PRASHAD Schemes**
 - 24x7 Toll Free Multi-Lingual Tourist Info-Helpline**

<ul style="list-style-type: none"> ● Outcome-driven by defining service levels and outcomes benchmarking with the best. ● Affordable choices ● Diversity and Inclusion across device types, linguistic barriers, geography and accessibility compliant. 	<ul style="list-style-type: none"> ● Be open and inter-operable. ● Resilient to withstand failures by building automated recoveries and adaptation. ● Minimal, Reusable, Unbundled and Shareable architecture ● Innovation and responsible deployment of emerging technologies. 	<p>to the ecosystem. Define methods to ensure compliance.</p> <ul style="list-style-type: none"> ● Secure and Trust Based.
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NDTM to Bring Host of Benefits



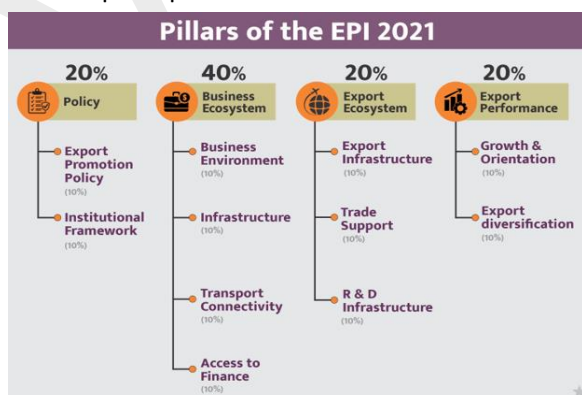
Conclusion

The implementation of NDTM shall have multifold benefits to various entities of the tourism ecosystem. Not only will it improve the efficiency and effectiveness, but it will also increase transparency and provide a boost to tourism economy by preventing data leakages.

3.8. NEWS IN SHORTS

3.8.1. NITI AAYOG RELEASES SECOND EDITION OF EXPORT PREPAREDNESS INDEX (EPI) 2021

- EPI, prepared by NITI Aayog in partnership with Institute of Competitiveness, is a comprehensive analysis of India's export achievements of states and union territories and identifies challenges and opportunities.
- EPI is a **data-driven endeavour to identify fundamental areas** critical for subnational export promotion.
 - EPI ranks states and UTs on **4 main pillars—Policy; Business Ecosystem; Export Ecosystem; Export Performance** and **11 sub-pillars**. (Refer infographic)
- **Key findings**
 - **Most of the 'Coastal States' are best performers, with Gujarat as top-performer**, followed by Maharashtra, Karnataka, Tamil Nadu.
 - States with higher exports also experience **high Gross State Domestic Product (GSDP)**.
 - **Among landlocked states, Haryana emerged as a best performer** followed by Uttar Pradesh, Madhya Pradesh, and Punjab.
- **Significance**
 - **Instill competition** among states to bring favourable policies.
 - Ease the **regulatory framework** to prompt subnational export promotion.
 - Assist in identifying strategic recommendations for improving export competitiveness.
- **Three major challenges to India's export promotion** are
 - Intra- and inter-regional differences in export infrastructure.
 - **Weak trade support** and growth orientation across states.
 - **Lack of R&D infrastructure** to promote complex and unique exports.



3.8.2. GOVERNMENT EXTENDS EMERGENCY CREDIT LINE GUARANTEE SCHEME (ECLGS) TILL MARCH 31, 2023

- **National Credit Guarantee Trustee Company Limited (NCGTC)** has issued modifications to operational guidelines for **ECLGS 3.0**.
 - Under ECLGS 3.0, business enterprises in **hospitality, travel and tourism, leisure and sporting sectors** would be able to avail credit under ECLGS.
- **Major modifications**
 - **Increased additional credit support** from existing 40% of fund-based credit outstanding to **50% of fund and non-fund based credit outstanding** under ECLGS 3.0.
 - **Cap on maximum borrowing** by a single MSME from **aviation industry** has been increased to **Rs 400 crore** from Rs 200 crore earlier.
 - **Eligible borrowers in civil aviation sector** now permitted to **avail of non-fund based emergency credit facilities**.
- ECLGS, announced in 2020 as **one of the key components of Rs 2 trillion economic stimulus package** under 'Aatmanirbhar Bharat Abhiyan'.
 - It aims to **provide 100% guaranteed coverage to banks, non-banking financial institutions (NBFCs)** in order to enable them to extend emergency credit to business entities in view of Covid-19 to meet their additional term loan/ working capital requirements.
 - Interest rates are capped at **9.25% for Banks and Financial Institutions (FIs)**, and **14% for NBFCs**.

3.8.3. INDIA, SOUTH AFRICA, NAMIBIA OPPOSE TALKS AT WTO ON E-COMMERCE, INVESTMENT, MSMES

- These countries have jointly **voiced concerns on the plurilateral talks** on e-commerce, investment facilitation etc **gathering pace at the WTO**.
- The proponents of the **plurilateral talks, called the Joint Statement Initiative (JSI)** are trying to look for an **outcome at the 12th WTO Ministerial Conference (may take place in June)**.
 - JSIs are broadly defined as a **plurilateral negotiating tool** initiated by a group of WTO members on certain issues **without adhering to the rules on consensus decision-making** of the multilateral body.

- India has **refused to be part of the JSI discussions** as it believes that members need to first **focus on mandated areas** for negotiations, including a **permanent solution** for food procurement subsidies.
 - All members need to follow the **foundational rules** of the rules-based multilateral system, as enshrined in the **Marrakesh Agreement**.
 - **Marrakesh Agreement** (led to the **establishment of the WTO in 1994**) highlighted the concerns over the fragmentation of multilateral rules following the **Tokyo Round** and was in favour of developing an **integrated, more viable and durable multilateral trading system**.
 - ✓ Tokyo Round of General Agreement on Tariffs and Trade (GATT) negotiations in 1979 had led to **plurilateral codes**.

3.8.4. INDIA'S SMART METERING PROGRAMME HITS A SNAG, BIDS SUSPENDED TILL 15 MARCH

- As per reports, government has suspended smart meter bids under its Rs. 3.03 trillion **Revamped Distribution Sector Scheme (RDSS)** till March 15 due to multiple issues.
 - RDSS aims to **bring down India's average aggregate technical and commercial (AT&C) loss from the present level of 20% to 12-15%** and gradually **narrow the deficit between the cost of electricity and the price** at which it is supplied to zero by 2024-25.
- Smart Meter is an advanced energy meter that provides the **tracking of utility energy consumption** that occurs on the system or outlet it is attached to.
 - A smart meter is **one component of a smart grid**.
- **Benefits of smart metering**
 - **To customers:** Greater control over their electricity use, enhanced consumer satisfaction through better complaint management, system stability, reliability and transparency.
 - **To discoms:** reduce AT&C losses, improve financial health, incentivise energy conservation, enhance ease of bill payments and ensure billing accuracy.
- **Issues with smart metering**
 - **Delay in operationalizing prepaid functionality** in these meters.
 - **Connections and disconnections are done manually**, defeating the objective of avoiding human intervention.
 - **Cybersecurity risks** include data privacy issue.
- **Government steps**
 - **National smart metering programme (NSMP)** aims to replace 250 million conventional meters

with smart ones that will **reduce power theft** and **ensure reliable electricity supply**.

- **National Smart Grid Mission (NSGM)** plans and monitors the implementation of policies and programmes related to Smart Grid activities in India.

3.8.5. ELECTRONIC BILL (E-BILL) PROCESSING SYSTEM

- On the 46th Civil Accounts Day, **Ministry of Finance & Corporate Affairs** launched **e-Bill processing system**.
- E-Way bill system is for **GST registered person / enrolled transporter for generating the way bill electronically** on commencement of movement of goods **exceeding the value of Rs. 50,000**.
- Under this **vendors/supplier can upload their bills online along with supporting documents** from the convenience of their place at any time through digital signature.
- It **eliminates physical interface** between suppliers and government officers.
- It is developed by the **Public Financial Management System (PFMS) Division**.

3.8.6. RESERVE BANK INNOVATION HUB (RBIH)

- It has been **inaugurated in Bengaluru**.
- Set up as a Section 8 company under Companies Act, 2013, with an **initial capital contribution of Rs 100 crore**
- RBIH aims to **encourage and nurture financial innovation in a sustainable manner through an institutional set-up**.
 - It creates an ecosystem that focuses on promoting **access to financial services and products for the low-income population in the country**.
- Hub would bring **convergence among various stakeholders** (BFSI Sector, Start-up ecosystem, Regulators and Academia) in the financial innovation space.

3.8.7. RESERVE BANK OF INDIA (RBI) CONDUCTS A \$ 5 BILLION DOLLAR-RUPEE SWAP AUCTION



- Under the auction, **RBI sold \$5.135 billion to banks and simultaneously agreed to buy back** the dollars at the end of the swap settlement period.
 - The auction, as part of RBI's **liquidity management initiative**, led to infusion of dollars and sucking out of the rupee from the financial system.
- It will **reduce the pressure on inflation and strengthen the rupee** which has already hit the 77 level against the US dollar.

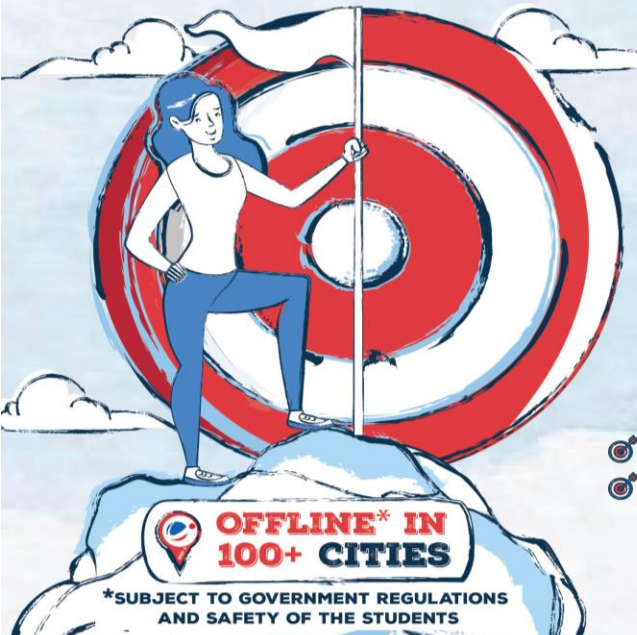
3.8.8. TAPI, PAR, NARMADA RIVER INTERLINKING PROJECT

- The interlinking project is envisioned under the 1980 National Perspective Plan (NPP) and proposes to transfer river water from the surplus regions of the Western Ghats to the deficit regions of Saurashtra and Kutch
 - NPP- Also known as the National River Linking Project (NRLP), envisages inter-basin water transfer from water 'surplus' basins where there is flooding, to water 'deficit' basins where there is drought/scarcity, through inter-basin water transfer projects.
- It proposes to link three rivers - Par (originating from Nashik in Maharashtra), Tapi (from Satpura) and Narmada (originating in Madhya Pradesh).
- It includes the construction of seven dams (Jheri, Mohankavchali, Paikhed, Chasmandva, Chikkar, Dabdar and Kelwan), of which one is in Maharashtra and others are in Gujrat.
- Significance

- It will help in saving the water of the Sardar Sarovar dam which is presently used for irrigation in Saurashtra.
- It will assist in generation of hydropower through the powerhouses installed at four dam sites.
- The reservoirs will also provide flood relief to the people residing in downstream areas.
- However, concerns have been raised by tribal regarding submergence of land, displacement and loss of livelihood.



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4. SECURITY

4.1. DEFENCE INDIGENISATION

Why in News?

Recently, a parliamentary panel has **expressed concern over India's spending on defence research** showing low Defence Indigenisation.

Key highlights of the panel report

- India's defence expenditure has **remained less than 1% of its GDP** in the last five years.
 - Spending came down to **0.083% in 2020-21** from 0.088% in 2016-17.
- India is **funding 6% on defence Research & Development (R&D)** of the Defence Budget whilst, USA and China are spending approximately 12% and 20%, respectively.
- In Defence Research and Development Organisation (DRDO), there is a **shortfall of 808 scientists which is slightly more than 10%** of sanctioned strength.
- In 2021-2022, against an allocation of Rs 31,250 crore, **only Rs 11,821 crore was utilised** by December end 2021 which would compromise operational needs and R&D.

Need for increasing the focus on Defence Indigenisation

- Security concerns:** Due to the unresolved territorial disputes with China and Pakistan, insurgency in Jammu and Kashmir (J&K), North-Eastern states, and growing menace of left-wing extremism has intensified the need of more funding in defence sector as well as Indigenisation.
- Regional Power:** To act as a net security provider in the region, India needs to **acquire self-sufficiency** in terms of the development of advanced defence hardware and technology.
- Economic Benefits:** To **reduce dependency on arms imports** and preserve foreign exchange and thus reducing Current account deficit.
- Capacity Building:** Given India's current deficiencies in the Armed Forces, there is need to focus on the **development of advanced and sophisticated weapons system** for various platforms of combat, i.e., land, sea, and air.
- Advancement in technology:** Armed Forces' war-fighting capabilities, **development of new weapons (Hypersonic missile) and Solid Fuel Ducted Ramjet (SFDR) technology** in the weapons and equipment needs constant augmentation and updation which requires an efficient infrastructure.

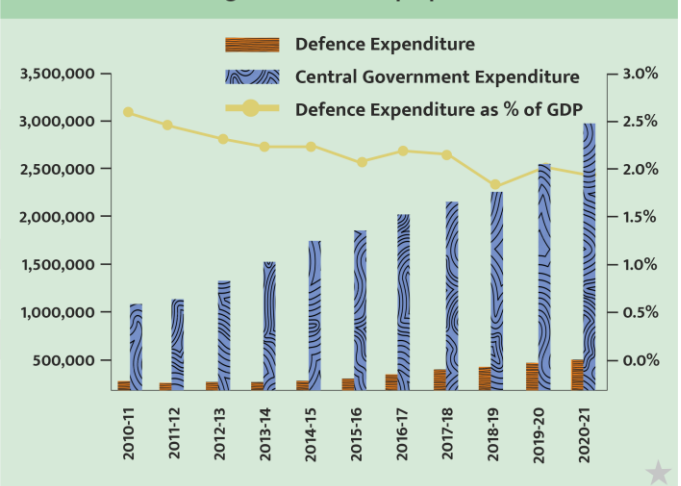
Constraints in Defence Indigenisation in India

- Lack of overarching organisation:** Due to absence of an organisation, several agencies like Indigenisation Directorates of the Services, DRDO, DPSUs etc. are involved to channelise the efforts, which are largely **disjointed, lack synergy and no mechanism is in place to facilitate their interaction** with the armed forces to increase indigenisation.

Defence Indigenisation

- It means the **capability to design, develop and produce defence equipment within the country** using own skills and resources for the purpose of achieving self-reliance and reducing the burden of imports i.e. self-sufficient.
- Defence Research & Development Organisation (DRDO), Defence Public Sector Undertakings (DPSUs), and private organisations i.e., Original Equipment Manufacturer (OEM) are playing a critical role in indigenisation of defence industries.

Defence budget decreased as proportion of GDP



Related news

Stockholm International Peace Research Institute (SIPRI) report

- India's import of arms decreased by 33% between 2011-15 and 2016-20 and Russia was most affected supplier, although India's imports of US arms also fell by 46%.
- India's warheads have low yield and have maximum range of over 5,000 km, as compared to China.
- SIPRI, established in 1966, **independent international institute** dedicated to research into conflict, armaments, arms control and disarmament.

- **Private Participation:** Abysmal private sector participation, especially MSMEs, which can play a critical role in developing niche technologies and providing solutions that are critical for indigenisation.
- **Absence of comprehensive Policy:** Department of Defence Production (DDP) only contains the policy for indigenisation of components and spare parts but **lack conceptual and procedural inadequacies.**
- **Technology and delays:** Indian defence industry suffers from **inefficiency, productivity, and low R&D** especially in advanced weapons system and defence technology.
 - For example, defence research organisations have gone through **several production delays and cost-overruns** while developing Battle Tank Arjun and Light Combat Aircraft (LCA) Tejas.
- **Skewed decision-making:** Due to **lack of military inputs in decision-making**, national security strategy of India suffers from flaws such as absence of a National Security Doctrine and long-term defence planning.

Steps required for Defence Indigenisation

- **Funding:** Adequate funding should be provided to the defence research so that strategic projects are taken up with full vigour.
 - **DRDO should seek additional funds at the revised estimates** and the supplementary stage to ensure its R&D plans progress as per the set timeline.
- **Defence Renewal Fund:** Ministry of Finance should create a **Non-Lapsable Defence Modernisation Fund** which can be used exclusively for the procurement of key defence assets at critical times.
- **Resolve procedural issues:** It needs to be done to ensure that testing, quality assurance and certification agencies work more as a part of the team engaged in Indigenisation rather than as external technology audit entities.
- **Accountability and Transparency:** By avoiding excessive, wasteful, and corrupt military expenditures and procurement, high levels of transparency and accountability in military budgeting and procurement processes can be achieved.
- **Adopt 5 Is:** There is need to adopt the concept of **5 Is (Identify, Incubate, Innovate, Integrate and Indigenise)** to accelerate progress, reduce costs and complete defence procurement in a time bound manner.

Government initiatives for Defence Indigenisation

- **Offset portal:** To ensure greater transparency, efficiency and accountability in self-reliance process.
 - Offsets are **essentially benefits that a buyer gets from a seller** — technology/capability that Indian industry gets from a foreign vendor selling equipment to India.
 - The policy on offsets was first introduced as part of the **Defence Procurement Procedure (DPP) 2005**, and has undergone revisions since then.
 - The main objective of the Defence Offset Policy is “to **leverage capital acquisitions to develop Indian defence industry**”
- **Defence Procurement Procedure (DPP), 2016:** New category of capital procurement ‘**Buy Indian-IDDMM (Indigenously Designed, Developed and Manufactured)**’ has been introduced to promote indigenous design and development of defence equipment.
- **Technology Development Fund (TDF):** To encourage participation of public/ private industries for enhancing cutting-edge technology capability for defence applications.
- **Defence Industrial Corridors (DICs):** In Uttar Pradesh and Tamil Nadu to serve as an engine of economic development and growth of defence industrial base.

Role of different stakeholders in Defence Indigenisation

- **Public sector:** Create level playing field, promote joint ventures with private players and boost efficiency of Public Sector Undertakings (PSUs), while retaining authority, autonomy, and technical control over new developments.
- **Private Sector:** It can **promote healthy competition between public and private sector**, boost supply chains and encourage collaborations to address critical issues like: components shortage, lack of R&D etc.
- **Armed services:** They can be **further integrated in the DAP by articulating clear timelines**, technical specifications and qualitative requirements and address cost overrun.
- **Ministry of Defence:** To coordinate with other relevant ministries such as Ministry of MSME, Ministry of Heavy Industry and Public Enterprises, to **boost collaboration, fast-track acquisition** and to clearly highlight immediate needs of the defence forces.
- **Ministry of Finance:** To **address the total defence budget deficit, and its allocation** between revenue, pensions, and capital expenditure thus boosting capabilities of tri-services.

4.2. NEWS IN SHORTS

4.2.1. VILLAGE DEFENCE GROUPS (VDGS) IN J&K

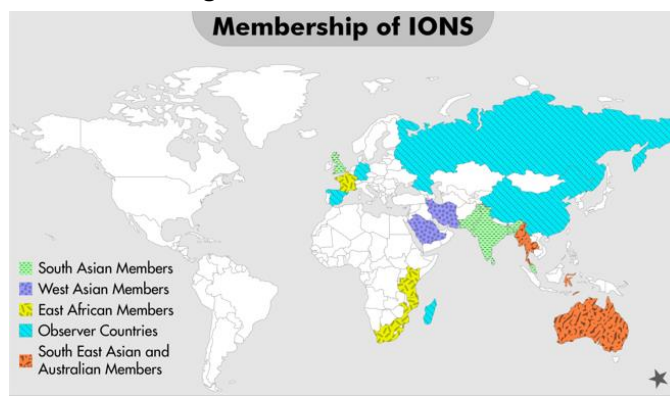
- Ministry of Home Affairs has given a nod to **formation of VDGS in Jammu and Kashmir (J&K).**
- Members of VDGS will be **designated as Village Defence Guards.** They will **function under the direction of SP/SSP of the concerned district.**
- VDGS were **earlier known as village defence committees (VDCs).**

- During peak of militancy in the 1990s, 4,125 VDCs existed in J&K.
- VDCs play a significant part in **assisting the forces in counter-terrorism operations, maintaining vigil over inimical elements and assisting in maintaining peace.**

4.2.2. INDIAN OCEAN NAVAL SYMPOSIUM (IONS) HOLDS MAIDEN MARITIME EXERCISE

- Maiden edition of IONS Maritime Exercise 2022 (IMEX-22) was **conducted at Goa and in Arabian Sea** with the **aim to enhance interoperability in Humanitarian Assistance and Disaster Relief (HADR) operations among member navies.**
 - It witnessed participation of 15 out of the 25 member nations of IONS.
- IONS, established in 2007, is a **voluntary initiative that seeks to increase maritime cooperation among navies of the littoral states of the Indian Ocean Region (IOR)** by providing an open and inclusive forum for discussion of regionally relevant maritime issues.
 - It has **enabled discussions on regional maritime issues, promoted friendly relationships, and significantly improved maritime security cooperation** in the IOR.
 - **Inaugural IONS Seminar was held by the Indian Navy in 2008.**
- IONS includes 24 nations that permanently hold territory that lies within the IOR (See Map)
- **Importance of IONS for India**

- Strengthening and **deepening relations with Indian Ocean littoral states.**
- Establishing its leadership potential and aspirations of being a **net-security provider.**
- Fulfilling **India's vision of a rules-based and stable maritime order in IOR.**
- **Counter-balance** the increasing presence of China in the region.



4.2.3. EXERCISES IN NEWS

- **SLINEX (Sri Lanka–India Naval Exercise):** The 9th edition of the India-Sri Lanka bilateral maritime exercise SLINEX was held at Visakhapatnam.
- **EX-DUSTLIK:** The third edition of the **India - Uzbekistan exercise** was conducted in Uzbekistan.
- **LAMITIYE-2022:** It is a **Joint Military Exercise between the Indian Army and Seychelles Defence Forces.**
- **Prasthan (Offshore Security exercise):** **Western Naval Command** conducted 'Prasthan' in the Offshore Development Area (ODA) off Mumbai.

PERSONALITY DEVELOPMENT PROGRAMME

CIVIL SERVICES EXAMINATION 2021

Programme Features

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

Admission Open

5. ENVIRONMENT

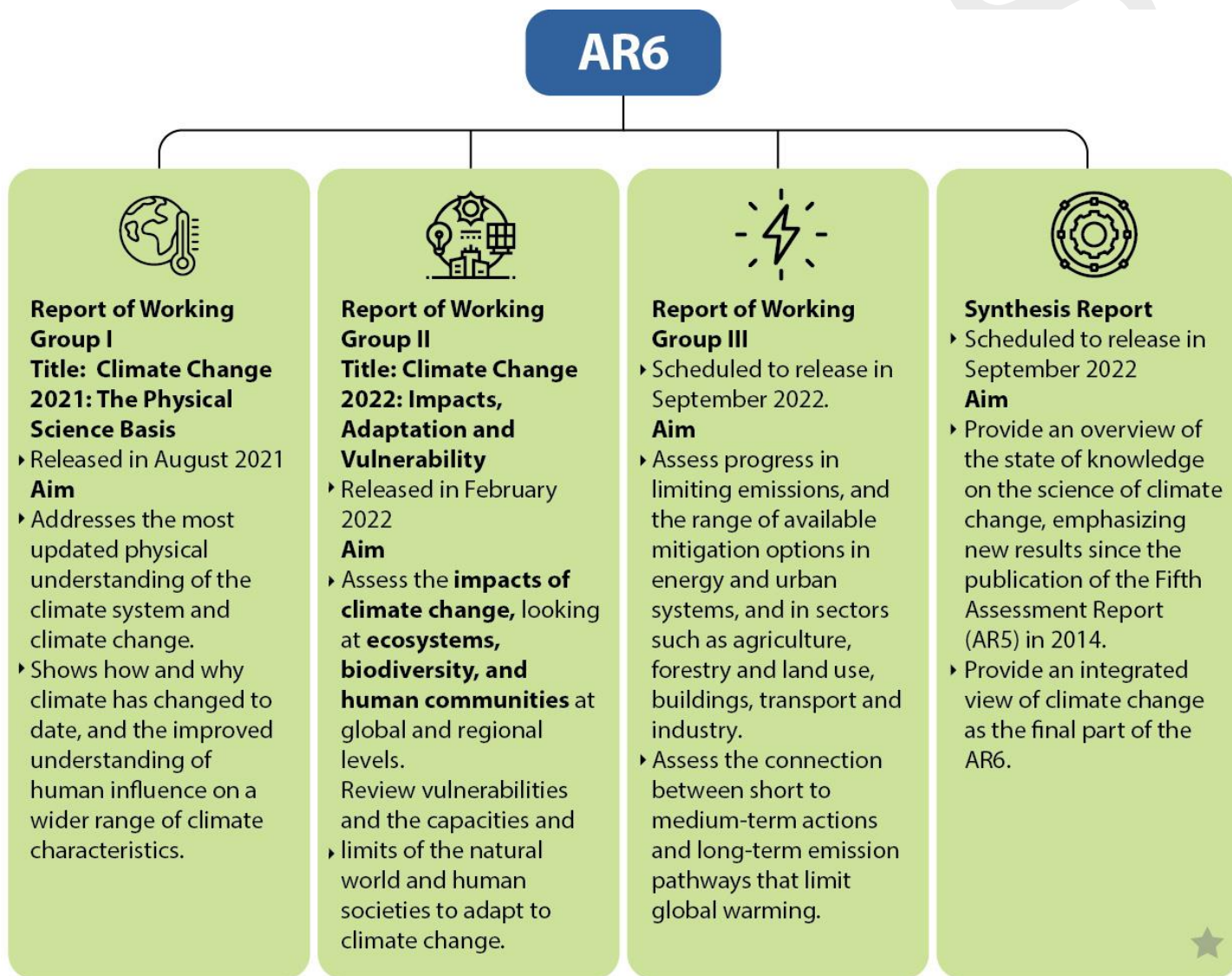
5.1. IPCC'S SIXTH ASSESSMENT REPORT: PART II

Why in news?

The IPCC released the second part of the Sixth Assessment Report, titled 'Climate Change 2022: Impacts, Adaptation and Vulnerability', the Working Group II contribution to the Sixth Assessment Report.

About IPCC's Sixth Assessment Report

- The IPCC is in its sixth assessment cycle, in which it is producing the **Sixth Assessment Report (AR6)** with contributions by its **three Working Groups and a Synthesis Report**.



5.1.1. KEY FINDINGS

- According to the latest report, extent and magnitude of climate change impacts are larger than estimated in previous assessments.

Observations	Data and other Information
Observed Impacts:	Impacts on Biodiversity and ecosystems: <ul style="list-style-type: none"> Substantial damages in terrestrial, freshwater and coastal and marine ecosystems.

<p>Human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability.</p>	<ul style="list-style-type: none"> • Increases in disease and mass mortality events of plants and animals. • Increased severity and outbreak extent of forest insect pests in several regions. • Poleward shift of species: Approximately half of the species assessed globally have shifted poleward or, on land, also to higher elevations. • Irreversible losses: Climate-caused local population extinctions have been detected in 47% of 976 species examined and associated with increases in hottest yearly temperatures. • Impacts approaching irreversibility: such as the impacts of hydrological changes resulting from the retreat of glaciers and Arctic ecosystems driven by permafrost thaw. <p>Impacts on Humans:</p> <ul style="list-style-type: none"> • Reduced food and water security: <ul style="list-style-type: none"> ○ Slowed agricultural growth over the past 50 years globally mainly in mid- and low latitude regions. ○ Ocean warming and ocean acidification adversely affected food production from shellfish aquaculture and fisheries. ○ Roughly half of the world’s population currently experience severe water scarcity for at least some part of the year due to climatic and non-climatic drivers. • Adverse impact on physical health and mental health of people: <ul style="list-style-type: none"> ○ Extreme heat events resulted in human mortality and morbidity. ○ Increased occurrence of climate-related food-borne, water-borne diseases and vector-borne diseases. ○ Emergence of Animal and human diseases, including zoonoses. ○ Climate-sensitive cardiovascular and respiratory distress due to increased exposure to wildfire smoke, atmospheric dust, and aeroallergens. ○ Mental distress due to trauma from weather and climate extreme events and loss of livelihoods and culture. ○ Malnutrition in vulnerable communities: Sudden losses of food production and access to food compounded by decreased diet diversity have increased malnutrition in communities like Indigenous Peoples, small-scale food producers and low-income households. • Economic loss: due to negative impact on- <ul style="list-style-type: none"> ○ climate exposed on sectors like agriculture, forestry, tourism etc., ○ outdoor labour productivity, ○ individual livelihoods due to changes in agricultural productivity, impacts on human health and food security, destruction of homes and infrastructure, and loss of property and income, etc. ○ Short term losses cause by extreme events like cyclones. • Increase in Humanitarian crises where climate hazards interact with high vulnerability: Examples- <ul style="list-style-type: none"> ○ Displacement in Small Island States. ○ Flood and drought-related acute food insecurity and malnutrition in Africa, and Central and South America.
<p>Vulnerability and Exposure of Ecosystems and People</p>	<p>Impacts in Urban areas:</p> <ul style="list-style-type: none"> • Intensification of Hot extremes including heatwaves and aggravated air pollution events. • Compromised transportation, water, sanitation and energy systems. • Impacts concentrated amongst the economically and socially marginalized urban residents, e.g., in informal settlements. <p>Vulnerability and Exposure of Ecosystems and People</p> <ul style="list-style-type: none"> • Factors increasing vulnerability: by affecting the capacities of ecosystems, societies, communities and individuals to adapt to climate change include - <ul style="list-style-type: none"> ○ Unsustainable land-use and land cover change, ○ unsustainable use of natural resources, ○ deforestation, ○ loss of biodiversity, ○ habitat fragmentation, and ○ ecosystem damage by pollutants.

- **Impacts on Human-** Competition for land and/or water resources and impact on key infrastructure systems including sanitation, water, health, transport, communications and energy.
- **Vulnerability is exacerbated by-** inequity and marginalization linked to gender, ethnicity, low income etc.
- **Impact on ecosystems-**
 - Degradation of world’s forests, coral reefs and low-lying coastal wetlands.
 - **Very high extinction risk for endemic species in biodiversity hotspots:** ~100% on islands, ~84% on mountains, ~12% on continents and ~54% in the ocean (notably the Mediterranean) are projected to be threatened with extinction due to climate change.
- **Regions with higher vulnerability-**
 - West-, Central- and East Africa, South Asia, Central and South America, Small Island Developing States and the Arctic.
 - Locations with poverty, governance challenges and limited access to basic services and resources, violent conflict and high levels of climate-sensitive livelihoods (e.g., smallholder farmers, pastoralists, fishing communities).

KEY RISKS ASSESSED IN THE REPORT

A. Low-lying coastal systems

Nat. coastal protection & habitats 	Loss of lives, livelihood & well-being 	Disruption of transport systems
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B. Terrestrial & marine ecosystems

Change structure/functioning 	Loss ecosystem goods/services
Nat. coastal protection & habitats 	Loss of biodiversity

C. Critical infrastructure, networks & services

Damage & disruption 	Impacts of failure on lives; livelihoods, economics
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D. Living standards

Aggregate economic impacts 	Loss of Livelihoods 	Increased poverty
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E. Human health

Heat-related morbidity & mortality
Vector-borne diseases
waterborne diseases

F. Food security

Increased hunger
Decline ecosystem services

G. Water security

Water scarcity 	Water-related disasters
Indig. & trad. cultures & ways of life 	

H. Peace & mobility

Armed conflicts
Involuntary (im)mobility

Risks in the near term (2021–2040)

- **Global warming, reaching 1.5°C in the near-term,** would cause unavoidable increases in multiple climate hazards and present multiple risks to ecosystems and humans, like-biodiversity loss, sea encroachment on coastal settlements and infrastructure, submergence and loss of low-lying coastal ecosystems etc.

	<ul style="list-style-type: none"> The level of risk will depend on vulnerability, exposure, level of socioeconomic development and adaptation. Near-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages compared to higher warming levels, but cannot eliminate them all.
Mid to Long-term Risks (2041–2100)	<ul style="list-style-type: none"> Projected adverse impacts and related losses and damages escalate with every increment of global warming. For instance: <ul style="list-style-type: none"> In terrestrial ecosystems, 3 to 14% of species assessed will likely face very high risk of extinction at global warming levels of 1.5°C, increasing up to 3 to 18% at 2°C, 3 to 29% at 3°C, 3 to 39% at 4°C, and 3 to 48% at 5°C. Very high extinction risk for endemic species in biodiversity hotspots: Projected to at least double from 2% between 1.5°C and 2°C global warming levels and to increase at least tenfold if warming rises from 1.5°C to 3°C Approximately a billion people projected to be at risk from coastal-specific climate hazards. At approximately 2°C global warming, snowmelt water availability for irrigation is projected to decline in some snowmelt dependent river basins by up to 20%.
Complex, Compound and Cascading Risks	<ul style="list-style-type: none"> Multiple climate hazards will occur simultaneously, and multiple climatic and non-climatic risks will interact, resulting in compounding overall risk and risks cascading across sectors and regions. <ul style="list-style-type: none"> For example, unavoidable sea level rise will bring cascading and compounding impacts resulting in losses of coastal ecosystems and ecosystem services, groundwater salinisation, flooding and damages to coastal infrastructure that cascade into risks to livelihoods, settlements, health, well-being, food and water security, and cultural values.
Risks arising from some responses that are intended to reduce the risks of climate change	<ul style="list-style-type: none"> These include risks from maladaptation and adverse side effects of some emissions reduction and carbon dioxide removal measures. <ul style="list-style-type: none"> For example, deployment of afforestation of naturally unforested land, or poorly implemented bioenergy, with or without carbon capture and storage, can compound climate-related risks to biodiversity, water and food security, and livelihoods, especially if implemented at large scales. Solar radiation modification would not stop atmospheric CO₂ concentrations from increasing or reduce resulting ocean acidification under continued anthropogenic emissions.
Increased risk of Transboundary conflicts	<ul style="list-style-type: none"> Conflicts among fisheries users due to redistribution of marine fish stocks from lower to higher latitude regions. Precipitation and water availability changes in planned hydropower projects to cause conflict across countries that share river basins.
Impacts of Temporary Overshoot	<ul style="list-style-type: none"> If global warming transiently exceeds 1.5°C in the coming decades or later (overshoot), then many human and natural systems will face additional severe risks. Some impacts will cause release of additional greenhouse gases contributing to a potential amplification of global warming making return to a given global warming level or below more challenging. Some impacts will be irreversible, even if global warming is reduced.

5.1.2. INDIA SPECIFIC FINDINGS

- Ganges and inter-state Sabarmati River basin could face severe water scarcity challenges.**
- Extreme weather events:** Increased severity and frequency of heat waves, droughts in arid and semi-arid areas, floods in monsoon regions, cyclones in coastal areas and glacier melting in the Hindu Kush Himalaya region.
 - For instance, drought conditions are projected to increase by 5-20% by the end of the century.
- Impact on Marginalised sections:** For example, salinisation-associated changes in coastal areas may disproportionately burden women responsible for securing drinking water and fuel in the Indian Sundarbans.
- Impact on health:** Increases in hazards such as intense heatwaves, flooding and drought, air pollutants etc. will lead to increased occurrence of-
 - circulatory, respiratory, diabetic and infectious disease;
 - diarrheal diseases, dengue fever and malaria; and





- heat-related deaths and infant mortality.
- **Invasive species:** Climate change would promote invasion of a highly invasive species such as Giant African Snail in India.
- **Impact on food production:**
 - **About 69% of the commercially important species of the Indian marine fisheries** were found to be impacted by climate change and other anthropogenic factors.
 - **Rice production can decrease** from 10% to 30% whereas **maize production can decrease** from 25% to 70% assuming a range of temperature increase from 1° to 4°C.
 - This can lead to adverse impact on food availability and prices of food causing **undernourishment**.
- **Migration:** Increased climate variability and extreme events are already driving migration and will increase involuntary displacement in the future.
 - In 2019, India recorded more than 4 million disaster-induced displacements.
- **Exposure to high energy insecurity and industrial systems risk:** due to increase of energy demand for cooling at a rapid rate, together with the population growth.
- Some innovative and community led adaptation practices of India highlighted in the report:
 - **Artificial glaciers, ice stupas and snow barrier bands** built by local communities in Ladakh and Zaskar and Himachal Pradesh.
 - **Ahmedabad has pioneered preparedness for extreme temperatures and heat waves** by developing annual Heat Action Plans, building regulations to minimise trapping heat, advisories about managing heat stress, and instituting cool roofs policy.

5.1.3. ADAPTATION MEASURES

Current Adaptation	<ul style="list-style-type: none"> ● At least 170 countries and many cities including adaptation in their climate policies and planning processes. But at current rates of adaptation planning and implementation the adaptation gap will continue to grow. ● Issues with current adaptation efforts- fragmented, small in scale, incremental, sector-specific, designed to respond to current impacts or near-term risks, focused more on planning rather than implementation and unequally distributed across regions.
Limits to Adaptation	<p>Soft limits: to some human adaptations have been reached due to following constraints-</p> <ul style="list-style-type: none"> ● Financial constraints: Insufficient funds especially in developing countries, overwhelming majority of global tracked climate finance targeted to mitigation. ● Governance, institutional and policy constraints: Lack of climate literacy at all levels, limited availability of information and data, Inequity and poverty, and technical and financial constraints to adaptation planning and implementation. <p>● Hard limits to adaptation have been reached in some ecosystems including some warmwater coral reefs, some coastal wetlands, some rainforests, and some polar and mountain ecosystems.</p> <ul style="list-style-type: none"> ● Maladaptation: Actions that focus on sectors and risks in isolation and on short-term gains often lead to maladaptation if long-term impacts of the adaptation option and long-term adaptation commitment are not taken into account. <ul style="list-style-type: none"> ○ For example, seawalls effectively reduce impacts to people and assets in the short-term but can also increase exposure to climate risks in the long-term as reduce space for natural processes. ● Maladaptive responses to climate change can- <ul style="list-style-type: none"> ○ Create lock-ins of vulnerability, exposure and risks that are difficult and expensive to change. ○ Decrease Biodiversity and ecosystem resilience to climate change. ○ Affect marginalised and vulnerable groups adversely (e.g., Indigenous Peoples, ethnic minorities, low-income households, informal settlements) by reinforcing and entrenching existing inequities.
Climate Resilient Development	<ul style="list-style-type: none"> ● There is a rapidly narrowing window of opportunity to enable climate resilient development. ● The prospects for climate resilient development will be further limited if global warming levels exceeds 1.5°C and not be possible in some regions and sub-regions if the global warming level exceeds 2°C.

5.1.4. RECOMMENDATIONS OF THE REPORT

- **Undertaking feasible and effective adaptation options** which can reduce risks to people and nature (see infographic).
- **Avoiding Maladaptation:** by-
 - Considering biodiversity and autonomous adaptation in **long-term planning processes**.
 - **Inclusive planning initiatives** informed by cultural values, Indigenous knowledge, local knowledge, and scientific knowledge.
 - **Multi-sectoral and multi-actor planning with flexible pathways**.
- **Enabling Conditions:** These include-
 - political commitment and follow-through,
 - institutional frameworks,
 - policies and instruments with clear goals and priorities,
 - enhanced knowledge on impacts and solutions,
 - mobilization of and access to adequate financial resources,
 - monitoring and evaluation, and
 - inclusive governance processes.
- **Achieving Climate Resilient Development:** through following steps-
 - Governments, civil society and the private sector need to make inclusive development choices that prioritise risk reduction, equity and justice.
 - Decision-making processes, finance and actions should be integrated across governance levels, sectors and timeframes.
 - **Developing partnerships with traditionally marginalised groups**, including women, youth, Indigenous Peoples, local communities and ethnic minorities.
 - **Effective and equitable conservation** of approximately 30% to 50% of Earth's land, freshwater and ocean areas, including currently near-natural ecosystems.
 - **Integrated, inclusive planning and investment** in everyday decision-making about urban infrastructure, including social, ecological and grey/physical infrastructure.

System transitions	Representative key risks	Climate responses and adaptation options	
Land and ocean ecosystems	Coastal socio-ecological systems	Coastal defence and hardening Integrated coastal zone management	
	Terrestrial and ocean ecosystem services	Forest-based adaptation Sustainable aquaculture and fisheries Agroforestry Biodiversity management and ecosystem connectivity	
	Water security	Water use efficiency and water resource management	
	Food security	Improved cropland management Efficient livestock systems	
Urban and infrastructure systems	Critical infrastructure, networks and services	Green infrastructure and ecosystem services Sustainable land use and urban planning Sustainable urban water management	
Energy systems	Water security	Improve water use efficiency	
	Critical infrastructure, networks and services	Resilient power systems Energy reliability	
Cross-sectoral	Human health	Health and health systems adaptation	
	Living standards and equity	Livelihood diversification	
	Peace and human mobility	Planned relocation and resettlement Human migration	
	Other cross-cutting risks	Disaster risk management Climate services, including Early Warning Systems Social safety nets Risk spreading and sharing	

Conclusion

“The cumulative scientific evidence is unequivocal: Climate change is a threat to human well-being and planetary health. Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all.”

5.2. NATIONAL DOLPHIN DAY

Why in news?

The Ministry of Environment, Forest and Climate Change announced that **October 5 will be celebrated as National Dolphin Day** from this year as part of the conservation campaign for the species and to generate awareness.

More on news

- The decision to designate a National Dolphin Day was taken **by the standing committee of the National Board for Wildlife (NBWL)**.

- October 5 is currently celebrated as 'Ganga River Dolphin Day', but its re-designation now as a national day for this aquatic animal will encompass all rivers and oceans' Dolphins beyond the Gangetic ones.

About Gangetic Dolphin

- It is an **indicator species**, whose status provides information on the overall condition of the ecosystem and of other species in that ecosystem.
- It is extremely **vulnerable to changes in water quality and flow**.
- It is among the four freshwater dolphins found in the world – the other three are found in the **Yangtze River (China), the 'bhulan' of the Indus (Pakistan) and the 'boto' of the Amazon River (Latin America)**.
- It is fluvial (riverine) in habitat, it may **also be found in brackish water** though it never enters the sea.
- It is a **mammal and cannot breathe in the water** and must surface every 30-120 seconds.
- The Gangetic river species is **found in India, Bangladesh and Nepal**.
 - In India, mostly Gangetic dolphins, a species of freshwater dolphins, are sighted in long deep river reaches in Assam, Bihar, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh and West Bengal.
- Being a **mammal**, the Ganges River dolphin **cannot breathe in water** and **must surface every 30-120 seconds**. Because of the **sound it produces when breathing**, the animal is popularly referred to as '**Souns/Susu/Sushuk/Seho**'.
- Conservation efforts**
 - The **Vikramshila Gangetic Dolphin Sanctuary (VGDS)**, Bhagalpur in Bihar is the only dolphin sanctuary in the country.
 - '**Project Dolphin**' to conserve both freshwater and marine dolphins.
 - The government of India declared it **the National Aquatic Animal in 2009**.
 - The Conservation Action Plan for the Ganges River Dolphin 2010-2020**, which 'identified threats to Gangetic Dolphins and impact of river traffic, irrigation canals and depletion of prey-base on Dolphins populations'.



Protection Status	
List/ Act	Categorisation
Wild Life (Protection) Act, 1972	Schedule I
CITES	Appendix I
IUCN Red list	Endangered

5.3. DISASTER MANAGEMENT PLAN OF MINISTRY OF PANCHAYATI RAJ

Why in news?

Disaster Management Plan of Ministry of Panchayati Raj (DMP–MoPR) was recently released.

About DMP–MoPR

- It has been prepared in **compliance of Section 37 of Disaster Management Act** and **guidelines issued by National Disaster Management Authority** with larger perspective of community-based planning starting from village to District Panchayat level.

Key Components of the plan:

- Institutional arrangement:** Village Committee on Disaster Management in each village and a Working Group on Disaster Management in each Panchayat for planning, implementation and monitoring of the plan.

- **Mainstreaming of Community Based DMP of Villages and Panchayats:** Every Indian village would have Village Disaster Management Plan. These plans would be the basis for preparation of disaster management mainstreamed Gram Panchayat Development Plan (GPDP), Block Development Plan (BDP) and District Development Plan (DDP) for the respective Panchayat.

- The community-based disaster management plans would be prepared in participatory, modified bottom-up and socially inclusive process.

- **Hazard Risk, Vulnerability and Capacity Analysis:** It involves vulnerability mapping, zoning for natural disasters such as cyclone, floods, drought, earthquake, Tsunami etc.

- **Coherence of Disaster Risk Management across Resilient Development and Climate Change Action:** by mutual reinforcing of the national initiatives corresponding to the three global frameworks- **Disaster Risk Reduction, Sustainable Development Goals (SDGs) and Paris Agreement on Climate Change** and the ten - point agenda.

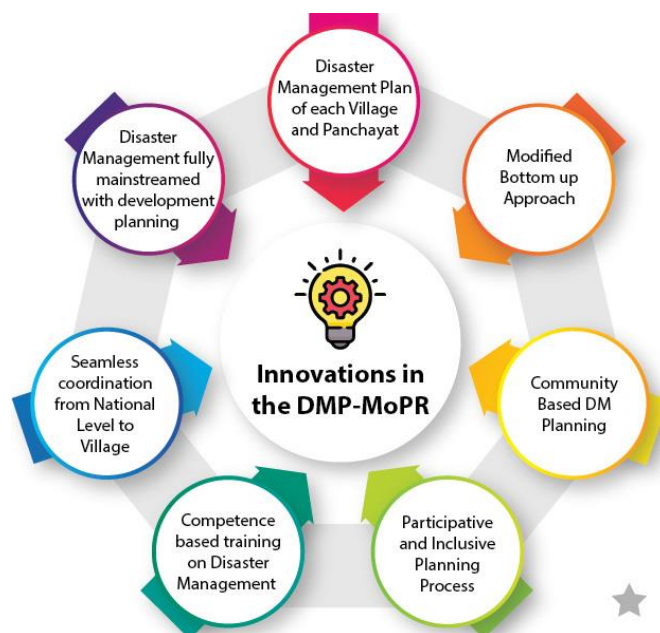
- **Socially Inclusive Disaster Risk Reduction in Rural Area:** Processes and methods have been highlighted for incorporating needs of vulnerable Groups like, Sexual Minorities, Scheduled Castes and Scheduled Tribes, Children and Specially Abled Persons.

- **Capacity Building Framework:** Competence based training for two members of every village committee on DM, members of the Working Group on DM for each Panchayat, etc.

- The MoPR would support the first component of training to the State Resource Persons under the Rashtriya Gram Swaraj Abhiyan (RGSA).

- **Coordination, Convergence and Collective Action:** Functional coordination with multiple agencies, convergence with structure and system of disaster management.

- Implementation of the plan will be in convergence mode with the ongoing scheme of RGSA, schemes of Central Government and State Governments and Disaster Management Authorities (DMAs) and Grants on the basis of recommendation of Fifteenth Finance Commission.



Constitutional Provision for DM Planning at local level

- **Article 243G:** It is intended to empower all three tiers of Panchayats by enabling the State Governments to devolve powers and authority including those matters listed in the Eleventh Schedule.
 - Although, the word ‘disaster’ has not been mentioned in the 29 subjects in Eleventh Schedule, they cover most of the activities required for preparedness, mitigation, recovery and reconstruction required for disaster management like maintenance of community assets.
- **Article 43ZD:** It makes it mandatory for the States to constitute District Planning Committee (DPC) which mandated to prepare a Draft District Development Plan by consolidating the plans prepared by all the Panchayats and Municipalities in the district.
 - Disaster risk reduction are a critical component in these plans.

What is the significance of involvement of PRIs in Disaster Management?

- **Coverage:** Rural population in India was reported at 65.07 % of total population in 2020. Since India’s unique climate and socio-economic conditions make it vulnerable to a number of natural, as well as man-made disasters, local rural governments play a major role in DM throughout the country.

- **Proximity:** The close involvement of PRI with village communities can enhance people’s participation in activities crucial for effective disaster risk reduction like:

- **Risk assessment of areas;**
- **Identification of vulnerable groups** and extent of their vulnerability;
- **Preparing for early warning systems;**
- **Response measures undertaken during disaster and in post-disaster periods** like reconstruction of damaged houses, crop protection measures, etc.

- **Maintaining transparency and accountability** in the activities undertaken during and post disaster through social audits.
- **Inclusive disaster risk reduction:** About 5.5 lakh SCs, 3.35 lakh STs and 10.48 lakh women were working as panchayat leaders at different levels of the PRI. These elected representatives are best equipped to take care of marginalised groups who are more vulnerable to extreme events and disasters.
- **Utilization of traditional knowledge:** PRIs can act as catalysts to social mobilization process and tap the traditional wisdom of the local communities to complement the modern practices in DM efforts.
- **Spreading authentic awareness in the community:** For instance, Panchayats played a crucial role in creating awareness about the COVID-19 pandemic in rural areas.
- **Leadership:** PRI members can play a role of leadership in Disaster Risk Management at all stages.
- **Provide a base for integration** of various concerns of the community with that of the NGOs which are engaged in various Developmental activities at the grassroots level.

Challenges faced by PRIs in effectively tackling disasters

- **Insufficient institutional, financial and human capacities** to implement their disaster plans.
- **Low level of devolution of powers and functions** by the States.
- **Lack of clarity regarding roles and responsibilities** of PRIs in disaster management.
- **Low participation of vulnerable groups** at the grassroots level.
- **Absence of effective of inter-agency coordination** at district, state, and central levels.
- **Lack of training of Elected Representatives and Official Functionaries** regarding mechanisms and strategies of Disaster Management.

Conclusion

The **DMP–MoPR** can help in empowerment of PRIs functionally, financially and administratively to effectively shoulder responsibilities, while being hand-held to continuously build their capacities for economic development, social justice, and disaster management.

5.4. NEWS IN SHORTS

5.4.1. UNEA ADOPTS HISTORICAL RESOLUTION “END PLASTIC POLLUTION: TOWARDS AN INTERNATIONALLY LEGALLY BINDING INSTRUMENT”

- Representatives from 175 nations endorsed the **resolution at UN Environment Assembly (UNEA-5)** in Nairobi to End Plastic Pollution and forge an **international legally binding agreement by 2024**.
 - Under the legally binding agreement, **countries will be expected to develop, implement and update national action plans** reflecting country-driven approaches to contribute to the objectives of the instrument.
- **About the resolution**
 - It is based on three initial draft resolutions of **Peru, Rwanda and Japan**.
 - It **addresses the full lifecycle of plastic**, including its production, design and disposal.
 - It **establishes an Intergovernmental Negotiating Committee**, which will begin its work in 2022, with the ambition of completing a draft global legally binding agreement by the end of 2024.

- **Extent of plastic pollution**
 - Plastic pollution **soared from two million tonnes in 1950, to 348 million tonnes in 2017**. This could **double by 2040**.
 - By 2050, greenhouse gas emissions associated with plastic production, use and disposal, would account for 15% of allowed emissions.
 - **More than 800 marine and coastal species** are affected by this pollution through ingestion, entanglement, and other dangers.



5.4.2. UNEP 'FRONTIERS' REPORT 2022

- UNEP 'Frontiers' report 2022: **Noise, Blazes and Mismatches'** looks at three concerns: Urban soundscapes, wildfires and phonological shifts.
- **Key findings**
 - Out of 13 noise polluted cities in South Asia, 5 of these are in India, namely Moradabad, Kolkata, Asansol, Jaipur and Delhi.
 - Long-term exposure to noise pollution from road traffic, railways, or leisure activities causes **premature deaths, heart disease, metabolic disorders, and people suffer from irritability.**
 - Highest noise pollution has been recorded in Dhaka, Bangladesh followed by Moradabad.
- **Steps taken to deal with noise pollution**
 - Earlier, it was covered under the **Air (Prevention and Control of Pollution) Act, 1981** but later, **Noise Pollution (Regulation and Control) Rules, 2000** replaced it.
 - ✓ However, under **Air Act, 1981**, noise emanating from industry is regulated by State Pollution Control Boards / Pollution Control Committees (SPCBs / PCCs) for states/UTs.
 - **Central Pollution Control Board (CPCB) proposed fines** between Rs 1,000 and Rs 1 lakh for those who violate norms.
 - **Environment (Protection) Rules, 1986** prescribed noise standards for motor vehicles, air-conditioners, refrigerators etc.
- **Steps that can be taken: Vegetation** in urban environments, **Noise barriers** along highways or railways, conducting awareness campaigns etc.
- Noise pollution is defined as **regular exposure to elevated sound levels that may lead to adverse effects in humans or other living organisms.**
- CPCB has laid down the **permissible noise pollution levels** in India for different areas.

5.4.3. MINAMATA CONVENTION

- Fourth Conference of Parties (COP4) to the **Minamata Convention (MC) on Mercury** being held in Bali, Indonesia
- **MC on Mercury**, adopted in 2013 at Geneva, is the world's **first legally binding treaty to protect human health and environment** from adverse effects of mercury.
 - It is named after the city in Japan that became the epicenter of Minamata disease, a neurological disease caused by severe mercury poisoning, in the 1950s.
 - **India signed the MC in 2014 and ratified in 2018.**
 - **It came into force in 2017.**

- At the meeting, Indonesia as well as the United Nations have introduced a global declaration that calls on parties to the **MC on Mercury to tackle global illegal trade of mercury.**
- **Non-binding declaration calls upon parties to**
 - **Develop practical tools and notification and information-sharing systems** for monitoring and managing trade in mercury.
 - **Exchange experiences and practices relating to combating illegal trade** in mercury, including reducing use of mercury in artisanal and small-scale gold mining.
- **Other conventions**
 - **Rotterdam - For certain hazardous chemicals and pesticides in international trade.**
 - **Basel- Control of transboundary movements of hazardous wastes and their disposal.**
 - **Vienna- Protection of Ozone Layer.**
 - **Stockholm- Persistent Organic Pollutants (POPs).**

- Mercury is considered by WHO as one of the top ten chemicals or groups of chemicals of major public health concern.
 - It may have **toxic effects on nervous, digestive and immune systems, lungs, kidneys, skin and eyes.**
 - India is second-largest user of mercury in world after US.

5.4.4. LAKSHYA ZERO DUMPSITE

- Under Lakshya Zero Dumpsite, Government of India approves **₹178.6 crore Legacy Waste Remediation Proposal of Telangana.**
- About **Lakshya Zero Dumpsite:**
 - One of the aims under Swachh Bharat Mission - Urban 2.0.
 - Seeks to remediate approx **16 crores metric tonnes (MT)** of legacy waste has covered around **15000 acres** of prime land across the nation
 - Will help in furthering the vision of **resource recovery** and principles of the **circular economy.**

5.4.5. EARTH HOUR

- **Organized by:** World Wildlife Fund (WWF).
- It is celebrated **annually on March 26th globally**, this year's theme was '**Shape Our Future**'.
- 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.
- **WWF** is an **international non-governmental organization**, established in **1961** and headquartered at **Gland, Switzerland.**

5.4.6. NATIONAL WETLAND DECADAL CHANGE ATLAS TITLED NATIONAL WETLAND INVENTORY AND ASSESSMENT-2006-07 AND 2017-18

- It was prepared by the Space Applications Centre (SAC) of ISRO, highlighting the changes which have happened in Wetlands across the country in the past decade.
 - The original Atlas was released by SAC in 2011 and has over the years been used extensively by all the State Governments also in their planning processes.
- Key highlights
 - At the national level, the total wetland area has been estimated at 15.98 Mha, which is around **4.86 per cent of country's total geographic area**.
 - Among the wetland types, **more than one-third of the total wetland area is covered by rivers** (35.2 per cent), another around 43 per cent wetland area is covered combining reservoirs (17.1 per cent).
 - A majority of the increase in wetland area in last decade has been found in **inland man-made (81.5 per cent) and coastal artificial (17.0 per cent) categories**.
 - There is a **decrease in coastal natural wetlands**, mostly converted to coastal man-made categories.
 - There is an **increase in the mangroves area, coral reefs area**.

About Wetlands

- Ramsar convention defines wetlands as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.
- India has come up with **Wetlands (Conservation and Management Rules) 2017** for protection, management of wetlands in India.

5.4.7. PERMAFROST PEATLANDS IN EUROPE, WESTERN SIBERIA NEARING TIPPING POINT: STUDY

- A recent study has found that by 2040, **northern Europe** might become **too wet and warm** to support **permafrost peatlands** (frozen, carbon-storing expanses of land).
 - By 2060, **Europe and western Siberia** could lose **75 per cent** permafrost peatlands under moderate efforts to mitigate climate change.
- Peatlands are a **class of wetlands**. Term 'peatland' refers to the **peat soil** and the wetland habitats growing on the surface.

- Some peatlands are **buried under frozen ground or permafrost** and exist as **permafrost peatlands**. They are found in the **northern parts of Alaska, Canada, Russia and parts of northern Europe**.
- Permafrost is any ground that remains completely frozen - **32°F (0°C) or colder** - for at least two years straight.
- **Significance: Critical** for preventing and mitigating the effects of **climate change**, preserving **biodiversity**, minimising **floodrisk**, and ensuring safe **drinking water**.
 - Peatlands occupy **only 3 per cent of the global land surface** but store **twice as much carbon as all the world's forests**.
- **Threats: Drainage and burning for agricultural**, climate change, deforestation, destroyed by the extraction of peat, which is used as a source of energy etc.

GLOBAL DISTRIBUTION OF PEATLANDS



Global Peatlands Initiative

- It was launched at **United Nations Climate Change Conference in Marrakech (2016)** as an international partnership to **save peatlands as the world's largest terrestrial organic carbon stock**.

5.4.8. CARRYING CAPACITY

- Preliminary findings of a study by Wildlife Institute of India (WII) suggest that the **density of tigers in the Sunderbans may have reached the carrying capacity of the mangrove forests**.
 - **All-India Tiger report (2018)** put the carrying capacity in the Sunderbans "at **around 4 tigers**" per **100 sq km** while the **ongoing WII study** indicates a **density of 3-5 tigers**.
- Carrying capacity can be **defined as a species' average population size in a particular habitat**. The **species population size is limited by environmental factors** like adequate food, shelter, water, and mates.
 - It is also an important basis for the measurement and management of human sustainable development.
- **Step required**
 - **New perimeter of defining the peak density of forest should be revised**, amidst the increase in

human interference for livelihood due to COVID - 19.

- **Sustainable land uses to minimize damage** and adequate incentives to promote acceptance of wildlife.
- **Functional connections between reserves** so that tigers can have healthy intermixing of populations.
- New management strategies of wildlife should be decentralized at the local level.
- **About Sundarbans:**
 - It is the world's largest mangrove delta which is home to Royal Bengal Tigers, is spread across 10,000 sq km.
 - ✓ More than 4,000 sq km is in West Bengal and the rest in Bangladesh.
 - It is a **biosphere reserve, national park and tiger reserve**
 - Declared a **UNESCO World Heritage Site in 1987**

5.4.9. SOFTWARE WITH INTELLIGENCE MARKING BASED IDENTIFICATION OF ASIATIC LIONS (SIMBA) TO IDENTIFY ASIATIC LIONS

- Gujarat forest department will use SIMBA an Artificial Intelligence (AI)-based photo-identification software-**specifically designed to distinguish patterns or marks.**
 - It has been developed by Hyderabad-based "teliolabs".
- **How it works** - Asiatic lions have **unique whisker spots on either side of their muzzle.** According to scientific studies, **these precise patterns are highly variable and do not change over time.**
 - SIMBA, with machine learning technique **automates the individual identification, based on the variability in the individual's whisker spot pattern, presence of scars on face, notches on ears** and other metadata of the photograph.
- **Significance** -
 - Allows user to **identify and search whether individual** already exists in the database or is a new inventory.
 - Additional information like **gender, name, microchip number, life-status**, lactating (in case of female) can also be used to filter individuals from database.
 - Aid the efforts towards **conservation and management of the species in the Asiatic lion landscape.**

About Asiatic Lion

- It is one of five big cats inhabiting India, along with the Bengal tiger, Indian leopard, snow leopard, and clouded leopard.

- Found **only in India**, in five protected areas in Gujarat – Gir National Park, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary, and Girnar Sanctuary.
- Lions are the only cats that live in groups, called pride.
- **Female lions** are the **pride's primary hunters.**
- The gestation period lasts between **100 – 119 days.**
- **Conservation Status:**
 - **Schedule 1** of Wildlife Protect Act, 1972.
 - **Appendix-I** of CITES
 - **Endangered** on IUCN Red List.
- Asiatic lions are slightly smaller than African lions.
 - IUCN status of African Lion is **Vulnerable.**

5.4.10. CHEETAH ACTION PLAN: TRANSLOCATION IN 2022

- In the backdrop of Indian delegation visiting **Namibia, the Cheetah capital of the world**, grounds are being prepared for **appointing Namibian cheetahs as the country's goodwill ambassadors for India's 75th year of Independence.**
- **Background**
 - Supreme Court lifted its **seven-year stay on a proposal to introduce African cheetahs** from Namibia into the Indian habitat on an experimental basis.
 - In 2013, SC had rejected this owing to **lion translocation in the same Kuno-Palpur sanctuary and doubt of lack of prey base** for Cheetah.
 - Also, an **'Action Plan for Introduction of Cheetah in India'** was launched to introduce 50 Cheetahs over 5 years.
- **About Cheetah Reintroduction**
 - **African Cheetahs (IUCN status: Vulnerable), are being considered for reintroduction** as **Asiatic Cheetah (IUCN: critically endangered)** are low in numbers which is known to occur only in Iran now.
 - Cheetah is a **keystone species** of dry forests, scrub forests, and savannahs.
 - It was declared **extinct in India in 1952** due to over-hunting and loss of habitat.
 - It is also the **world's fastest land mammal.**
 - Part of Appendix 1 of **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).**

5.4.11. INDIAN WOLF

- The first scientific population estimate of **Indian peninsular wolves (Canis lupus pallipes)** has revealed that only 3,100 members of the species are left in the country.
- Indian wolf is a **subspecies of grey wolf.**
 - It is one of the common large carnivores **found in scrub, grasslands and agro-pastoral regions of semi-arid India.**

- **Highest concentration** is currently in **Madhya Pradesh**, followed by Rajasthan, Gujarat, Maharashtra and Chhattisgarh.
- **Threat-** Hunting, encroachment and land conversion, growing man-animal conflict.
- **Conservation status**
 - ✓ **Endangered species in Schedule I** of Wild Life (Protection) Act, 1972.
 - ✓ Appendix 1 of CITES.
 - ✓ **IUCN-** Least Concern

5.4.12. GOLDEN LANGUR

- A recent study by scientists has suggested a significant decline in the habitat of Golden Langur.
- Golden Langur are **easily recognised by the colour of their fur**, and are distributed in the **trans-boundary region of Bhutan and India**.
 - Their habitat is restricted to the foothills of Bhutan (north), Manas river (east), Sankosh river (west), and Brahmaputra river (south).
 - Listed in **Appendix I of CITES**, as 'endangered' on the **IUCN Red List of Threatened Species**, and **Schedule I of the Indian Wildlife (Protection) Act, 1972**, and protected under Bhutan's Forest and Nature Conservation Act, 1995.
 - **Threat-** electrocution, deforestation, habitat loss.

5.4.13. ROUGH-TOOTHED DOLPHIN

- A Research team of the Department of Environment and Forest in Lakshadweep has **reported the first-ever live sighting of rough-toothed dolphins** (*Steno bredanensis*) in **Indian waters**.
- **About Rough-Toothed Dolphin:**
 - **Found in tropical and warmer temperate waters all over the world** but little is known about them.
 - Grow up to 8.5ft in length and have grey body with white lips and throat and a speckled belly.
- **Conservation status:**
 - **IUCN:** Least Concern.
 - **CITES** Appendix II.

5.4.14. OLIVE RIDLEY TURTLES ARRIVE AT ODISHA COAST FOR MASS NESTING

- 2022 **arribada (mass-nesting phenomenon)** is the most delayed mass nesting recorded in Gahirmatha
 - **Gahirmatha (Odisha) is the world's largest rookery of olive ridley's followed by Rushikulya.**
 - Olive Ridley turtles **dig holes on the beach at night time creating a cavity**. They **lay 40-50 eggs in each hole and cover it again with sand**. Before sunrise, the turtles return to the sea, leaving behind the eggs, which **hatch after 40-60 days**.

- **About Olive Ridley**
 - It gets its name from the **olive-green color of its heart-shaped shell**.
 - Found primarily in the **warm tropical regions of the Pacific, Indian, and Atlantic oceans**.
 - **Threats: Accidental killing** through entanglement in trawl nets; **extensively poached** for their meat, shell and leather; **warmer sea surface temperatures** etc.
 - **IUCN Status:** Vulnerable.
 - **Protection:** Schedule I of the Indian Wildlife Protection Act, 1972, CITES Appendix I.
- **Government Initiatives**
 - **Operation SaveKurma** by Wildlife Crime Control Bureau.
 - Odisha government has made it **mandatory for trawls to use Turtle Excluder Devices (TEDs)**.
 - **Operation Oliva** exercise to ensure the safe mid-sea sojourn of breeding Olive Ridley Sea turtles.



5.4.15. CARBOFURAN

- Recent death of more than **95 Himalayan griffon vultures** (Near Threatened) and a steppe eagle in Assam has been attributed to **pesticide poisoning due to carbofuran**.
 - **Habitat of Himalayan griffon vultures:** western China, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Afghanistan and Pakistan, east through the Himalayan Mountain range in India, Nepal and Bhutan, to central China and Mongolia.
- **About Carbofuran:**
 - It is a **pesticide that is widely used to control insects and nematodes** on a variety of agricultural crops.
 - Its extensive use for agricultural and non-agricultural purposes has been directly responsible for the **environmental contamination and human health** issues.

5.4.16. INDIA WATER PITCH-PILOT-SCALE START-UP CHALLENGE

- Ministry of Housing and Urban Affairs launched the Challenge under **Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0**.
 - AMRUT 2.0 was launched with aim of making the cities 'water secure' and 'self-sustainable' through circular economy of water.
- Under this, **Government will select 100 start-ups across the country** to empower sustainable economic growth and generate employment opportunities in the water or used water sector.

5.4.17. WORLD ENERGY TRANSITION OUTLOOK 2022

- **World Energy transition Outlook 2022** was launched by the **International Renewable Energy Agency (IRENA)** at the Berlin Energy Transition Dialogue.
 - It sets out **priority areas and actions** based on available technologies that must be realised by 2030 to **achieve net zero emissions** by mid-century.
- **Energy Transition** is a pathway toward **transformation of the global energy sector from fossil-based to zero-carbon** by the second half of this century.
 - At its heart is the need to **reduce energy-related CO2 emissions to limit climate change**.
- **Steps taken by India:**
 - **Intra-State Transmission System – Green Energy Corridor.**
 - **Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)** Scheme to de-dieselise the farm sector.
 - **Offshore Wind Energy policy (2015)** to harness the potential of offshore wind energy.
 - Approved an investment of Rs 1,500 crores in the **Indian Renewable Energy Development Agency (IREDA)**, which provides project financing to the Renewable Energy (RE) sector.
 - **Faster Adoption and Manufacturing of Hybrid & Electric Vehicles in India (FAME INDIA)** scheme.
 - **National Solar Mission**, National Biofuels policy, **UJALA** scheme for affordable LEDs, etc.

5.4.18. MEKEDATU DAM

- Tamil Nadu government has recently passed a resolution against move to build the dam.
- **About the Dam**
 - To be built across **the Cauvery River by Karnataka as a reservoir and drinking water project**. It will also recharge the aquifers in the region.

- However, Tamil Nadu has been opposing the project as it **violates the final award of the Cauvery River Water Tribunal of 2007 and SC judgement of 2018**.
- Also, the dam would disrupt the natural flow of water from the upper riparian state and affect its agrarian community.
- The project is now before the **Cauvery Water Management Authority**.

5.4.19. MANAS NATIONAL PARK

- **Assam's Manas National Park** witnesses sharp rise in tiger, rhino population.
- It is a **UNESCO World Heritage Site**, Tiger Reserve, Elephant Reserve, Biosphere Reserve, **National Park** and also a Wildlife Sanctuary.
- **Located in the Himalayan foothills**, it is contiguous with the Royal Manas National Park in Bhutan.
- It spans the **Manas River** and is **bounded to the north by the forests of Bhutan**.
- Manas river is a **major tributary of Brahmaputra River**, which passes through the national park.
- **Habitats for rare and endangered species**, including tiger, greater one-horned rhino, swamp deer, pygmy hog and Bengal florican.



5.4.20. SARISKA TIGER RESERVE

- **Sariska** is located in **Alwar, Rajasthan**
- It is famous for the **Royal Bengal Tiger**. Other important fauna includes Leopard, Wild Dog, Jungle Cat, Hyena etc.
- It is a **wildlife sanctuary and a tiger reserve**.
- It is also famous for **Kankarwadi fort, Neelkanth temple and Pandupol hanuman temple**.



5.4.21. INTERNATIONAL MONSOONS PROJECT OFFICE (IMPO) LAUNCHED

- It will be hosted at the Indian Institute of Tropical Meteorology (IITM), Ministry of Earth Sciences.
- It would be fostered under the leadership of World Climate Research Programme and World Weather Research Programme.
- Both these international Research programmes are coordinated by World Meteorological Organisation.
- Setting up the IMPO would expand integrated scientific approach to solve the seasonal variability of monsoons, enhancing the prediction skill of monsoons and cyclones, strengthening monsoon research etc.

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

6.1. CARE ECONOMY

Why in news?

Recently, the **International Labor Organization (ILO)** has released a report, titled **Care at work: Investing in care leave and services for a more gender equal world of work.**

About the report

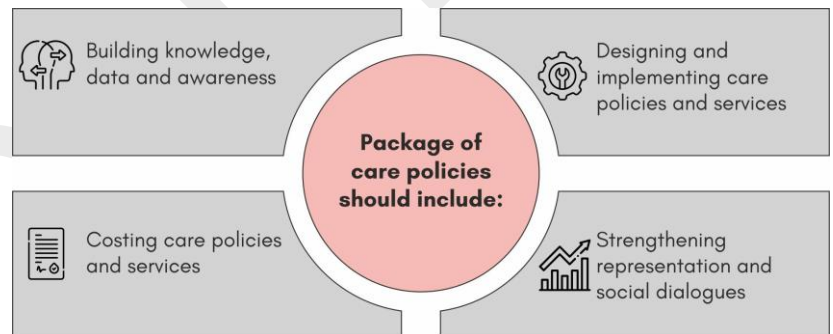
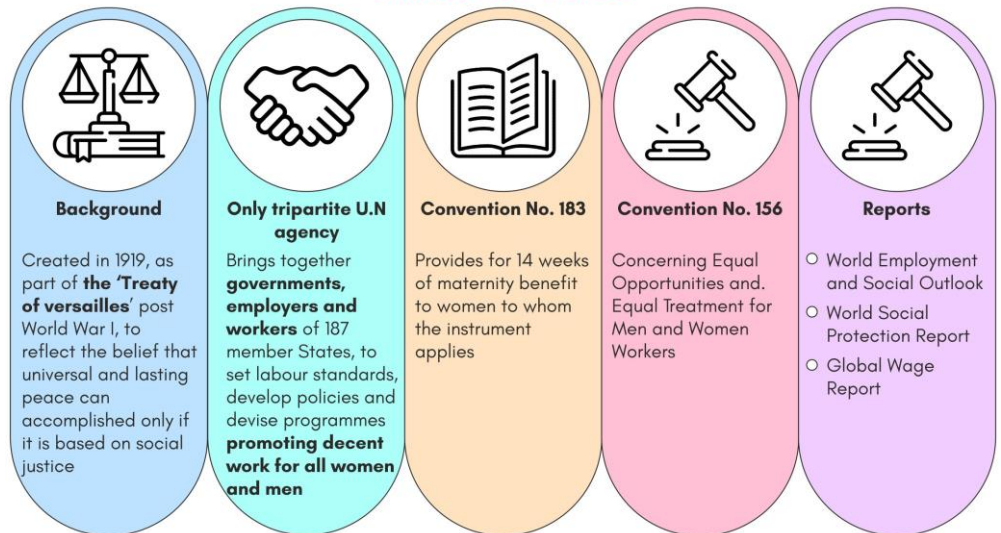
- The report provides a **global overview of national laws and practices regarding care policies**, namely maternity protection, paternity, parental and other care-related leave policies, as well as childcare and long-term care services.
- Key findings**
 - Persistent and significant gaps in care services and policies** have left millions of workers with family responsibilities without adequate protection and support.
 - Three out of every ten women of reproductive age** or 649 million women, lived in the 82 countries that **did not meet the ILO Convention 183** (refer to the infographics).
 - It will take at least 46 years to achieve minimum maternity leave rights** in the 185 countries analysed for the study.
 - Long-term care services are also essential to ensure the **right to healthy ageing in dignity and independent living.**

About Care Economy

- Care economy “consists of activities and relations involved in **meeting the physical, psychological and emotional needs** of adults and children, old and young, frail and able-bodied.
- Care work also encompasses a range of sectors such as **education, health, and social work** involving teachers, nurses, community health workers, social workers, and domestic workers.

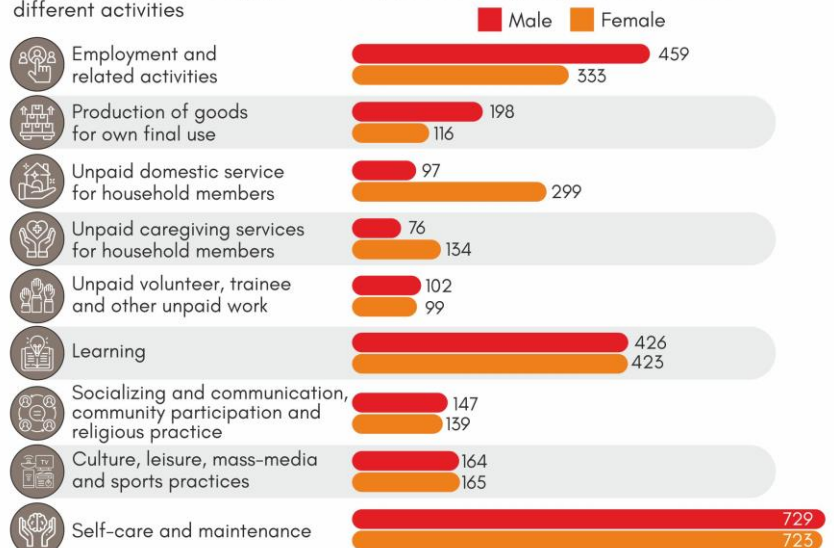
- For any society and **economy to survive and thrive** care work, both paid and unpaid, is extremely essential.

About ILO



Equal Work, Unequal Pay

Average time (in minutes) spent in a day persons of age 6 years and above in different activities



- In particular, **unpaid care workers** contribute dependable quality care as a “**public good**” from which communities benefit, without having to pay for it.
- The indispensable nature of care work was **further highlighted in the pandemic**, when it became difficult to proceed without the services of care workers.
- Apart from being necessary for the normal day to day, **care economy is a huge employer**, the sector also **offers serious growth potential**.
 - Moreover, paid care work has always been a **major source of remittances for India**.
 - More women are involved in care economy than men (refer the graph)

Challenges in India’s care economy

- **Marginalization:** Historically, not a lot of focus has been given to care work despite its importance. This is evident from two factors –
 - there is **no mechanism for proper identification** of care economy workers in India;
 - as compared to other countries, **public expenditure on care economy is extremely low** (less than 1% of the GDP) in India.
- **Disproportionate burden of unpaid care on women:** Women perform significantly larger portion of domestic duties than men. To address this imbalance, proposals of salaries for housewives are being mooted but this measure can potentially backfire by entrenching gender roles in care work even further.
- **Inadequate implementation of policies:** The Maternity Act, 2017 mandates that employers must provide crèche facilities within a prescribed distance. Yet, in practice, implementation remains shallow.
 - Surveys conducted in 2019 show only 49 per cent of employers had creche facilities in place. The absence of clear implementation guidelines, penalty provisions, or monitoring makes non-compliance pervasive as has been reported.
- **Inadequate payment to care workers:** The country’s 2.5 million women Anganwadi workers (AWWs), auxiliary nurse-midwives (ANMs) and accredited social-health activists (ASHAs) are not recognised as workers or paid fixed monthly salaries in many States.
 - The Parliamentary Standing Committee on Labour (2020) has now called on the Ministry of Labour and Employment to determine wage thresholds for frontline health and care workers.
- **Climate change:** Climate change has accentuated water scarcity and rural food distress which increases care burden on women and children. In these circumstances, excessive and strenuous unpaid care activities can compromise the quality of care received.

Initiatives taken by India for care economy

- **Maternity leave:** India offers 26 weeks of maternity leave, against the ILO’s standard mandate of 14 weeks that exists in 120 countries.
- **Paternity leave:** In India, central government employees get 15 days of paternity leave, but there is no formal policy in place for employees in the private sector.
 - However, some companies including Meesho, Twilio, Flipkart, Razorpay and Okcredit provide more time off to new fathers, sometimes as much as 30 weeks, the shift is increasingly gaining ground across sectors.
- **All India Survey on Domestic Workers:** It is being conducted by Labour Bureau.
 - The survey is aimed to estimate the number and proportion of domestic workers at National and State level, percentage distribution of domestic workers with respect to Live-in/Live-out, formal/ Informal Employment, Migrant/Non-Migrant, their wages and other socio-economic characteristics.
- **National Programme for Health Care of the Elderly (NPHCE):** It was launched by the Ministry of Health & Family Welfare during 2010-11 **to address various health related problems of elderly people**. The Programme is an articulation of the commitments of the Government as envisaged under
 - the **UN Convention on the Rights of Persons with Disabilities (UNCPRD)**
 - **National Policy on Older Persons (NPOP), 1999**
 - the **Maintenance and Welfare of Parents and Senior Citizens Act, 2007**

Way ahead

- **Identify care workers:** Creating an identification mechanism for care workers thereby creating a pipeline that could be used to reach them. Once a formal definition is devised, a person that is identified as a care worker must be allotted a job card. This job card will not only allow a channel to issue benefits but will also help create an official network of care workers. E-Sharm portal could be leveraged in this whole process.
- **Formalization:** By estimates, women’s unpaid work is valued at 3.1 per cent of GDP in India. Recognising AWWs, ANMs, ASHAs and domestic help (amongst others), as formal sector workers would allow their economic contribution to be counted in the GDP.

- **Women sensitive employment generation:** An analysis by the Women’s Budget Group (2019) showed that if an additional 2 per cent of the GDP was invested in the Indian health and care sector, 11 million additional jobs could be generated, nearly a third of which would go to women. Moreover, countries which invest in a combination of childcare infrastructure and parental leave policies to offset the burden on women, have a higher maternal employment to population ratios as per the ILO.
- **Enhanced investment:** More investment in care infrastructure and services can be in the form of public private partnerships, to develop expertise of the private sector. Investing in care infrastructure can prevent “occupational downgrading”, so that women become less likely to end up with lower pay when looking for flexibility, or part-time roles owing to care work responsibilities.
- **Making Child Care Leave (CCL) gender neutral:** CCL is granted to women employees or those male employees who happen to be “single male parent” for a maximum period of two years (730 days) during their entire service for taking care of their minor children (up to eighteen years of age). This policy reinforces the thought that child care is primarily women’s responsibility.
 - **More than 80 percent of Indian men** believe taking care of the child is the **primary responsibility of the mother.**

6.2. SEXUAL AND REPRODUCTIVE HEALTH

Why in News?

A new study by the World Health Organization (WHO) highlighted inequalities concerning access to sexual and reproductive healthcare.

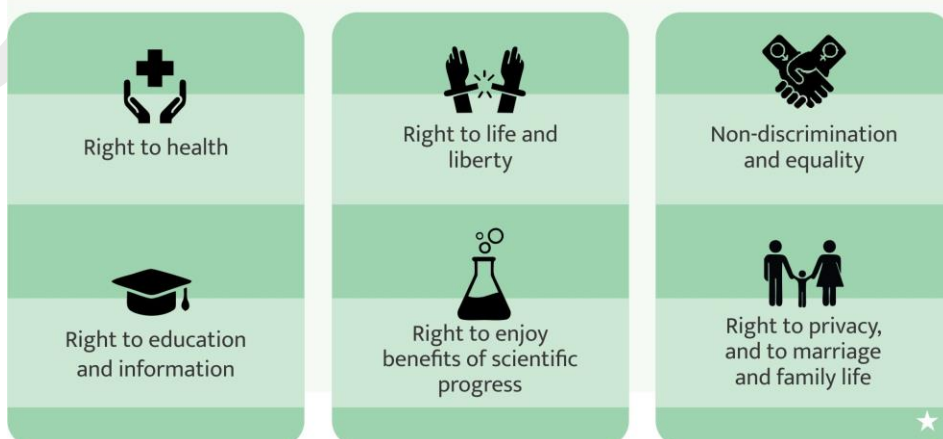
About Sexual and Reproductive Health and Rights (SRHR)

- SRHR includes **access to SRH services, care, and information, as well as autonomy in decision making about their SRHs** including the spacing and timing of children. These are human rights - universal, indivisible, and undeniable.
 - **Sexual rights may include the right to sexual education, freedom from sexual violence and coercion or the right to decide whether or not to have children.**
 - **Reproductive rights** on the other hand, can include **access to contraception, access to menstrual and sanitary products**, access to safe and legal abortions and ensuring safe pregnancies and childbirth.
 - SRHR also deal with violations such as **eliminating female genital mutilation (FGM) and forced sterilization** or preventing sexually transmitted diseases
- At its core is **promotion of reproductive health, voluntary and safe sexual and reproductive choices** for individuals and couples, including decisions on family size and timing of marriage.

Sexual and Reproductive Health Rights in India

- India was **among the first countries in the world** to develop legal and policy frameworks **guaranteeing access to abortion and contraception.**
- Still, women and girls **continue to experience significant barriers to full enjoyment of their reproductive rights**, including poor quality health services and denials of women's and girls' decision-making authority.
 - India has **among the highest number of maternal deaths** worldwide.
 - **Unsafe abortions are one of the leading causes of maternal deaths** in India.
- **Poor awareness of lawful abortion care and contraception is pervasive.** Both the availability and accessibility of abortion services in rural districts is sparse.
- Public policies surrounding reproductive rights are still **largely focused on sterilisation as opposed to other methods of contraception.**
- Misinformation regarding SRH is pervasive in India, owing at least in part to the **absence of comprehensive sex education.**

Different Human Rights obligations linked to Reproductive Rights



Importance of SRHR



Essential for Sustainable Development Goals (SDG)

Because of their links to gender equality and women's wellbeing, their impact on maternal, newborn, child, and adolescent health, and their roles in shaping future economic development and environmental sustainability



Upholding People's Right to govern their bodies

These include those related to sexuality, reproduction, and the use of sexual and reproductive health services. Such decisions should be free of stigma, discrimination, and coercion.



Crucial for Young People

It provides medical care and comprehensive sexuality education, which gives them vital information about issues such as sexual abuse, gender-based violence and harmful practices like female genital mutilation.



Empowering Women

Family planning and modern contraception offer choice and opportunity for women to make informed decisions. SRHR freedom enables young women to avoid pregnancy too early in life, reduces maternal and child deaths.



Essential part of Universal Health Care

Countries moving towards UHC need to consider how the SRHR needs of their population are met throughout the life course, from infancy and childhood through adolescence.



Broad Medical Benefits

This includes the prevention of high-risk pregnancies, unsafe abortion and its complications, obstetric complications, cancers of the reproductive system and deaths to AIDS.



Other Benefits

It will save and improve lives, slow the spread of HIV and AIDS and encourage gender equality. It will help to stabilise population growth and reduce poverty.



Challenges regarding SRHR

- **Barriers to SRHR:** Cultural norms and ideological opposition to family planning and abortion, stigma associated with teenage pregnancy; cultural taboos about young people's sexuality etc. often impede access to services.
- **Financial shortfalls** lead to chronic underfunding of reproductive health care, in particular in areas like safe abortion and family planning. Poor people, especially women and young people, face huge social and economic barriers to SRH.
- **Lack of Awareness and Accurate Information:** Difficulties related to obtaining information and services are compounded for those who are marginalized on the basis of their sexuality, gender expression or marital status.
- **Lack of freedom for women:** Often female-oriented contraceptive methods are prioritized. Also, Vasectomy is considered a safer procedure than tubectomy for family size completion.
 - As per a UN report **only 57 per cent of women** are able to make their **own decisions over their SRHR**.
- **Failure of implementation of standards and guidelines:** The Supreme Court in **Devika Biswas case** recognised that the "sterilisation programme is virtually a relentless campaign for female sterilisation", and that a system of informal targets for the sterilisation programme was in place.
 - Court observed that **State policies such as setting informal targets and offering incentives to undergo sterilisation have impinged on the reproductive rights of vulnerable groups whose impoverished socio-economic conditions makes them susceptible to coercion** and leaves them bereft of any meaningful choice.

- The Court also held that **incentive schemes for sterilisation must be made gender neutral.**
- **Neglect during Pandemic:** Lockdowns, movement restrictions and diversion of funds due to COVID-19 have jeopardized access to essential SRHR.

Way forward

- **SRH information and services should be accessible and affordable to all** individuals who need them regardless of their age, marital status, socioeconomic status, race or ethnicity, sexual orientation, or gender identity.
- **Access to accurate information about contraceptive options**, including information about possible side-effects and potential failures of contraceptive methods are essential preconditions for a person to exercise their reproductive autonomy, plan whether and when to have children and decide the spacing of children freely and responsibly.
- **Countries must also take actions beyond the health sector** to change social norms, laws, and policies to uphold human rights.
 - These include **promoting gender equality and women’s autonomy, liberalizing abortion laws**, and prohibiting discrimination against people with diverse sexual orientations and gender identities and expression.
- **Comprehensive Sexuality Education needs to be implemented** as an important aspect to address Sexual and Reproductive Health. This should be integrated with the life skills education programme and needs to be a part of the formal school curriculum.
 - The importance of sexuality information and education has evolved as a **means of addressing widespread taboos and misconceptions around sexuality**, the persistence of systemic sexual violence against women, high levels of sexually transmitted diseases and socio-cultural values/ practices that discriminate and stigmatise persons on grounds of gender and sexuality.
- **Programmes should engage men to become supportive partners** in SRHR while protecting women’s autonomy in sexual and reproductive decision making.
- **Address the acute shortfall of public health care infrastructure** in the primary, secondary, and tertiary-level services, which includes access to free medicines, free diagnostics, and availability of skilled human resources.

Initiatives taken

- **Medical Termination of Pregnancy (Amendment) Act, 2021** increases the time period within which abortion may be carried out.
- Supreme Court (SC) in **decriminalizing adultery** and in the **Navtej Johar judgment** striking down Section 377 held clearly, that **women have a right to sexual autonomy.**
- In the landmark **Puttaswamy judgment**, SC held that **Privacy includes** at its core the preservation of personal intimacies, the **sanctity of family life, marriage, procreation, the home and sexual orientation.**
- **India is also signatory to international conventions, such as**
 - Convention on the Elimination of All Forms of Discrimination against Women (CEDAW);
 - International Covenant on Civil and Political Rights (ICCPR);
 - International Covenant on Economic, Social and Cultural Rights (ICESCR); and
 - Convention on the Rights of the Child (CRC).
- **Several schemes** are currently being implemented **by the Union Ministry of Health and Family Welfare (MoHFW) and the Ministry of Women and Child Development (MWCD) to address maternal health** and the issues related to it:
 - Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A)
 - Janani Suraksha Yojana (JSY)
 - Janani Shishu Suraksha Karyakram (JSSK)
 - Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)
 - Pradhan Mantri Matritva Vandana Yojana

Related News

United Nations Population Fund’s (UNFPA) released State of World Population 2022

- The report is titled as **“Seeing the Unseen: The case for action in the neglected crisis of unintended pregnancy”.**
 - **An unintended pregnancy** is a pregnancy that is either unwanted, such as the pregnancy occurred when no children or no more children were desired.
- **Key findings of report**
 - Over **60% of unintended pregnancies end in abortion** and 45% of abortions are unsafe, causing 5% to 13% of maternal deaths.
 - **13 % of women in developing countries begin childbearing** before they turn 18.
 - Between 2015 and 2019, **121 million unintended pregnancies** across world every year, and **one in every seven of these occur in India.**
- **Key factors contributing to unintended pregnancies**
 - **Lack of sexual and reproductive health** care and information

- **Harmful norms and stigma surrounding women** controlling their own fertility and bodies
- **Judgmental attitudes** or shaming in health services
- **Poverty and stalled economic development**
- **Gender inequality**

- **Recommendations by the Report**

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

About UNFPA

- UNFPA is an **international development agency**, created in 1968 to support the execution of projects and programmes in the **area of population and sexual and reproductive health**.
 - Its mandate is established by the **United Nations Economic and Social Council (ECOSOC)**.
 - It is working with **governments, partners and other UN agencies to directly tackle many of SDG**:
 - ✓ Goal 3 on health,
 - ✓ Goal 4 on education
 - ✓ Goal 5 on gender equality.

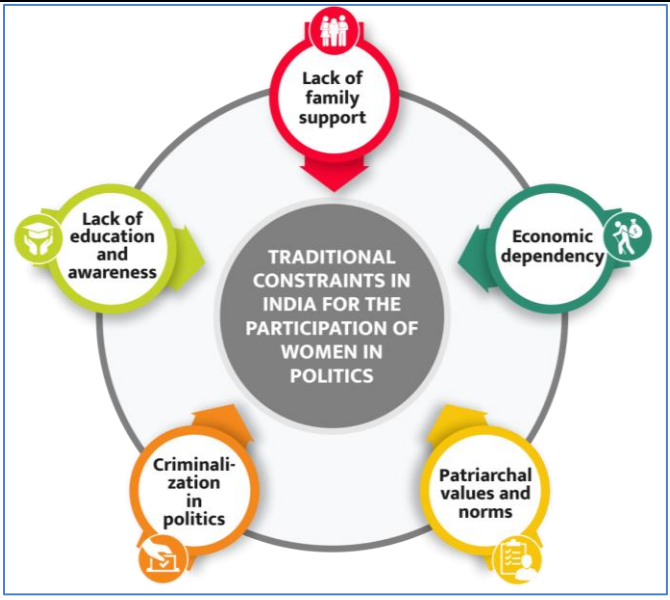
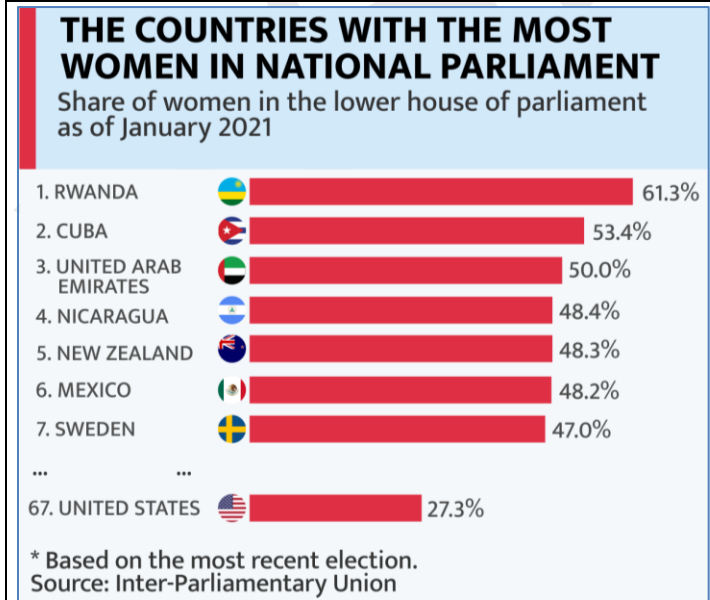
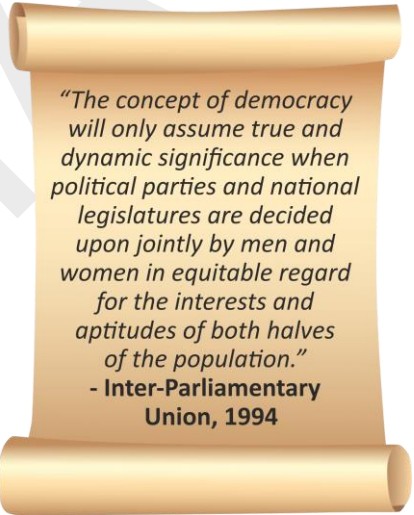
6.3. WOMEN'S RESERVATION BILL

Why in news?

It has been 25 years since the Bill was first introduced in the Parliament but could not be passed despite numerous attempts.

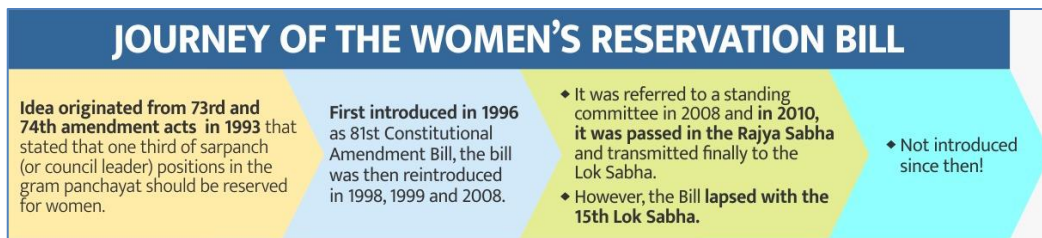
Why India needs a Women Reservation Bill?

- **India ranks in the bottom quarter, 148th out of 193 UN member nations**, in the proportion of elected women representatives in Parliament according to Inter-Parliamentary Union (IPU).
 - Pakistan (20.7%), Bangladesh (20.3%) and Nepal (29.9%) have higher representations of women in parliament.
- According to Global Gender Gap Report 2021, **India has declined on the political empowerment index** by 13.5 percentage points, and a decline in the number of women ministers, from 23.1% in 2019 to 9.1% in 2021 (way short of the international average of nearly 22%).
- According to various international reports, **development in India is being severely hampered by the breadth of the gender gap** and limited female participation in traditionally male dominated institutions and social strata.



History of Women Reservation Bill in India

The Women Reservation Bill (Constitution (108th Amendment) Bill, 2010) has witnessed a tumultuous journey in Parliament and has been opposed on many grounds.



Key provisions of the bill

- To reserve **33% seats in Lok Sabha** and **all state legislative assemblies** for women.
- Reserved seats may be **allotted by rotation to different constituencies** in the state or union territory.
- Reservation of seats for women shall **cease to exist 15 years** after the commencement of this Amendment Act.

Arguments in favour of and against the bill

Arguments supporting the bill	Arguments against the bill
<ul style="list-style-type: none"> It is essential for active political participation of women that will help them fight the abuse, discrimination, and inequality they suffer from. Critical for sustainable progress against human development indicators. Political participation of all sections of society is essential for building a functioning, representative democracy. Women's political participation can provide the inspiration for women to take action on a vision of a better and more equal society, and to make meaningful contributions towards inclusive national development. It is intrinsic to eliminate gender discrimination and strengthening women's empowerment as enshrined by equality of rights and freedoms in the Preamble and Constitution of India. Encouraging experience of reservation for women in panchayats: <ul style="list-style-type: none"> Gram panchayats with elected women leaders invested more in the public goods closely linked to women's concerns and resulted in a subsequent increase in the percentage of female local leaders contesting and winning elections. 	<ul style="list-style-type: none"> It would perpetuate the unequal status of women since they would not be perceived to be competing on merit. Reservation would only help women of elitist groups gain political power, aggravating the plight of the poor and deprived sections. Rotation of reserved constituencies in every election may reduce the incentive for an MP to work for his constituency as he may be ineligible to seek re-election from that constituency. It may perpetuate a "proxy culture" or a similar concept of "sarpanch pati" when elected women will not have real power and will act on behalf of a male decision-maker. Diverts attention from the larger issues of electoral reform such as criminalisation of politics and inner party democracy. Legislative positions may go to women at the cost of certain qualified men losing out.

Is there any alternative to Women Reservation Bill?

- An alternative to women's reservation is the idea of **ensuring reservation within political parties**. Countries like Canada, the United Kingdom, France, Sweden, and Norway etc., reserve seats for women within the political parties, but do not have quotas for women in Parliament.
 - The **Election Commission of India has suggested mandatory candidate quotas for women** at party level that will require ordinary amendment in the Representation of the People Act.
- Similarly, another alternative is introducing **dual-member constituencies**, which means constituencies, instead of reserving seats for women, will nominate two members, one being a woman.

However, lack of rigorous evidence on the efficacy of these alternatives has limited the scope for adoption of these practices worldwide.

Way ahead

Both **political commitment and rigorous evidence** is necessary to deliberate and debate this legislation and ensure its passage in Parliament thereby bridging the critical gender gap in political and legislative decision-making.

Additionally, strategies such as bringing **change in the male dominated value system** prevalent in the politics and organizing **awareness and leadership development programs** for women to boost their confidence must be implemented to increase women's participation in the politics.

Constitutional provisions for women's political empowerment:

- **Article 15 (3)**, the State is empowered to make "special provisions", legislative or otherwise, to secure women's socio-political advancement.
- **Article 325**: Guarantees equal rights for both sexes, and entitles women to enjoy economic, social, cultural, and political rights on an equal footing with men.

International agreements that support proactive state measures for women's political development:

- **The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)**: Ratified by India in 1993, it provides appropriate measures, including legislation, to ensure the full advancement of women and to eliminate discrimination against women in the political and public life of the country.
- **The Beijing Platform for Action (BPfA), 1995** endorses affirmative action for women in the political spheres for the achievement of democratic transformation, women's empowerment and achieving the goals of sustainable development.

6.4. NEWS IN SHORTS

6.4.1. MINISTRY OF EDUCATION REPORT ON UNIFIED DISTRICT INFORMATION SYSTEM FOR EDUCATION PLUS (UDISE+) 2020-21

- UDISE, integrating DISE for elementary and secondary education, was **one of the largest Management Information Systems on School Education**. It was initiated in 2012-13.
- **UDISE+ is an updated version** (developed in 2018-19) of UDISE to overcome **problems associated with the previous practice of manually filling data** in paper format and feeding it **onto computers**.
 - Under UDISE+ **entire system is online with real-time data collection**.
- **Key Findings**
 - **Gross Enrolment Ratio (GER)** which measure general level of participation **has improved in 2020-21** (25.38 Crore) at all levels of school education compared to 2019-20 (25.10 Crore).
 - **Pupil Teacher Ratio (PTR)** stood at 26 for primary, 19 for upper primary, 18 for secondary and 26 for higher secondary, showing an improvement since 2018-19.
 - **Over 12.2 crore girls are enrolled** in primary to higher secondary showing an increase of 11.8 lakh girls compared to 2019-20.
 - **Impact of COVID-19 pandemic**: 39.7 lakh students of government aided, private school students shifted to Government schools during 2020-21.
 - **School infrastructure**: Percentage of schools with functional girl's toilet facility, drinking water, hand wash facilities, internet facility etc. has increased in 2020-21 compared to 2019-20.

6.4.2. SAMPLE REGISTRATION SYSTEM (SRS) STATISTICAL REPORT 2019 RELEASED

About SRS

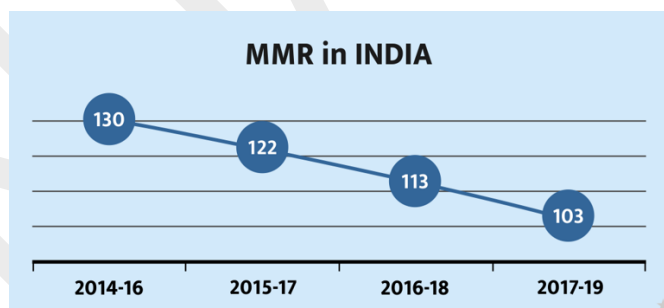
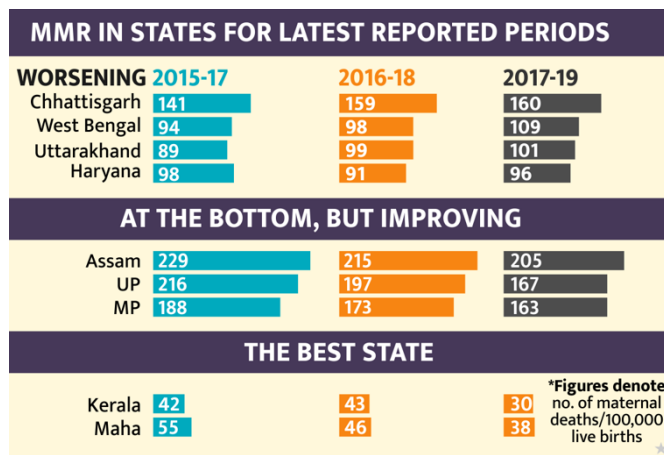
- It was released by **Office of the Registrar General & Census Commissioner** under Ministry of Home Affairs.

- SRS is the **only official source of demographic data** except decadal censuses in India.
- SRS is a **demographic survey** for providing reliable annual estimates of IMR, birth rate, death rate, and other fertility and mortality indicators at the national and sub-national levels.
- **Key Highlights**

Indicators	Findings
Crude Birth Rate (CBR) - annual number of live births per 1,000 population	<ul style="list-style-type: none">• At National level during 2019 stands at 19.7.• Maximum in Bihar (25.8) and the minimum in Kerala (13.5).• There has been a decline of 1.3 points in the CBR for the country from 2014 to 2019. The corresponding decline in rural CBR is 1.3 points and in urban CBR 1.0 points.
Crude Death Rate (CDR) - number of deaths per 1,000 midyear population	<ul style="list-style-type: none">• At national level: 6.0 in 2019.• Maximum in Chhattisgarh (7.3) and minimum: Delhi (3.2).• During the last five years, decline in National CDR has been to the tune of 0.7 points. The corresponding decline in female CDR is 0.6 points whereas in male CDR it is 1.2 points.
Infant Mortality Rate (IMR) -number of deaths per 1,000 live births of children under one year of age.	<ul style="list-style-type: none">• It registered a 2-point decline to 30 in 2019 from 32 in 2018 at the National level.• Maximum in Madhya Pradesh (46) and minimum in Kerala (6).
Under 5 Mortality Rate U5MR - the probability that a child born in a	<ul style="list-style-type: none">• Showed a decline of 1 point over 2019 from 2018 (36 in 2018).• There has been a decline of 1 point in male U5MR and 2 points

specific year or period will die before reaching the age of 5 years	in female USMR during the corresponding period.
Sex Ratio at Birth- number of girls born for every 1,000 boys born	At the national level it has gone up by 5 points to 904 in 2017-19 from 899 in 2016-2018. Kerala has highest (968) while Uttarakhand has the lowest (848).
Total Fertility Rate (TFR)- total number of children that would be born to each woman if she were to live to the end of her child-bearing years. Replacement fertility level is the TFR at which a population can replace itself.	<ul style="list-style-type: none"> It came down to 2.1 in 2019 after being stable at 2.2 for the last two years 2017 and 2018. Bihar has reported the highest TFR (3.1) while Andhra Pradesh, Delhi, Jammu & Kashmir, Punjab, Tamil Nadu, and West Bengal have reported the lowest TFR (1.5) The replacement level TFR, viz. 2.1, has been attained in 15 states.

- 'LaQshya - Labor room Quality improvement Initiative'.
- **Reproductive, Maternal, New Born Child Health and Adolescent (RMNCH+A) services.**
- Over 10 lakhs **Accredited Social Health Activists (ASHAs)** have been engaged.



6.4.3. SAMPLE REGISTRATION SYSTEM (SRS) BULLETIN ON MATERNAL MORTALITY IN INDIA (2017-19) RELEASED

- SRS bulletin is brought out by **office of Registrar General of India**, Ministry of Home Affairs.
 - It initiated the **scheme of sample registration of births and deaths in India** popularly known as SRS in 1964-65 on a pilot basis and on full scale from 1969-70.
- **Key Highlights**
 - **Kerala tops with lowest Maternal Mortality Ratio (MMR) of 30. National MMR is 103.**
 - ✓ MMR is derived as proportion of **maternal deaths per 1,00,000 live births.**
 - Populous states like **UP, Rajasthan and Bihar showed huge improvement.**
 - **Assam, UP and Madhya Pradesh** continue to be the **states with high MMR.**
- India is **set to achieve SDG of bringing MMR to 70** well before target year of 2030.
- **Steps taken to Accelerate Pace of Reduction for MMR-**
 - **Janani Shishu Suraksha Karyakram**, where every pregnant woman is entitled to free delivery, including caesarean section in public health institutions.
 - **Pradhan Mantri Surakshit Matritva Abhiyan** to provide antenatal care.

6.4.4. UNITED NATIONS SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK RELEASED THE WORLD HAPPINESS REPORT (WHR) 2022

- This year marks the 10th anniversary of the report which evaluates levels of happiness by taking into account factors such as **GDP, social support, personal freedom, and levels of corruption in each nation.**
 - The goal of the report is to **identify key determinants of well-being.**
- The report 2022 ranked **India 136th** while **Finland topped** the charts for the fifth year in a row.
 - The rankings of WHR 2022 use data from the Gallup World Poll surveys from 2019 to 2021.
 - Among the bottom-five countries on the index are conflict-torn Afghanistan, Lebanon, Zimbabwe, Rwanda, and Botswana.
 - Bhutan is not listed in the 2022 WHR
- Also, India was one among the countries that witnessed, over the past 10 years, **a fall in life evaluations by more than a full point on the 0 to 10 scale.**

- SDSN, set up in 2012, mobilizes global scientific and technological expertise to promote practical solutions for sustainable development, including implementation of Sustainable Development Goals (SDGs) and Paris Climate Agreement.

6.4.5. UNIVERSITY GRANTS COMMISSION (UGC) MAKES COMMON ENTRANCE TEST MANDATORY FOR ALL CENTRAL UNIVERSITIES

- During a virtual interaction with media, **UGC Chairman stated that:**
 - **Central universities will have to conduct admissions** to all undergraduate courses solely on the basis of **Common University Entrance Test (CUET)** from the upcoming academic year (2022-23).
 - ✓ **No weightage will be given to Class 12 scores** for undergraduate admissions to any central university.
 - CUET, which is **envisaged in National Education Policy (NEP) 2020**, will be conducted for both undergraduate and postgraduate courses by **National Test Agency (NTA)**.
 - ✓ Unlike undergraduate studies, **conducting admissions to postgraduate programmes through CUET is not compulsory** for central universities.
 - ✓ NTA is an **autonomous premier testing organization** established under **Societies Registration Act (1860)** for conducting tests for admissions to premier higher education institutions.
 - CUET, a computerized exam, **will test a candidate on a language of her choice, domain-specific knowledge and general test** (with questions on general knowledge, current affairs etc).
 - **CUET will be conducted in 13 languages:** English, Hindi, Gujarati, Assamese, Bengali, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu and Urdu.
- Move to replace multiple entrance tests with a single one is aimed to **reduce the burden on higher education aspirants.**

6.4.6. STREE MANORAKSHA PROJECT

- It was launched by **Ministry of Women and Child Development (MoWCD)** in collaboration with National Institute of Mental Health and Neuro Sciences (NIMHANS).
 - NIMHANS is an **Institute of National Importance**, for patient care and academic pursuit in the **field of mental health and neurosciences.**
- It is aimed at extending **mental health training to 6000 One-Stop Center (OSC) functionaries** across India.
 - OSC Scheme (by MoWCD) is being implemented since 2015 to **provide integrated support and assistance to women affected by violence and in distress**, both in private and public spaces.
 - They aid women in **medical, legal, and crime-related matters.**

6.4.7. SPECIAL ENTREPRENEURSHIP PROMOTION DRIVE FOR WOMEN - "SAMARTH"

- Launched by Minister of Micro, Small & Medium Enterprises, it aims to **provide women an opportunity to be self-reliant and independent** by undertaking self-employment opportunities.
- Under Samarth, following benefits will be available to women entrepreneurs:
 - **20% Seats in free Skill Development Programs** will be allocated for Women.
 - **Special Drive for registration** of women-owned MSMEs under **Udyam Registration.**
 - **20% of MSME Business Delegations** sent to exhibitions under schemes for Marketing Assistance will be dedicated to women owned MSMEs.

6.4.8. NARI SHAKTI PURASKAR

- This **award is conferred on International Women's Day.**
- It is an **initiative of the Ministry of Women and Child Development** to acknowledge the exceptional contribution made by **individuals and institutions**, to celebrate women as game changers and catalyst of positive change in the society.
 - Award is **open to all individuals & institutions.**



SMART QUIZ

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



7. SCIENCE AND TECHNOLOGY

7.1. NET NEUTRALITY

Why in News?

The **net neutrality debate has resurfaced in the country** as telecom operators are backing a proposal to regulate content delivery networks, which are used by global big tech companies to host data locally.

More on News

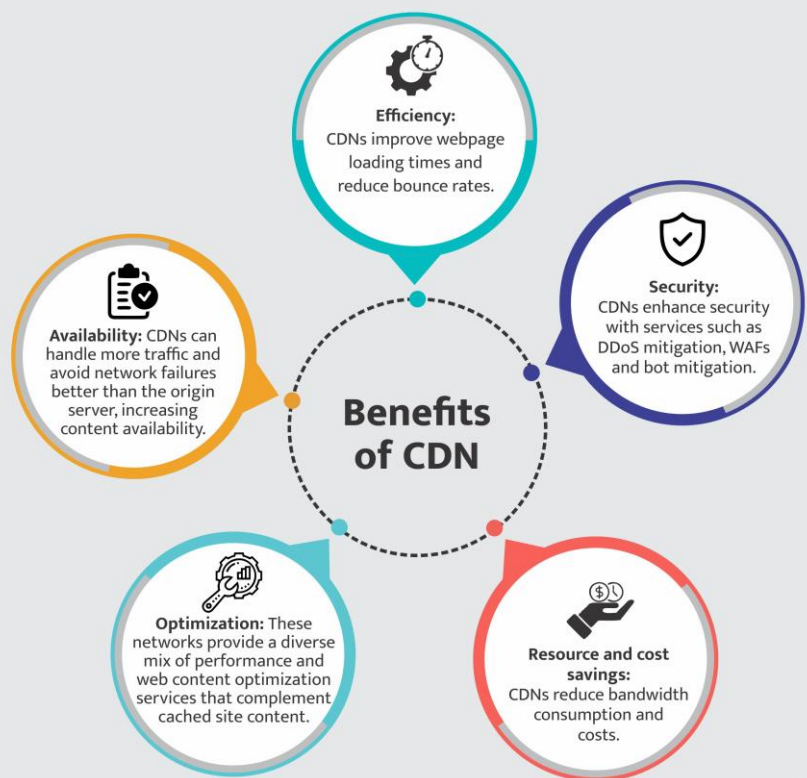
Telecom operators say that content delivery networks (CDN), which were kept out of the Telecom Regulatory Authority of India's (TRAI) 2017 recommendations on net neutrality, need regulatory re-examination as **internet companies start to tie up with specific ISPs to deliver higher quality services to certain groups of customers.**

About Net Neutrality

- Net Neutrality is the idea that **Internet service providers (ISPs) should treat all data that travels over their networks fairly**, without improper discrimination in favour of particular apps, sites, or services.
 - **Other stakeholders may include over-the-top (OTT) service providers** (those who deliver content over the internet **and government**, who may regulate and define relationships between these players.
- It means ensuring that all **end users are able to access the internet content, applications and services at the same level of service quality, speed and price**, with no priority or degradation based on the type of content, applications or services.
- Net Neutrality has different nuances specific to a country depending on its social, political, and economic conditions. **Accordingly, each country adopts different responses to the issue.**
 - **Countries which have taken no specific measures** as the existing mechanism is often considered sufficient to address the issue e.g. Australia, Republic of Korea, New Zealand.
 - **Countries that have adopted light-touch regulatory measures** e.g. European Commission, Japan, United Kingdom.
 - **Countries that have taken or propose to take specific legislative measures** e.g. Brazil, Chile, France, Netherlands, Singapore, USA (Federal Communications Commission (FCC) rules).
- Mechanisms for establishing guidelines ensuring Net Neutrality **in India are at present mainly enforced by TRAI.**

About Content Delivery Network (CDN)

- CDN refers to a **geographically distributed group of servers** that work together to provide fast delivery of Internet content.
- Thus, **internet companies like** search engines (such as Google) OTT content providers (Netflix etc.) will employ CDN services to **deliver services faster.**
 - **Page loading time has a direct impact on advertising and e-commerce revenues** for any web-based service, which is why there is a vibrant market for the CDN services.
- CDN management software **dynamically calculates which server is located nearest** to the user making the request and delivers content based on those calculations.



Why Net Neutrality is needed?

- **Unlocking Possibilities:** Open and non-discriminatory access to the Internet has led to rapid growth in people-to-people, business-to-people and government-to-people communications shaping new forms of social interactions, businesses, and governance.
- **Important component of open internet:** Where policies such as equal treatment of data and open web standards allow those on the Internet to easily communicate with each other without interference from a third party.
- **Level playing field:** Without net neutrality, ISPs can slow down the websites or services of small businesses that can't afford to pay for the so-called fast lanes.
- **Freedom of expression and free speech:** ISPs shouldn't be able to block content or slow down webpages just because they don't like them. With no net neutrality legislation, nothing stops them from censoring online content.
- **No exclusion:** Net neutrality guarantees that everything on the internet is available to everyone. If accessing high-quality content online becomes a luxury, this will increase social exclusion and decrease equal access.
- **Supporting innovative ideas:** Net neutrality has enabled an ecosystem for creation of Google, Facebook, Twitter and countless other services. All these services had very humble beginnings. They started as a basic websites with modest resources.

Arguments against Net Neutrality

- **Priority based services:** Data packets of different applications (e.g., an email packet and a VoIP packet, a data packet carrying emergency service information versus another packet carrying video information etc.) need different type of treatment on the network.
- **Limited Bandwidth:** Unlike an infinite resource, the bandwidth of the Net is limited. If someone is using Skype or YouTube, he needs a lot of bandwidth and that too on priority. It can be argued that he should pay a higher price.
 - As work from home becomes the new normal, regulators around the world have come under pressure to relook at the rules relating to bandwidth, traffic and indeed network neutrality.
- **Illicit content:** Offensive, dangerous, and illegal content is accessible to everyone and difficult to remove. Removing net neutrality makes it easier for ISPs to filter dangerous content.
- **Lack of new infrastructure:** With net neutrality, large amounts of data are consumed without being paid for – this money could be used to expand the high-speed network to rural areas.

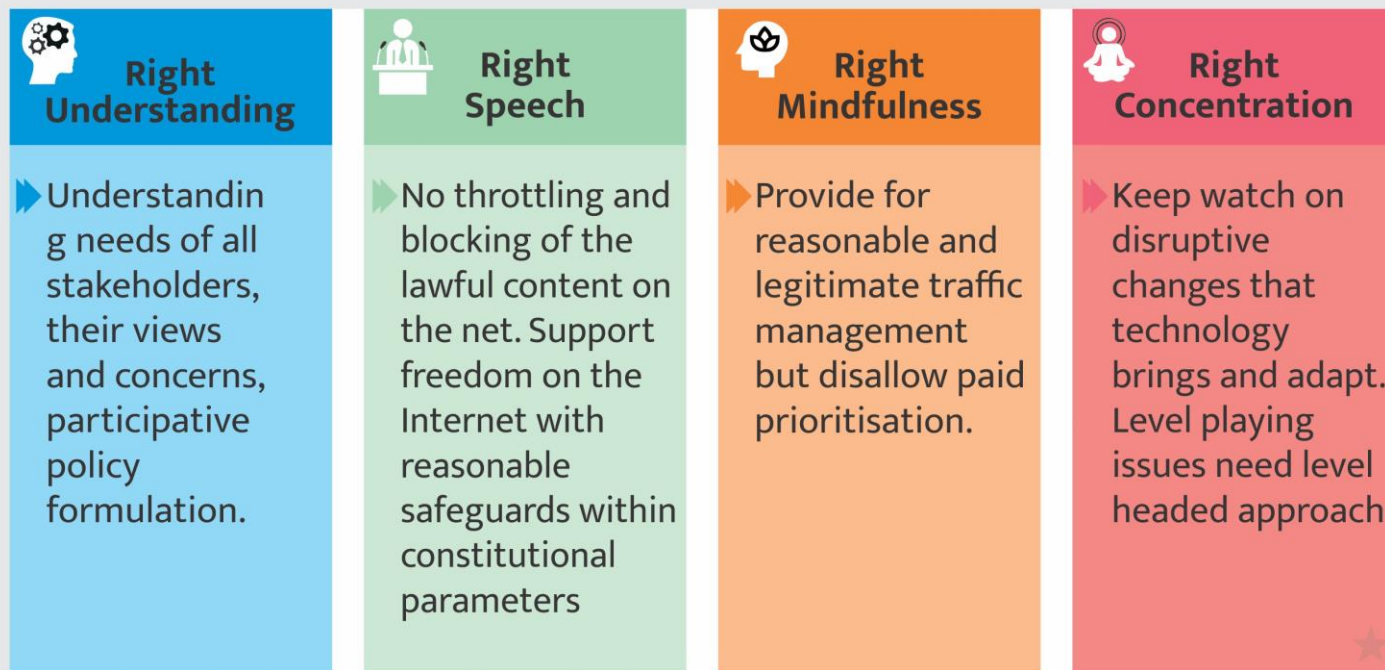
TRAI on Net Neutrality

- TRAI has backed the basic principles of an open and free internet in its recommendations on Net Neutrality (2017).
- **Key highlights from TRAI recommendations**
 - **Discriminatory treatment of content is prohibited.** Internet access services should be governed by a principle that restricts any form of discrimination or interference in the treatment of content.
 - Kept **content delivery networks (CDN) out of the regulation.**
 - **Internet of Things (IoT), as a class of services, is not excluded** from the scope of the restriction on non-discriminatory treatment. **However, critical IoT services, which could include telemedicine, B2B services will be automatically excluded.**
 - TRAI has also recommended a **watchdog along the lines of BARC India** for enforcing Net Neutrality.
 - **International treaties, court orders, government order** on blocking certain sites **are exempt from these guidelines.**

Way Forward

- **User rights on the Internet need to be ensured** so that ISPs do not restrict the ability of the user to send, receive, display, use, post any legal content, application, or service on the Internet.
- **ISPs should make adequate disclosures to the users about their traffic management policies,** tools and intervention practices to maintain transparency and allow users to make informed choices.
- **Prioritisation of government information in times of public crises certainly is important,** there needs to be more deliberation on the list of websites and URLs that Cellular Operators Association of India (COAI) will allow being zero-rated during emergency.
 - The evaluation of relevant sources and content can be largely subjective and allows for an ample scope for biases and must be an outcome of a transparent process of selection.
- **A.K. Bhargava committee (2015) on Net Neutrality** suggested some approach (see infographics) that should be followed.

A.K. Bhargava committee on Net Neutrality



7.2. SPACE DEBRIS

Why in News?

Indian Space Research Organisation (ISRO) is building up its orbital debris tracking capability by deploying new radars and optical telescopes under the Network for Space Objects Tracking and Analysis (NETRA) project.

About Space Debris

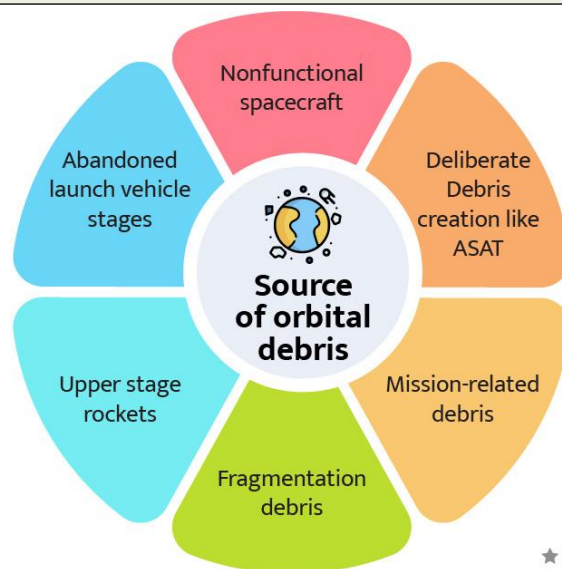
- Space debris encompasses **both natural meteoroid and artificial** (human-made) orbital debris. Meteoroids are in orbit about the sun, while most artificial debris is in orbit about the Earth (hence the term “orbital” debris).
 - Orbital debris** is any human-made object in orbit about the Earth that **no longer serves a useful function**.
- Every satellite that goes into orbit has the potential of becoming space debris.**
 - Debris or satellites left at higher altitudes of 36,000 kilometres, where communications and weather satellites are often placed in geostationary orbits, can continue to circle Earth for hundreds or even thousands of years.
- Anti-satellite tests (ASAT)** are rare, but there have been instances when the US, China and even India used a missile to blow up their own satellite, causing thousands of new pieces of debris.

Risks associated with space debris

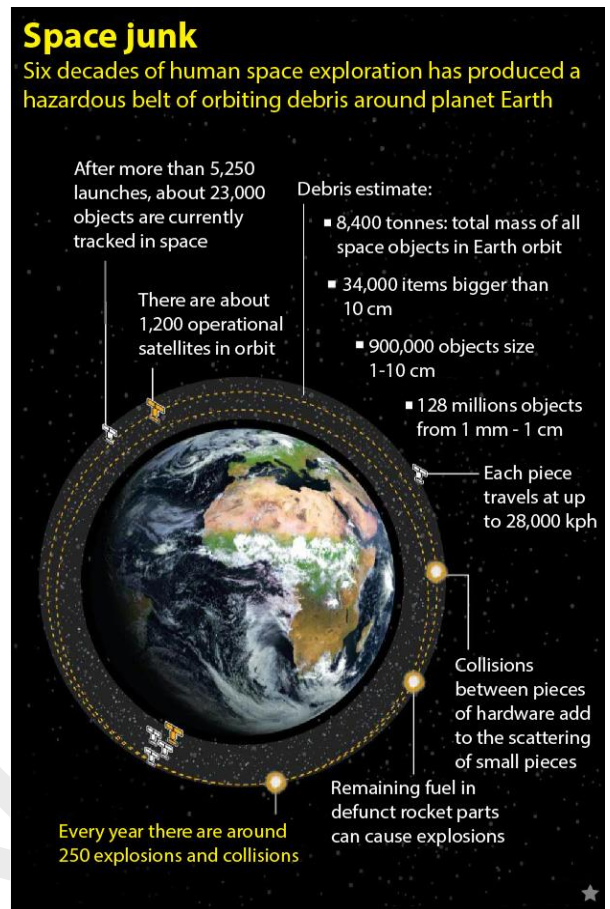
- In-orbit risks:** Objects in Low Earth Orbit travel at speeds up to 6-8 km/second, fast enough to cause significant damage to satellite, spacecraft, or spacewalking astronauts.

About Network for Space Objects Tracking and Analysis (NETRA) project

- Under the NETRA project, ISRO is building up its **orbital debris tracking capability by deploying new radars and optical telescopes**.
- A space debris tracking radar with a **range of 1,500 km and an optical telescope** will be inducted as part of establishing an effective surveillance and tracking network under NETRA.
- It will be capable of **detecting and tracking objects 10 cm and above in size**.
- It will be **indigenously designed and built**.



- The rising number of space debris increases the potential danger to all space vehicles, especially to ones with humans aboard, the International Space Station (ISS), for instance.
- **Kessler Syndrome:** The Kessler syndrome, also called the Kessler effect is a scenario in which the density of objects in Low Earth Orbit (LEO) is high enough that collisions between objects could cause a cascade where each collision generates space debris that increases the likelihood of further collisions.
- **Increases Cost:** According to a **study by OECD**, Space debris **increases the cost for satellite operators**. Satellite operators in the geostationary orbit have estimated that protective and mitigation measures account for about 5-10% of mission costs and for lower-Earth orbits the cost is even higher.
- **Interference with Scientific and other observations:** The presence of manmade objects in space complicates the observations of natural phenomenon.
 - Space debris also disrupts reception of radio telescope and distorts photographs from ground-based telescopes affecting the accuracy of scientific results obtained.
- **Affect Air travel:** Space debris may lead to significant problems for spaceflight around Earth. The risk would be highest for objects orbiting at an altitude of around 1,000 kilometres, which is used for **communications and Earth observation**.



Strategies to Tackle Space Debris

- **Preventive measures:** To preclude explosive failures of spacecraft and upper stages and eliminate placement of space debris objects in outer space.
 - Spacecraft and orbital stages should be **designed not to release debris** during normal operations.
 - **Spacecraft** or orbital stages that are terminating their operational phases in orbits that **pass through the LEO region should be de-orbited** or where appropriate maneuvered into an orbit with a reduced lifetime.
 - Missions should estimate and **limit the probability of accidental collision** during the orbital lifetime. Avoidance maneuvers for spacecraft/co-ordination of launch windows should be considered.
 - **Move satellites in higher orbits** (particularly GEO), which are too far away to re-enter the atmosphere, into a graveyard orbit well outside the region used by active satellites.
 - ✓ This would create a protected zone of a few hundred km either side of the GEO ring
- **Removal procedures:** To reduce the number and mass of objects on orbit, reduce the probability and severity of on orbit hypervelocity collisions.
 - **Space tether:** This technique would require attaching a tether between the debris object and a remover spacecraft and letting the tether out, causing the remover spacecraft to move higher in orbit, and the debris to move lower. Eventually, the debris object moves close enough to the upper atmosphere that after release from the tether, spirals and burns up.
 - **Lasers:** This method is used to slowing objects using high powered lasers fired from Earth, so that they move out of orbit. Laser technologies could potentially remove a large quantity of small debris.
 - **Space tugs:** Space tugs refers to using a robotic grappling device on another spacecraft to tug an object to a new orbit or to cause it to re-enter the atmosphere destructively.
 - ✓ A space tug is actually a spacecraft that is used to move multiple pieces of debris to disposal orbits in GEO.
- **Space Situational Awareness:** Until the improvement of orbital debris situation through mitigation and remediation, Space Situational Awareness (SSA) is the essential strategy to ensure the protection of useful operational satellites from space debris collisions.
 - SSA means the tracking of orbiting satellites and debris continuously using ground-based radar and optical stations in such a way that the orbital paths of debris can be predicted so that satellite operators can avoid

possible collisions with space debris by maneuvering the operational spacecraft in advance from the debris' predicted orbit.

Way forward

- **Extensive research and discussion:** There are many associated political, legal, and regulatory issues concerning debris topic that have to be considered to have a complete understanding of the problem and its solution.
- **Make mitigation guideline binding:** For everyone to follow as international law rather than to follow voluntarily.
 - International bodies such as UNCOPUOS should take the responsibility of obtaining a global consensus in the form of agreement/laws to address this debris challenge and to ensure the long-term sustainability of space activities.
- **Encourage States to**
 - Ratify and implement existing space treaties
 - Develop domestic legislation and build capacity in space law
 - Adopt internationally accepted best practices
- **Limit future launches:** Launching thousands of new satellites would not help to improve the situation, and instead, there is a fair chance of having a much worse condition.
 - **Multi-mission satellites** can significantly reduce the number of potential launches in the future.
- **Space Information Networks (SIN):** It can accommodate many more commercial and governmental contenders to address the limited orbital resources issue while fulfilling the requirements of the services of every country.
- **Monitoring the debris situation continuously.**

Global Initiatives by Space agencies to tackle Space Debris

- **Inter-Agency Space Debris Coordination Committee's (IADC) Space Debris Mitigation Guidelines:** The Guidelines cover the overall environmental impact of the missions with a focus on the following:
 - Limitation of debris released during normal operations
 - Minimisation of the potential for on-orbit break-ups
 - Post-mission disposal
 - Prevention of on-orbit collisions.
- **UN Committee on the Peaceful Uses of Outer Space (COPUOS)** concluded various international treaties (like Outer Space Treaty, Liability Convention etc.) which deal with issues like liability for damage caused by space objects, Prevention of harmful interference with space activities and registration of space activities etc.
- **Japan's Aerospace Exploration Agency (JAXA) and the European Space Agency (ESA)** have partnered with start-ups to help with removal of space debris.
 - While **JAXA** has launched a **six-month demonstration project with Astroscale for the world's first debris removal mission.**
 - **ESA** is working with **Swiss start-up ClearSpace** for launching a mission in 2025.
- **Remove DEBRIS**
 - The British satellite Remove DEBRIS, was launched in 2018 and deployed from the ISS.
 - It tested **two different technologies for removing space debris:**
 - ✓ capture with a net
 - ✓ capture with a harpoon
- A number of diplomatic initiatives have been proposed to address the long-term debris consequences of destructive ASAT weapons.
 - **China and Russia** have submitted a draft treaty at the **U.N. Conference on Disarmament** that would seek to prevent the placement, or use, of weapons in outer space.
 - **European Union**—sponsored **voluntary code of conduct** that addresses issues such as space-traffic management, debris mitigation, and destructive ASAT testing.
- In India, **Digantara, a company incubated at the Indian Institute of Science (IISc) in Bengaluru**, aims to combat the growing problem of space debris by developing the country's first space-based surveillance platform.

7.3. GENOME EDITING

Why in News?

Ministry of Environment, Forest, and Climate Change (MoEFCC) has for the first time issued an order exempting certain types of genomes edited crops from the stringent regulations applicable on genetically modified or GM crops.




More on News

- MoEFCC exempted **Site directed nuclease (SDN)1 and SDN2 genome edited plants from certain rules of the Environment Protection Act (EPA)** for manufacture, use or import or export and storage of hazardous microorganisms or genetically engineered organisms or cells rules, 1989.

- It will allow genome-edited plants, or organisms without any “foreign” genes to be subjected to a different regulatory process than the one applied to genetically engineered products.
 - With this notification, SDN1/SDN2 category plants will be initially regulated by Institutional Biosafety Committee under EPA Rules 1989 and subsequently under the Seed act under the Ministry of Agriculture and Farmers Welfare.
 - SDN1/SDN2 category plants will be allowed without regulation at the Genetic Engineering Appraisal Committee (GEAC).
 - ✓ GEAC is a special committee under MoEFCC entrusted to govern matters related to GM crops

About Site directed nuclease (SDN)

- SDN or sequence specific nuclease (SSN) refers to the **practice of cleaving DNA strands** to affect the subsequent genome editing.
 - Nucleases are **enzymes that degrade nucleic acids**, either DNA or RNA.
 - They are **essential in living organisms for their several DNA repair aspects**. If there are defects in certain nucleases, it can cause immunodeficiency or genetic instability.
- Depending on the nature of the edit that is carried out, the process is divided into three categories — SDN 1, SDN 2 and SDN 3.



SDN 1, SDN 2 and SDN 3		
SDN 1 SDN 2 Both processes do not involve alien genetic material and the end result is indistinguishable from conventionally bred crop varieties		SDN 3
 <p>SDN1 introduces changes in the host genome's DNA through small insertions/deletions without introduction of foreign genetic material.</p>	 <p>In SDN 2, the edit involves using a small DNA template to generate specific changes.</p>	 <p>Involves larger DNA elements or full length genes of foreign origin which makes it similar to Genetically modified organisms (GMO) development.</p>

About Gene Editing

- Genome (or gene) editing is a way of making specific changes to the DNA of a cell or organism. This allows genetic material to be added, removed, or altered at particular locations in the genome.
 - Editing DNA can lead to changes in physical traits, like eye color, and disease risk.
- There are **two different categories** of gene editing therapies: **germline therapy and somatic therapy**.
 - **Germline therapies change DNA in reproductive cells** (like sperm and eggs). Changes to the DNA of reproductive cells are **passed down from generation to generation**.
 - **Somatic therapies, on the other hand, target non-reproductive cells**, and changes made in these cells affect only the one who receives the gene therapy.

How is gene editing different from GMO development?

- **Genetically modified organisms (GMO)** involves modification of the genetic material of the host by **introduction of a foreign genetic material**.
 - For example, in case of cotton, introduction of genes cry1Ac and cry2Ab mined from the soil bacterium Bacillus Thuringiensis (BT).
- The basic difference between genome editing and GMO is that while the **former does not involve the introduction of foreign genetic material**, the latter does.

GMOs	CRISPR gene editing
Technique: a foreign gene is inserted into the DNA strand.	Technique: gene is cut and its DNA is modified.
	
Result: the crop takes on improved characteristics associated with the new gene and the genetic modification can be detected through tests.	Result: the crop's DNA is changed, but tests cannot distinguish the genetically engineered crop from traditional techniques.

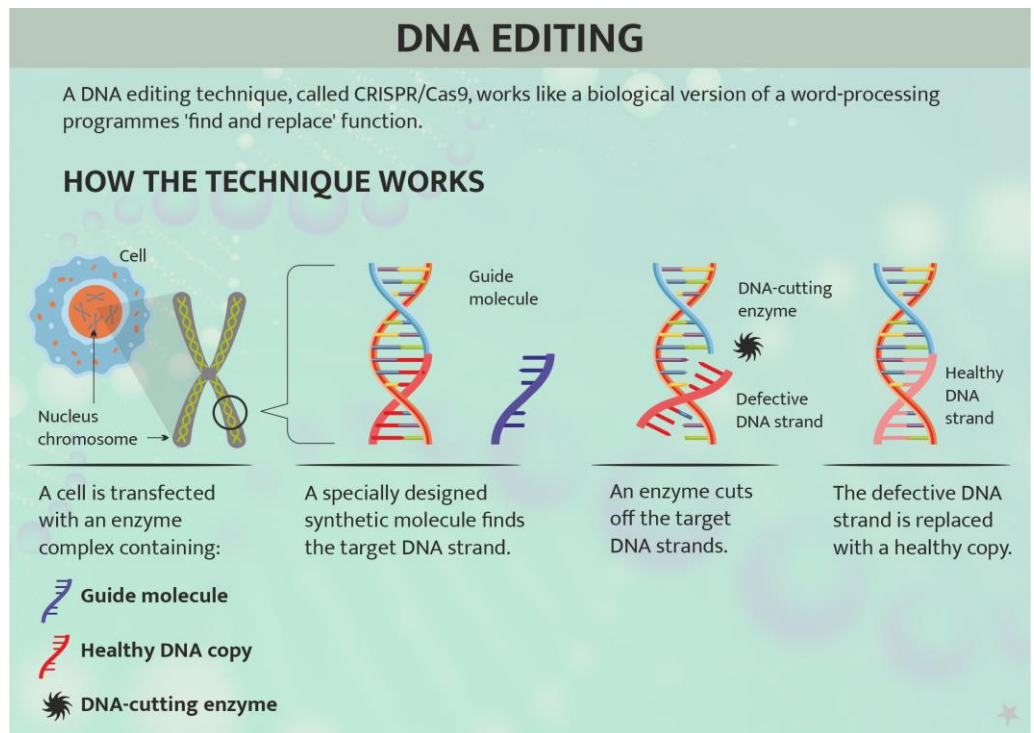
How does it work?

- It is a three-stage complex mechanism of **unwinding, cleaving (cut paste) and rewinding of DNA**.
- Genome editing **uses a type of enzyme called an ‘engineered nuclease’ which cuts the genome in a specific place**.
- **Engineered nucleases are made up of two parts**.

- A nuclease part that cuts the DNA and
- A DNA-targeting part to guide the nuclease to a specific sequence of DNA.
- After cutting the DNA in a specific place, **the cell will naturally repair the cut.**
- This **repair process can be manipulated to make changes** (or 'edits') to the DNA in that location in the genome.
- **Types of Genome editing includes:** Small DNA Changes, Removal of a section of DNA, insertion of section of DNA.

Techniques used for Genome editing

- They mainly **differ in how they recognize the DNA to cut.**
 - **Protein based:** contain a protein that recognizes and binds to the target DNA to be cut.
 - **RNA based:** contain a short sequence of RNA that binds to the target DNA to be cut.



Genome Editing Techniques

CRISPR-Cas9

CRISPR is the DNA-targeting part of the system which consists of an RNA molecule, or 'guide', designed to bind to specific DNA bases through complementary base-pairing.

Cas9 stands for CRISPR-associated protein 9, and is the nuclease part that cuts the DNA.

Emmanuelle Charpentier and Jennifer A. Doudna were awarded Nobel Prize in Chemistry (2020) for discovering the CRISPR-Cas9 genetic scissors.

ZFNs (zinc-finger nucleases)

DNA-binding part of ZFNs is made of zinc-finger proteins, which each bind to about three DNA bases.

The nuclease part of ZFNs is normally a FokI nuclease, which cuts the DNA.

TALENs (Transcription activator-like effector nucleases)

DNA-binding part of TALENs is made of transcription activator-like effector (TALE) domains.

Like ZFNs, the nuclease part of TALENs is normally a FokI nuclease.

7.4. NEWS IN SHORTS

7.4.1. CHANDRAYAAN-2 MAKES FIRST OBSERVATIONS OF DISTRIBUTION OF ARGON-40 IN MOON'S ATMOSPHERE

- Chandra's Atmospheric Composition Explorer-2 (CHACE-2), a mass spectrometer onboard Chandrayaan-2 mission, has made the **first-of-its-kind observations of the global distribution of Argon-40 in the lunar exosphere.**

- Earlier, **NASA's Apollo-17 had detected presence of Ar-40 in the lunar exosphere confined only to near-equatorial region of Moon.**
- Exosphere' is **outermost region of upper atmosphere** where the constituent atoms and molecules rarely collide with each other and can escape into space.
- **Significance** - observations provide details on the spatial variations in Ar-40 through the lunar day **covering the equatorial and mid latitude regions of the Moon.**

- Observations are also indicative of **unknown or additional loss processes, Moon quakes or regions with lower activation energies.**
- **Chandrayaan-2 mission**
 - It is an **Indian lunar mission to explore the uncharted south pole** of Moon by landing a rover. Its **lander is 'Vikram' and rover is 'Pragyan'**.
 - Launched by **Geosynchronous Satellite Launch Vehicle Mk-III in 2019.**
- **Chandrayaan-1** was the **first lunar space probe of ISRO** and found **water on the Moon.**
 - It mapped Moon in **infrared, visible, and X-ray light** from lunar orbit and used reflected radiation to prospect for various elements, minerals, and ice.
- **Argon**
 - It is an **inert, colorless and odorless element, and a noble gas.**
 - Argon-40 is an **isotope of Argon that originates from the radioactive disintegration of Potassium-40 (K-40) present below the lunar surface.**

7.4.2. THE GSAT 7B AND INDIA'S OTHER MILITARY SATELLITES

- **Defence Acquisition Council (DAC)**, key procurement panel chaired by Defence Minister, has **accorded Acceptance of Necessity** (first step of procurement) for the indigenously designed, developed and built **GSAT 7B.**
 - Proposed to be launched in next 2-3 years, **GSAT 7B will be a state-of-the-art, multiband, military-grade satellite** for the Army.
 - It will act as a **force multiplier and fail-safe communication support** to the force as it moves deeper into network-centric warfare scenario.

7.4.4. CLUSTER BOMBS AND THERMOBARIC WEAPONS

- Human rights groups accused Russia of using **cluster bombs and Thermobaric weapons in the ongoing war.**

Cluster munitions	Thermobaric weapon (also called aerosol bombs, fuel air explosives, or vacuum bombs)
<ul style="list-style-type: none"> ● These are non-precision weapons that are designed to injure or kill human beings indiscriminately over a large area, and to destroy vehicles and infrastructure. ● They can be dropped from an aircraft or launched in a projectile, scattering many bomblets as it travels. ● Many of these bomblets end up not exploding, but continue to lie on the ground, posing a threat to the civilian population for long after the fighting has ceased. ● Countries that have ratified Convention on Cluster Munitions are prohibited from using cluster bombs. As of date, there are 110 state parties to the convention. <ul style="list-style-type: none"> ○ Russia, Ukraine, India are not signatories. 	<ul style="list-style-type: none"> ● They use oxygen from the air for a large, high-temperature blast. ● Causes significantly greater devastation than a conventional bomb of comparable size. ● The weapon goes off in 2 separate stages: <ul style="list-style-type: none"> ○ As they hit their target, a first explosion splits open the bomb's fuel container, releasing a cloud of fuel and metal particles that spreads over a large area. ○ A second explosion then occurs, igniting the aerosol cloud into a giant ball of fire and sending out intense blast waves that can destroy even reinforced buildings or equipment and vaporise human beings.

- **GSAT 7 series satellites are advanced geosynchronous transfer orbit (GTO) satellites** developed by Indian Space Research Organisation (ISRO) **to meet the communication needs of the defence services.**
 - **GSAT 7 satellite** (launched in 2013) is used by Indian Navy while **GSAT 7A (2018)** is designed for Indian Air Force.
 - **Currently, the Army is using 30%** of the communication capabilities of the **GSAT 7A.**
- **Other military satellites of India:**
 - **Electromagnetic Intelligence Gathering Satellite (EMISAT):** Has an **Electronic Intelligence (ELINT) package called Kautilya**, allowing interception of ground-based radar and carries out electronic surveillance across India.
 - **RISAT 2BR1 synthetic aperture radar imaging satellite:** Capability to operate in different modes including very high resolution imaging modes.

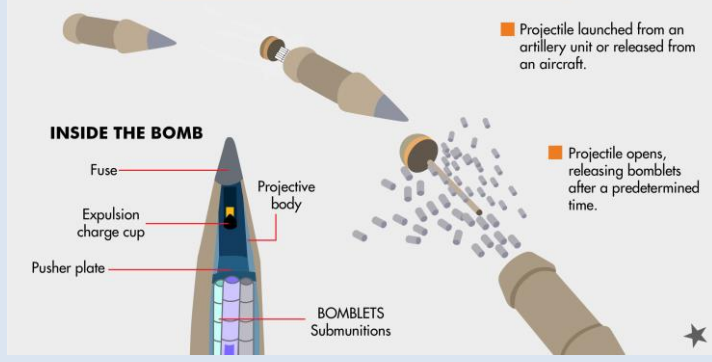
7.4.3. EXOMARS

European Space Agency's ExoMars 2022 mission **won't be launched in September as planned** after the agency **suspended all cooperation with Russia's space program Roscosmos.**

- ExoMars mission aims to address the question **whether life has ever existed on Mars.**
- **It has two parts:**
 - The first part launched an **orbiter and a lander** in 2016, but the lander crashed.
 - September 2022 launch would have **delivered a Mars rover** to the planet.

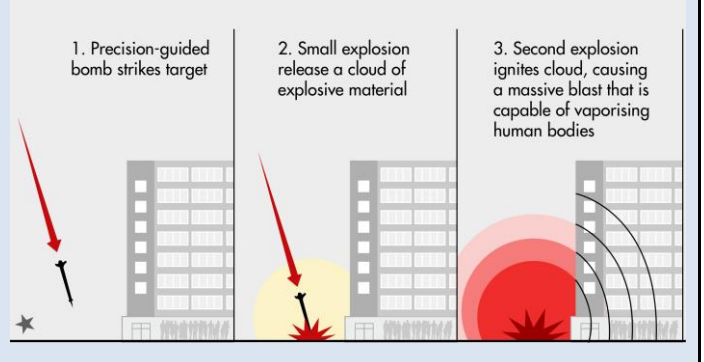
- India has cluster munitions delivered by ground-launched artillery projectiles, rockets, and missiles.

HOW CLUSTER BOMBS WORK



- These are not prohibited by any international law or agreement.

How thermobaric weapons work



7.4.5. MAN-PORTABLE AIR-DEFENCE SYSTEMS (MANPADS)

- Western countries are sending MANPADS to Ukraine for assistance in war.
- **About MANPADS**
 - Short-range, lightweight, and portable surface-to-air missiles that can be fired by individuals or small groups to destroy aircraft or helicopters.
 - Can be shoulder-fired, launched from atop a ground-vehicle, fired from a tripod or stand, and from a helicopter or boat.
 - Have 'fire and forget' guidance systems.

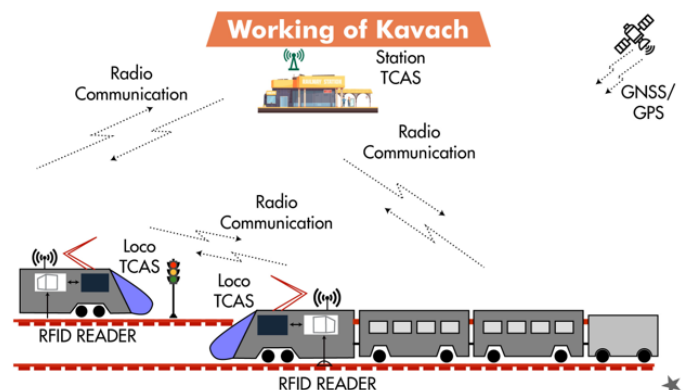
7.4.6. KAMIKAZE DRONES

- They are small unmanned aircraft that are packed with explosives that can be flown directly at a tank or a group of troops that are destroyed when it hits the target and explodes.
 - Also called Switchblade drones as their bladelike wings spring out on launch.
- **Features** - difficult to detect on radar, can hit targets without human intervention, based on facial recognition, can adjust the blast radius and are cost effective.
- They are presently being supplied to Ukraine by US in war against Russia.
 - Other countries including Russia, China, Israel, Iran and Turkey all have some version of it.

7.4.7. KAVACH

- **Minister of Railways** inspected the trial of 'Kavach' working system between Gullaguda-Chitgidda Railway stations.
- Kavach is the indigenously developed train collision avoidance system (TCAS).

- It is a set of electronic devices and Radio Frequency Identification devices installed in locomotives, in the signalling system and tracks.
- These communicate with each other using ultra-high radio frequencies to control the brakes of trains and alert drivers.
- **Key features include:**
 - It automatically takes over and applies sudden brakes — in case of a human error in jumping a red signal and prevents rear-end collisions too when they are on the same line.
 - The hooter sounds by itself when a level crossing is approached helping the loco pilots during fog conditions when visibility is less.
 - Speeds automatically shift to permissible limits during curves or on bridges.
- It is in development since 2012 and is developed by **Research Design and Standards Organisation (RDSO)** in collaboration with Indian industry and trials facilitated by South Central Railway.
- **Other initiatives taken for safety in railways:** Elimination of Unmanned Level Crossings, Online Monitoring of Rolling Stock and Switch over to **Linke Hofmann Busch coaches** for safety of Railway Passengers, etc.



7.4.8. WHO GLOBAL CENTRE FOR TRADITIONAL MEDICINE IN INDIA

- Cabinet has approved the establishment of the **WHO Global Centre for Traditional Medicine (GCTM) in Jamnagar, Gujarat** by signing a Host Country agreement between the Government of India and the WHO.
 - This would be the **first and only global outpost Centre**, under Ministry of AYUSH for traditional medicine across the globe.
- **Benefits of GCTM**
 - To position AYUSH systems across the globe.
 - To provide leadership on global health matters pertaining to traditional medicine.
 - To **ensure quality, safety and efficacy, accessibility, and rational use** of traditional medicine.
 - To **develop norms, standards, and guidelines in relevant technical areas** for collecting data undertaking analytics and assess impact.
 - To **develop specific capacity building and training programmes** in the areas of relevance to the objectives and conduct training programmes.
- **Other steps taken to promote traditional medicine**
 - **Scheme for Voluntary Certification of Yoga Professionals.**
 - **Yoga Certification Board (YCB)** has been established to bring synergy, quality and uniformity in knowledge.
 - **AYUSH Information Cell** have been set up in 31 countries to disseminate authentic information about AYUSH system.
- **Traditional medicine:**
 - It refers to health practices, approaches, knowledge, and beliefs incorporating plant, spiritual therapies, etc to treat, diagnose and prevent illnesses or maintain well-being.
 - It composes of Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) and Sowa Rigpa.

7.4.9. WORLD TUBERCULOSIS DAY 2022 OBSERVED ON 24TH MARCH

- **India TB report** on the theme '**Coming Together to End TB Altogether**' and **National TB Prevalence Survey Report** released in the backdrop of celebrations.
- **Key highlights of India TB report**
 - **2021 witnessed 19% increase** from previous year in **TB patients' notification.**
 - Vision of the National Strategic Plan for Elimination of Tuberculosis (NSP 2017- 25) **permeated to state**

and district levels with 18 states having committed to **Ending TB by 2025.**

- In India, **childhood Tuberculosis** remains a staggering problem, **contributing to approximately 31% of the global burden.**
- There has been an **increase in the mortality rate due to all forms of TB between 2019 and 2020 by 11% in India.**
- **Results of a National TB Prevalence Survey** were also released, which showed that the **majority (64%) of the symptomatic population did not seek healthcare services.**
 - Prevalence of all forms of TB for all ages in India was **312 per lakh population for the year 2021.**
- Government also launched "**Dare to Erade TB**" program for formation of a **Genome Sequencing Consortium for Whole Genome Sequencing, (WGS) TB surveillance based on the Indian Data.**
- **About TB**
 - Caused by **bacterium - Mycobacterium tuberculosis.**
 - It is a **communicable disease** which is spread from person to person through the air.
 - **India's vision to end TB - Eliminating TB by 2025**, five years ahead of global target by World Health Organisation (WHO) i.e., 2030.
 - Steps taken by government to check TB -**National Strategic Plan for Tuberculosis Elimination 2017-2025, National Tuberculosis Elimination Program (NTEP)- Centrally Sponsored Scheme and TB HaregaDeshJeetega Campaign.**

7.4.10. XENOTRANSPLANTATION

- A person on whom **Xenotransplantation was done, succumbed to death in 2 months.**
- **About Xenotransplantation -**
 - **It involves** the transplantation, implantation, or **infusion into a human recipient of live cells, tissues, or organs from a nonhuman animal source.**
 - **Pigs are increasingly being used** for this, as their **organs are anatomically similar to those of humans** and are more tuned for genetic engineering.
- **Concerns involved**
 - **Medical implications** as sometimes even human donor organ transplantation is **unacceptable to body.**
 - Issue of animal rights, and of faith and religion.

7.4.11. MICROPLASTICS IN BLOOD

- Scientists have **discovered microplastics in human blood for the first time**, warning that the ubiquitous particles could also be making their way into organs.
 - The tiny pieces of mostly invisible plastic have already been found almost everywhere else on

Earth, from the deepest oceans to the highest mountains as well as in the air, soil, and food chain.

- It is **not yet clear if these microplastics can cross over from the blood stream to deposit in organs and cause diseases.**



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8. CULTURE

8.1. INDIA'S MUSICAL INSTRUMENTS

Why in news?

Narasinghapettai nagaswaram, a wind musical instrument of Tamil Nadu, has been granted the Geographical Indication tag.

More on news



- The nagaswaram is a **wind instrument that is an integral part of Carnatic concerts**, weddings, festivals and temple ceremonies.
- The unique feature of the nagaswaram is its production process - **it is handmade in Narasingapettai village in Thanjavur, unlike the other machine-made ones.**
- Artisans of the nagaswaram choose the wood wisely, **a type of ebony**, ensuring it is **200 years old**, and which **does not absorb moisture**. The top portion has a metal staple into which a small metallic cylinder is inserted to hold the mouthpiece made of reed.
- **The reeds are made from the leaves** of a locally grown plant called 'naanai' (a variety of bamboo).
- The GI tag will now honour the nagaswaram artisans.

About Indian musical instruments

- **Evolution:** The earliest evidence of music activity is found on the **walls of cave paintings at Bhimbetka** (which were occupied by man approximately **10,000 years ago**). In the excavations of the **Harappan Civilization** also, evidence is available of dance and music activity.
- **Relevance of studying musical instruments:** A study of Musical instruments helps in tracing the **evolution of music** and also explains many aspects of the **material culture of the group of people** to which these instruments belong. For instance,
 - the hair used for making the bow, the wood or clay used for making the drum, or the hide of animals used in the instruments, all these tell us about the **flora and fauna of a particular region**.
 - the Tamil word for instrument-Karuvu is found in **Sangam literature of the 2nd to 6th century A.D.**, the literal meaning of which is **"tool"**.
 - the **hand was referred to as the Hasta Veena**, where the hands and fingers are used to show the notation system of vedic chanting, coordinating sound with mudra-hand gesture.
- **Classification of Indian musical instruments:** In the **Natya Shastra, compiled by Bharat Muni** dated 200 B.C.-200 A.D., musical instruments have been **divided into four main categories** on the basis of **how sound is produced** (this classification was later adapted by Greek and Europe):

About Geographical Indication (GI)

- GI is a **sign used on products** that have a **specific geographical origin** and possess **qualities or a reputation** that are due to that origin. Since the qualities depend on the geographical place of production, there is a **clear link between the product and its original place of production**.
- **International obligation:** The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) prescribes minimum standards of protection of GIs that WTO members must provide.
- **Legal regime in India:** India, in compliance with its obligation under TRIPS, has taken legislative measures by enacting the **Geographical Indications of Goods (Registration & Protection) Act, 1999** and the **Geographical Indication of Goods (Regulation and Protection) Rules, 2002**.
 - Under the Act, the **Controller-General of Patents, Designs and Trade Marks** under Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry is the **'Registrar of Geographical indications'** who supervises the functioning of the Geographical Indications Registry (GIR). The **GIR is in Chennai, and it has All-India jurisdiction**.
- **Protection:** A GI right enables those who have the **right to use the indication to prevent its use by a third party** whose product does not conform to the applicable standards. However, a protected GI **does not enable the holder to prevent someone from making a product using the same techniques** as those set out in the standards for that indication.
- **Duration of Protection:** A GI is registered for a period of **10 years** and the registration may be renewed from time to time for a period of 10 years at a time.
- **Penalty for infringement of GI:** Falsification of a GI will carry a penalty with imprisonment for a term which may not be less than six months but may extend to three years and with a fine which may not be less than Rs 50,000 but may extend to Rs 2,00,000.

<p>Avanaddha Vadya (membranophones or percussion instruments)</p>  <p>AVANADDHA VADYA Percussion Instruments</p>	<ul style="list-style-type: none"> • Sound is produced by striking the animal skin which has been stretched across an earthen or metal pot or a wooden barrel or frame. • Historical evidence: The earliest references to such instruments have been found in the Vedas where there is mention of Bhumi Dundhubhi. • Types: They have been divided into different categories on the basis of their shapes <ul style="list-style-type: none"> ○ Oordhwaka: Like Tabla pair and Chenda. Prominent musicians playing the tabla today are-Ustad Alia Rakha Khan, Zakir Hussain, Shafat Ahmed and Samata Prasad. ○ Ankya: Today, in this variety, the Mridangam, Pakhawaj, Khol, etc. are prominent. ○ Alingya: The Duff, Dufflies, etc. ○ Damaru types: Huddaka of Himachal Pradesh, Timila of the southern region.
<p>Tat Vadya (chordophones or stringed instruments)</p>  <p>TAT VADYA Stringed Instruments</p>	<ul style="list-style-type: none"> • Sound is produced by the vibration of a string or chord. These vibrations are caused by plucking or by bowing (Ravanastram is one of the earliest known bowed instruments) on the string which has been pulled taut. • Historical evidence: Representation of these can be found in many sculptures and murals of olden days, as for example, in the Bharhut and Sanchi Stupa, the reliefs of Amaravati and so on. Mention of Yazh are found in old Tamil texts from the 2nd century A.D. • Example: Santoor, sarangi, dilruba, esraj, Kamaicha (played by the manganiars of west Rajasthan and it links the Western Asia and Africa) etc. • Pandit Shiv Kumar Sharma is the famous Santoor player, and Ustad Sultan Khan is a renowned player of the sarangi.
<p>Ghan Vadya (idiophones or solid instruments)</p>  <p>GHAN VADYA</p>	<ul style="list-style-type: none"> • They are self-vibrators, i.e. owing to their elastic nature, they have a sonority of their own, which is emitted in waves when they are struck, plucked, or stimulated by friction or air. • These instruments are not capable of producing definite pitches that are required for creating a melody. That is why their use is limited in classical music. • Historical evidence: In the Sun temple of Konarak, Orissa, we see this large sculpture nearly 8 ft. high of a lady playing the Jhanj. • Example: Bell, Bhajan Chakkalu, Bhuanj, etc.
<p>Sushir Vadya (aerophones or wind instruments)</p>  <p>SUSHIR VADYA</p>	<ul style="list-style-type: none"> • Sound is produced by blowing air into an hollow column. The pitch of the note is determined by controlling the air passage. • Historical evidence: The musical text Sangeet Ratnakar written in the 13th century by Sharangdev refers to 18 kinds of flutes. Excavations of the Indus civilizations have shown bird whistles of clay, and seals which show wind and percussion instruments. There is reference in the Vedas to an instrument-the Venu which was used as an accompaniment to chanting and recitation. There is also mention of a kind of a flute called the Nadi. • Type: They are divided into two categories on the basis of how sound is produced: <ul style="list-style-type: none"> ○ Flutes: Single or double flutes with only one hollow tube with finger holes for controlling the pitch of the note are very common in many parts of the country. Pandit Hariprasad Chaurasia is famous flute players. ○ Reed instruments: They have one or two reeds inserted in the hollow beak or tube of the instrument. Example, Nadaswaram, Shehnai, etc., <ul style="list-style-type: none"> ▪ The Shehnai is considered to have come to India from West Asia, there are other scholars who believe that this instrument travelled to China from India. ○ Ustad Bismillah Khan is credited for popularising this instrument. Today, Pt. Anant Lal, Pt. Daya Shankar are also noted Shehnai players.

8.2. PAIKA REBELLION

Why in news?

Recently, Centre stated that the **Paika rebellion** cannot be called the **first War of Independence**.

More about news

- Since 2017, Odisha has urged the Centre to declare the Paika rebellion as the first war of Independence.

- At present, the **Indian Mutiny or Sepoy Mutiny of 1857** is called the **first war of Independence** against British Rule.
- Ministry of Culture suggested that it would be **included as a case study in the Class 8 history textbook** of National Council of Educational Research and Training (NCERT).
- In 2018, Indian Prime Minister released the **commemorative stamp and coin on Paika Rebellion**.

Paika Rebellion (1817-1825)

- It was an **armed rebellion** that took place in **Odisha** against the British East India Company (EIC). It took place nearly 40 years before the first sepoy mutiny.
 - The **Paikas were peasant militias of the Gajapati rulers of Odisha** who offered military services to the king. They owned **rent-free land** that had been given to them for their military service to Kingdom of Khurda.
- The British established themselves in Odisha when the **EIC dethroned the King of Khurda, Raja Mukunda Deva** in 1803.
- The Paikas under **Bakshi Jagabandhu Bidyadhar**, the hereditary chief of the militia army of the Gajapati King, rose in rebellion, taking support of tribals and other sections of society.
 - They attacked British symbols of power, setting ablaze police stations, administrative offices and the treasury during their march towards Khurda, from where the British fled.
 - They were supported by the zamindars, village heads and ordinary peasants.
- The uprising spread like a wildfire across the state resulting in several confrontations and encounters between the British and the Paika forces. The revolt was **eventually overpowered by the British army**.
 - Bidyadhar was imprisoned in 1825 and died in jail in 1829.



Quick Revision facts for Paika Rebellion

- **Time period:** 1817-1825
- **State:** Odisha
- **Leader:** Bakshi Jagabandhu Bidyadhar
- **Against:** British East India Company (EIC)

Causes of Paika Rebellion

- **Land revenue system:** The advent of the British and establishment of colonial rule brought new land revenue settlements, which led to the Paikas losing their estates.
- **British exploitative policies:** With the removal of the King of Khurda, exploitative policies of the British administration became increasingly intolerable for the people of Odisha. The continuous interference in the economy and revenue systems led to **exploitation and oppression of the peasants and farmers** eventually triggering a rebellion against the British.
- **New currency system:** The British changed the currency system from cowrie to rupee. The villagers faced a lot of problems in handling the new currency and they were grossly exploited by the local mahajanas.
- **British salt policy:** The long sea coast of Odisha produced a huge quantity of salt which was used by the people of this land freely. However, the British authority deprived the zamindars and the local people of coastal region of their traditional rights to manufacture salt.

Consequences of Paika Rebellion

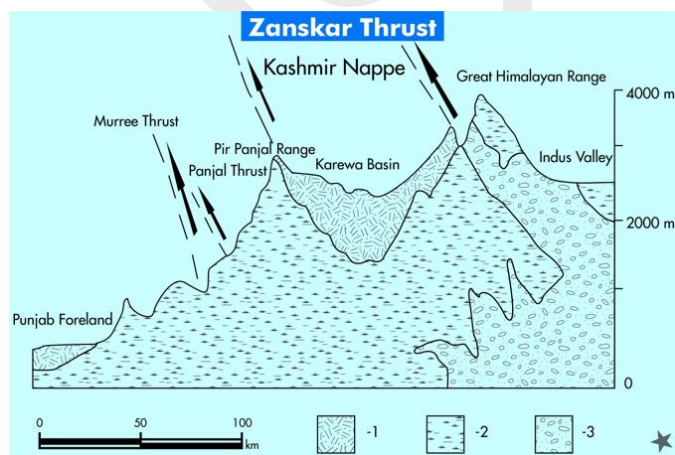
- **Administrative changes:** Odisha people (Odias) were employed in the government services and entrusted with responsible works. This facilitates the local people to come closer to the British authority through these employees.
- **Reduction in salt prices:** The price of the salt was reduced and more salt was made available for the smooth purchase of the people.
- **Reduction in revenue burdens:** British government reduced the revenue burdens of the local zamindars. In several cases, the government purchased the estates of the defaulters and restored them to the original proprietors.
 - The Paikas were forced to leave the profession of militia men of the king and to adopt cultivation and other works as means to earn livelihood.

- **Management of the Jagannath temple of Puri:** When Raja Mukundadeva II died in 1817, his son Ramachandradeva III was allowed to move to Puri. He was allowed an annual pension and to take over the charge of the management of the Jagannath temple of Puri. By this arrangement, the British government won the mind and sentiment of the people of Odisha.

8.3. NEWS IN SHORTS

8.3.1. KAREWAS

- Development and construction in the Kashmir Valley is **excavating and destroying its highly fertile alluvial soil deposits called 'karewas'**.
 - Karewas are **thick lacustrine deposits** (deposits in lake) of glacial clay and other **materials embedded with moraines**.
 - These are getting destroyed due to **haphazard constructions, illegal clay mining etc.**
- **Formation of Karewas** (also called Vudr):
 - During the Pleistocene Period (2.6 million years to 11,700 years ago), **due to the rise of Pir Panjal, drainage was impounded** and a lake (about 5000 sq. km) **area was developed, forming a basin** in the Kashmir Valley.
 - Subsequently, the **lake was drained through Bramulla gorge, leaving behind karewa deposits.**
- **Significance**
 - **Agricultural:** Ideal for cultivation of Kashmir saffron (Zafran), almonds, apples and several other cash crops.
 - ✓ Saffron heritage and cultivation of Kashmir Valley has been **recognised as Global Agricultural Heritage Systems** of Food and Agricultural Organization (FAO).
 - ✓ Saffron has received a **Geographical Indication (GI) tag** in 2020.
 - **Archaeological:** Hold fossils and remnants of many human civilisations and habitations.



8.3.2. GI-TAGGED KASHMIR CARPETS

- First ever Geographical Indication (GI) tagged Kashmir carpets flagged off to Germany.
- Department of Industry Promotion and Internal Trade granted **GI tag to Kashmiri hand knotted carpets in 2016** but the registered carpets were certified from this year.
- History of Kashmiri carpet dates back to the **period of the famous Sufi Saint and scholar, Hazrat Mir Syed Ali Hamdani (1341- 1385 AD)** of Persia.
- Kashmiri carpets are **very similar to Iranian carpets**, but in Kashmiri carpets weavers **use a written set of codes and symbols for design patterns and colors, called Taleem**.
 - **Taleem, a coded color chart** indicates the number of knots to be woven in their respective colors.

8.3.3. PAL-DADHVAV MASSACRE

- On 7th March, Gujarat government marked **100 years of the Pal-Dadhvavkillings**.
- Pal-Dadhvav massacre took place in the **Pal-Chitariya and Dadhvaav villages of Sabarkantha district part of Idar state** (was princely state in Gujrat).
 - The movement was to **protest against the land revenue tax (lagaan) imposed on the peasants** by the British and feudal lords.
 - British officer **Major H.G. Sutton from Mewad Bhil Corps** ordered to open fire at the innocent tribals.

8.3.4. UNESCO'S CITY OF LITERATURE

- Recently, **Kozhikode** was proposed by the Kerala Institute of Local Administration (KILA) to be branded as a **UNESCO's City of Literature, which is part of a wider UNESCO's Creative Cities Network (UCCN)**.
- UCCN was created in 2004 to **promote cooperation with and among cities that have identified creativity as a strategic factor for sustainable urban development**.
 - It **covers seven creative fields:** Crafts & Folk Art, Design, Film, Gastronomy, Literature, Music, and Media Arts.
- **6 Indian cities are included** on the list- Hyderabad (gastronomy), Mumbai (film), Varanasi (music), Chennai (music), Jaipur (crafts and folk art) and the latest addition, Srinagar (crafts and folk art).

8.3.5. OLCHIKI

- For the first time, **Indian Constitution is translated into Santali script 'OlChiki'**.
 - **92nd Constitutional Amendment Act 2003 added Santali to Schedule VIII** along with the Bodo, Dogri and Maithili languages.
- **About Ol Chiki**
 - Ol Chiki script—the word ol means “write,” and chiki means “script”—was **invented by Pandit Raghunath Murmu** in 1925 to write Santali.
 - Ol Chiki is alphabetic, and **does not share any of the syllabic properties of the other Indic scripts.**
 - It contains **30 letters and five basic diacritics** (marks placed above or below (or sometimes next to) a letter in a word to indicate a particular pronunciation).
- **About Santals**
 - Santals community is **concentrated in several states** including **Assam, Tripura, Bihar, Chhattisgarh, West Bengal, Odisha and Jharkhand.**
 - They speak **Santali language which belongs to the Munda group** of Austro-Asiatic sub-family of languages.
 - Santals are **well known for their housing architecture with colourfully painted walls, floors and artistically carved doors.**
 - Primary occupation is **settled agriculture.**

8.3.6. HORNBILL NEST ADOPTION PROGRAM (HNAP)

- The **Nyishi tribe** of Arunachal Pradesh celebrated a decade success of HNAP.
 - HNAP, launched in 2011 as community-based hornbill conservation programme, operates in the forests outside Arunachal Pradesh's Pakke Tiger Reserve.
- Hornbills are **indicators of the health of a forest**, they are **seed dispersers** and **called as 'farmers of the forest'**.
- **India is home to nine species**, of which four are found in Western Ghats—**Indian Grey Hornbill, Malabar Grey Hornbill, Malabar Pied Hornbill and the Great Hornbill.**
- Also, to encourage inter-tribal interaction and to promote cultural heritage of Nagaland, the **Government of Nagaland organizes the Hornbill Festival every year in the first week of December.**

8.3.7. BAMIIAN BUDDHAS

- Taliban are preserving **Bamiyan buddhas in Mes Aynak**, with eye to China investment.
- **About Bamiyan Buddhas:**
 - It is situated in the **Hindu Kush** in the central highlands of Afghanistan.
 - Bamiyan Buddhas **date back to the 5th century AD** and were once the tallest standing Buddhas in the world.
 - They were locally known as **Salsal and Shamama.**
 - They were great **examples of a confluence of Gupta, Sassanian, and Hellenistic** artistic styles.
 - In **2001, Taliban began blowing up** the two statues.
 - Following this, **UNESCO included the remains in its list of World Heritage Sites in 2003.**



8.3.8. PADMA AWARDS 2022

- Padma Awards, instituted in 1954, are **one of the highest civilian honours of India** announced annually on the eve of Republic Day.
- These are given in **three categories:**
 - **Padma Vibhushan** (for exceptional and distinguished service).
 - **Padma Bhushan** (distinguished service of higher order).
 - **Padma Shri** (distinguished service).
- The award seeks to recognize achievements **in all fields of activities or disciplines where an element of public service is involved.**
 - They are conferred on the **recommendations made by the Padma Awards Committee**, which is constituted by the Prime Minister every year.
 - **Even self-nomination can be made.**
 - However, **Government servants** including those working with PSUs, except doctors and scientists, are **not eligible for these Awards.**

- **Total number of awards to be given in a year** (excluding posthumous awards and to NRI/foreigners/OCIs) **should not be more than 120.**
- **Awardees are presented a Sanad** (certificate) signed by the President and a medallion. There is **no cash prize.**

8.3.9. PROMOTION OF RURAL AND INDIGENOUS/TRIBAL GAMES UNDER KHELO INDIA SCHEME (KIS)

- ‘Promotion of rural and indigenous/tribal games’ component of KIS is specifically dedicated to the development and promotion of rural and indigenous/tribal games in the country.
- KIS aims at infusing sports culture and achieving sporting excellence in the country thus allowing the populace to harness the power of sports through its cross-cutting influence.
 - It is the flagship **Central Sector Scheme of Ministry of Youth Affairs & Sports.**
- Following major **Indigenous/traditional games** have been identified:

Mallakhamb, MP	<ul style="list-style-type: none"> • It is a combination of Yoga, Gymnastics, and Martial Arts. • Many types of Mallakhamb as Pole, Rope, Hanging, Niradhar (without support), on cane, on floating platform, Mallakhamb with weapons etc 	
Kalaripayattu, Kerala	<ul style="list-style-type: none"> • It is a form of Marital Art. • Has different techniques like meipayattu (physical body exercise), vadipayattu (fight using sticks), valpayattu (fight using swords) etc. 	
Gatka, Punjab	<ul style="list-style-type: none"> • Traditional martial art form, that is historically associated with the Sikh gurus. • Stick fighting between two or more practitioners, with wooden sticks (called Soti) intended to simulate swords. 	
Thang ta, Manipur	<ul style="list-style-type: none"> • Traditional martial art also called HUYEN LALLONG ("method of safe-guarding"). 	
Yogasana	<ul style="list-style-type: none"> • Describes a seated posture in yoga typically used for meditation, such as a basic cross-legged position. • Examples: Padmasana (lotus pose), Siddhasana (perfect or accomplished pose), Vajrasana (thunderbolt pose) etc. 	
Silambam, TN	<ul style="list-style-type: none"> • Weapon-based Indian martial art, but also traditionally practiced by the Tamil community of Sri Lanka and Malaysia. 	

8.3.10. NATIONAL FILMS DEVELOPMENT CORPORATION

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

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

Role of film bodies

- **FD (under M/o I&B)**, established in 1948, was created primarily to **produce documentaries and news magazines as publicity for government programmes** and to keep a cinematic record of Indian history.
- **CFS (an autonomous organization)**, founded in 1955, with the specific objective of **providing children and young people value-based entertainment** through the medium of films.
- **NFAI (under M/o I&B)**, established in 1964, with the primary objective of **acquiring and preserving Indian cinematic heritage**.
- **DFF (under M/o I&B)**, set up in 1973, to **promote Indian films and cultural exchange**.



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9. ETHICS

9.1. BHAGAVAD GITA AND THE LEARNINGS FOR ADMINISTRATIVE ETHICS

Introduction

Recently, the Gujarat government announced that the Bhagavad Gita will be a part of the school syllabus for Classes 6 to 12 across the state from the academic year 2022-23.

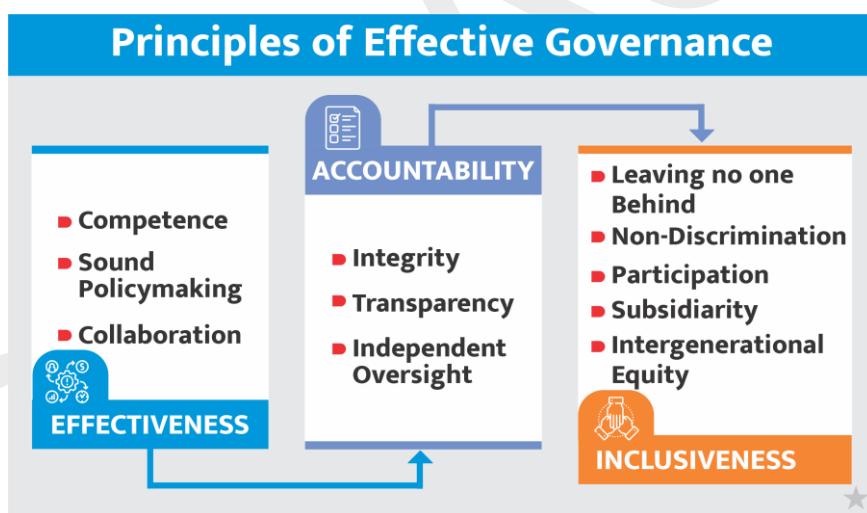
The knowledge imparted by the Bhagavad Gita goes beyond the religious connotation. It discusses issues ranging from the values essential for life to resolution of complex ethical conundrums and beyond.

The principles and ideas of ethical conduct propagated by the scripture are useful not only for school education but in other areas such as business ethics, medical ethics among others. The domain of its applicability also includes Administrative Ethics providing guidance to systems and administrators alike.

What are the principles and issues in administrative ethics?

Public administration, the cornerstone of government's work, plays an essential and critical role in effective governance for improving people's lives.

- To achieve effective governance from public administration institutions it is important that they meet **11 principles of effective governance** (see image).
- But in India we still lack a **Code of Ethics for the Civil Servants**.
- The Indian Administration suffers from number of other issues as well, such as:
 - **Corruption**, i.e., abuse of authority and squandering of public money. E.g., India still ranks at 85 in Corruption Perception Index due to nepotism and bribery.
 - **Lack of Objectivity in Decision Making** due to political interference and continuity of **Hegelian perspective**, i.e., they represent the universal interest of the society.
 - ✓ According to Michel Crozier, French Sociologist, it leads to **Bureaucratic Phenomenon** characterized by **slowness, complication of procedures, ponderousness** etc.
 - **Ineffective Leadership** or poor supervision from higher authorities in ensuring follow up of Constitutional values or a minimal Code of Conduct by all subordinates.
 - **Lack of accessibility and responsiveness** as authority is seen as a status of ruler rather than one in public service.
 - **Lack of Transparency and Accountability** despite laws like Right to Information.



How can teachings of Bhagavad Gita add value to the system of administrative ethics?

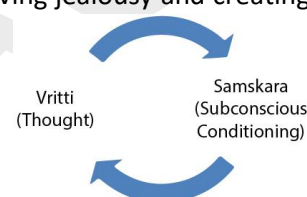
Teachings of Bhagavad Gita can play an important role towards **effective, accountable, and inclusive governance** by guiding public servants on ethical behavior or conduct. It will help in overcoming decision-making issues and create an ethical workplace through:

- **Integrity in actions:** Central to the scripture, Bhagavad Gita promotes **Nishkama Karma** (detached involvement) over **Sakama Karma** (attached involvement). Nishkama Karma or **selfless actions** will lead to integrity by removing attachments, egoism or actions with personal gain in mind. As **verse 47 of Chapter 2** says:

कर्मण्येवाधिकारस्ते
मा फलेषु कदाचन |
मा कर्मफलहेतुर्भूर्मा ते
सङ्गोऽस्त्वकर्मणि ||

एतेर्विमुक्तः कोन्तेय
तमोद्द्वारेस्त्रिभिर्नरैः ।
आचरत्यात्मनः श्रेयस्ततो
याति परां गतिम् ॥

- You have a right to perform your prescribed duties, but you are not entitled to the fruits of your actions. Never consider yourself to be the cause of the results of your activities, nor be attached to inaction.
- **Objectivity in Decision Making:** Bhagavad Gita promotes **Lok Samgraha**, i.e., **holding all together**. It inspires towards **universal welfare (inclusive and sustainable development)** through firmness of mind and preference to **Shreya over Preya**, i.e. Goodness or Objectivity over pleasure or happiness. As **verse 22 of Chapter 16** says:
 - Those who are free from the three gates to darkness endeavor for the welfare of their soul, and thereby attain the supreme goal.
- **Leadership Development:** Bhagavad Gita stresses on performance of **Svadharm**, i.e., **own duty or dharma**. When leadership performs its duties in a righteous way, subordinates also recognize and revere the leadership and follow the path of action.
- **Motivation:** Studies have highlighted that most of the reasons behind work related stress are related to mind such as pressure of performance, relationships, media pressure etc. Bhagavad Gita focuses on mind and distinguishes between **subconscious and conscious actions** to promote **Sattva** and **divinity in all-** removing jealousy and creating motivation for work.
 - Maharishi Patanjali also focused on human **Vrittis** (fluctuations of mind) with **building of right knowledge** (part of **Sattva**) to reinforce **Samskara** for right actions.



How can teachings of Bhagavad Gita help uphold these qualities?

Paul H Appleby highlighted some important qualities of a good administrator such as- a **good listener**, a **strong bent towards action**, **willingness to assume responsibility** etc. Bhagavad Gita can help administrators develop these qualities-

- **Emotional Intelligence:** Bhagavad Gita calls for **Sthitaprajna**, i.e., to acquire equanimity or calmness with firm resolve. It can help administrators to have control over senses and build a steadfast resolve towards the goals/objectives.
- **Resolution of Ethical Dilemmas:** **Nishkama Karma** detaches individuals from results of their action. It can help administrators in resolving conflict between moral imperatives, especially dilemmas caused by conflict between **Self-interest** and **Public Benefit**.
- **Compassion (Karuna):** **Sattva** and **purification of mind** helps in building compassion towards fellow living beings. It can help administrators in overcoming prejudices through **clarity of mind** and **motivation** to use official power to resolve **problems of people**.

"You see, spirituality has no religious overtones. The essence of spirituality is to make a person pure in his mind and his thoughts. When I started reading our old scriptures, like the "Bhagavad Gita," I found it was useful for day-to-day life, so I started practicing it.

I consider it an administrative gospel, one that will help you in doing things like running an organization".

- **E. Sreedharan** (Metro Man of India)

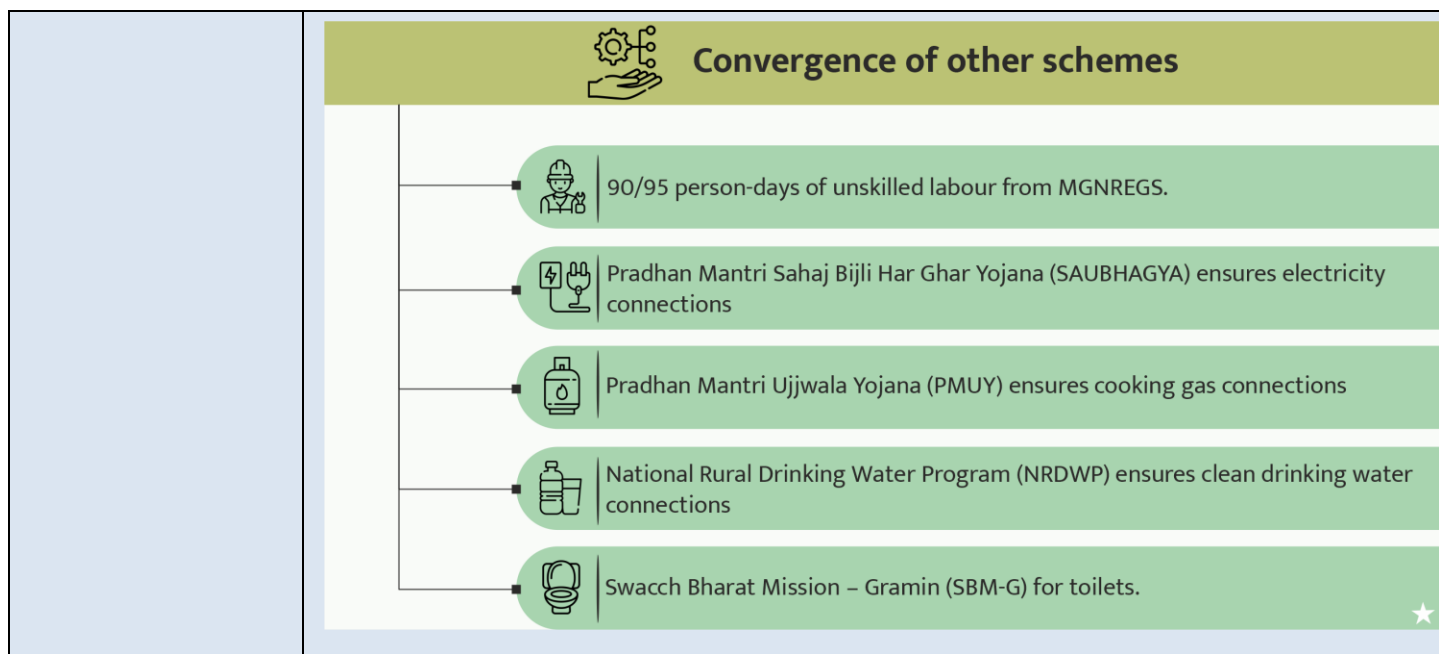
10. SCHEMES IN NEWS

10.1. PRADHAN MANTRI AWAS YOJANA (GRAMIN)

Why in news?

Recently, Ministry of Rural Development is taking various steps to increase the pace of house sanction & completion and achievement of the targets by March 2024.

Objective	Salient Features
<ul style="list-style-type: none"> • To provide assistance to eligible rural households with overall target to construct 2.95 crore pucca houses with basic amenities by March 2024. <ul style="list-style-type: none"> ○ Earlier, the scheme aimed at providing a pucca house with basic amenities to all houseless householder living in kutcha and dilapidated houses by 2022. • Apart from focusing on providing houses to the eligible beneficiaries, PMAY-G also addresses the basic needs of households through convergence with other Government Schemes. 	<ul style="list-style-type: none"> • It is a flagship Mission launched in 2016 by Government of India being implemented by the Ministry of Rural Development. • The division of scheme-related home construction cost between the Centre and State in a 60:40 ratio, wherein each unit receives Rs.1.20 lakh worth of financial assistance <ul style="list-style-type: none"> ○ In the Himalayan regions, Jammu and Kashmir, and North-Eastern states, the centre sponsors 90% of the construction costs, while the state is responsible for the remaining 10%. ○ If it is built in a hilly region, then the amount stands as Rs 1.3 lakh. • It selects beneficiaries using housing deprivation parameters in the Socio Economic and Caste Census (SECC) 2011 data and from finalized Awaas+ list subject to due verification by Gram Sabha and Appellate process thereafter. • Implementation and monitoring are to be carried out through an end-to-end e-Governance model Using Awaas Soft and AwaasApp. <ul style="list-style-type: none"> ○ AwaasApp – a mobile application is used to monitor real time, evidence-based progress of house construction through date and time stamped and geo referenced photographs of the house. ○ All payments to beneficiaries are to be through DBT to beneficiary’s Bank/Post office accounts registered in AwaasSoft MIS. <ul style="list-style-type: none"> ✓ AwaasSoft provides functionalities for data entry and monitoring of multiple statistics related to implementation aspects of the scheme ○ The programme implementation is also monitored through community participation (Social Audit), Members of Parliament (DISHA Committee), Central and State Government officials, National Level Monitors etc. • The minimum unit (house) size is 25 Sq.m (or) 269 Sq.ft. <ul style="list-style-type: none"> ○ No contractor should be engaged in the construction of the houses. • Facilitating willing beneficiaries to avail loan from Financial Institutions for an amount of upto Rs 70,000. • Some of the modules added recently in the AwaasSoft are: <ul style="list-style-type: none"> ○ Landless Module: The scheme has also taken care of landless households in the permanent waitlist (PWL). The State Government must ensure the provision of land to landless households on priority as they are the neediest ones. <ul style="list-style-type: none"> ✓ Further, to map landless beneficiaries in the PWL of PMAY-G and to capture the status of availing land or financial assistance for land purchase to the landless beneficiaries, a module on landless has been developed. ○ E-Ticketing system – The module has been introduced to address the grievances pertaining to technical as well as non-technical issues under PMAY-G as referred by the State/UTs ○ Aadhaar Based Payment System –ABPS allows Direct Benefit Transfer (DBT) to the PMAY-G beneficiary in his/ her bank account linked with the Aadhaar number of the concerned beneficiary for the safe and authentic transaction.



10.2. PRADHAN MANTRI KALYAN GARIB ANNA YOJANA

Why in news?

Recently, the Government has approved the extension of Pradhan Mantri Kalyan Garib Anna Yojana till September 2022 in “keeping with the concern and sensitivity towards poor and vulnerable sections of society”.

Objectives	Salient Features
<ul style="list-style-type: none"> It is a scheme as part of Atmanirbhar Bharat to supply free food grains to migrants and poor. It envisages fulfilling the food requirement of the needy by providing foodgrains through the public distribution system devised to reach all the priority households (ration cardholders) and Antyodaya Anna Yojana. <ul style="list-style-type: none"> PM-GKAY extension would ensure that no poor household goes to bed without food during this time of recovery. 	<ul style="list-style-type: none"> PM-GKAY has been under implementation since April 2020, as the largest food security program in the world. The scheme has been extended for another six months i.e., till September 2022 (Phase VI). More than 81.35 crore individuals, i.e, roughly two-thirds of India’s population would be covered under this scheme. The program is operated by the Department of Food and Public Distribution under the Ministry of Consumer Affairs, Food and Public Distribution. Benefits: <ul style="list-style-type: none"> Under the extended PM-GKAY each beneficiary will get additional 5 kg free ration per person per month in addition to his normal quota of foodgrains under the NFSA. <ul style="list-style-type: none"> ✓ When the scheme was first announced in 2020, the government included pulses and oils along with five kg of rice or wheat per person per month. However, later it limited itself to five kg of rice or wheat per person per month. The benefit of free ration can be availed through portability by any migrant labour or beneficiary under One Nation One Ration Card (ONORC) plan from nearly 5 lakh ration shops across the country. Eligibility: <ul style="list-style-type: none"> Families belonging to the Below Poverty Line - Antyodaya Anna Yojana (AAY) and Priority Households (PHH) categories will be eligible for the scheme. PHH are to be identified by State Governments/Union Territory Administrations as per criteria evolved by them. AAY families are to be identified by States/UTs as per the criteria prescribed by the Central Government: Households headed by widows or terminally ill persons or disabled persons or persons aged 60 years or more with no assured means of subsistence or societal support.

- Widows or terminally ill persons or disabled persons or persons aged 60 years or more or single women or single men with no family or societal support or assured means of subsistence.
- All primitive tribal households.
- Landless agriculture labourers, marginal farmers, rural artisans/craftsmen and other similar categories in both rural and urban areas.
- All eligible Below Poverty Line families of HIV positive persons.

RATION GIVEN UNDER PUBLIC DISTRIBUTION SYSTEMS

ANTODAYA ANNA YOJNA



PER HOUSEHOLD

PRIORITY HOUSEHOLDS



PER HOUSEHOLD



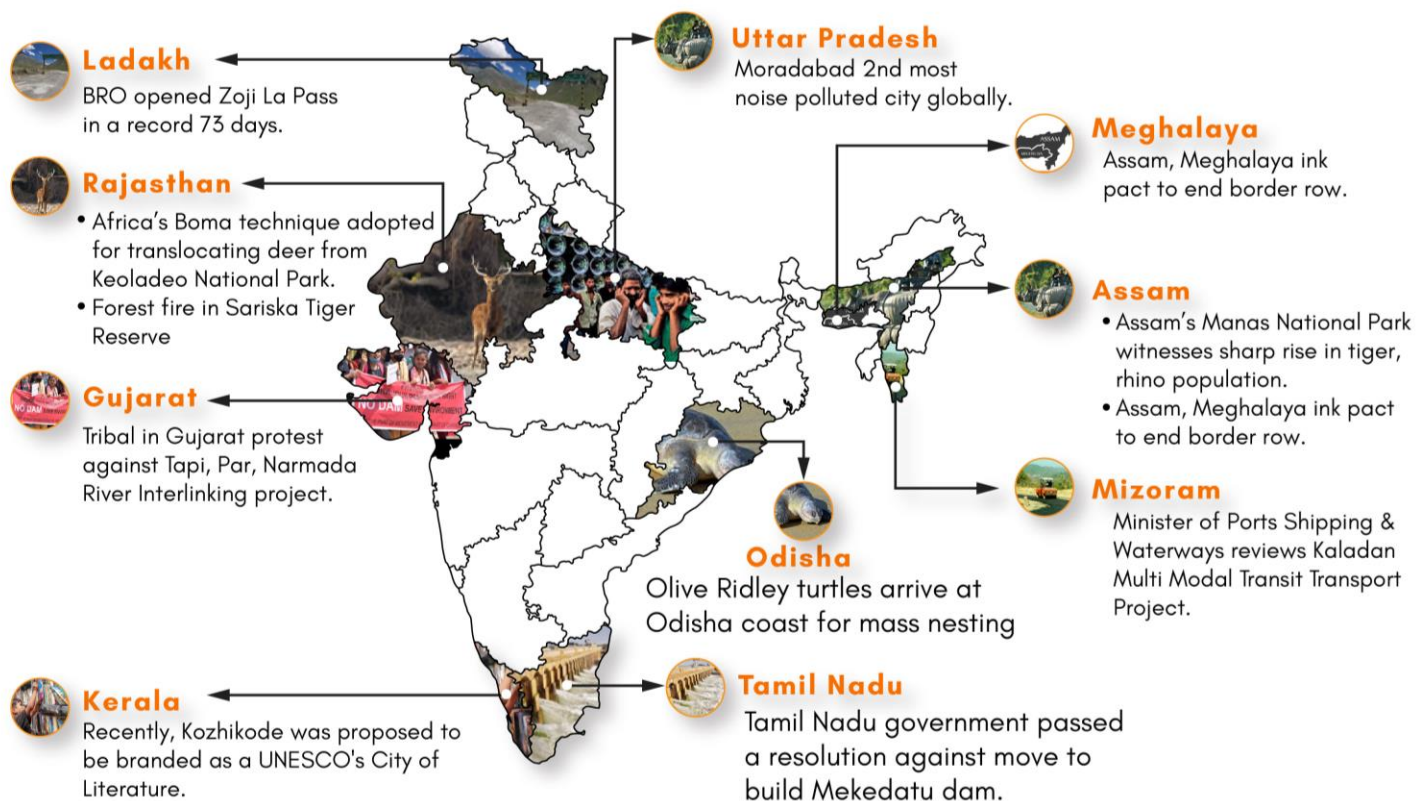
ESSAY

ENRICHMENT PROGRAMME 2022

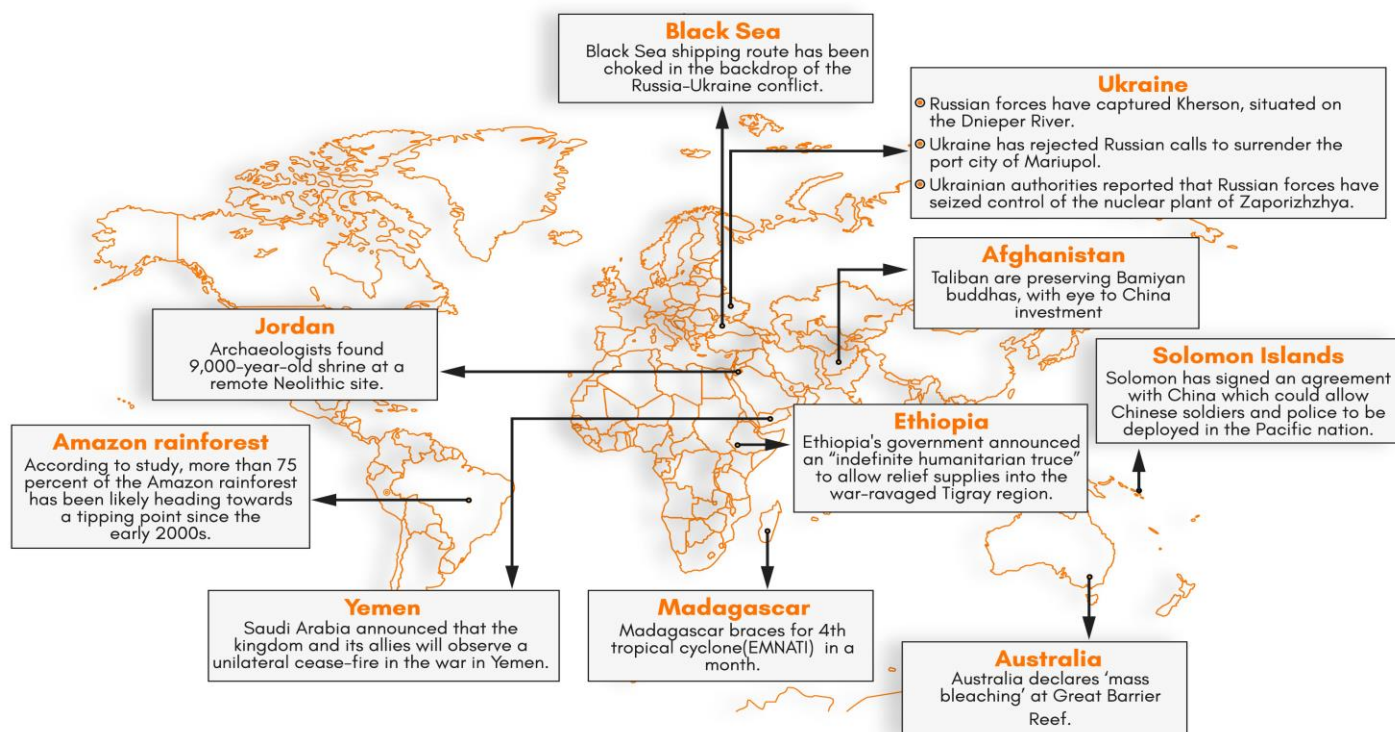
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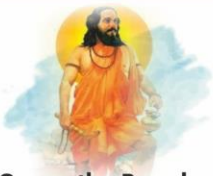





Places in News: India








Places in News: World



Personalities in News

Personality	About	Ethical Values Exhibited by the personality
 <p>Samartha Ramdas</p>	<ul style="list-style-type: none"> ● Samartha Ramdas ● Born in Maharashtra in 1608 A.D, he was closely associated with Shivaji and was a contemporary of Sant Tukaram. ● He was an Advaitin and a Bhakta in one and worked towards spreading the Hindu religion throughout India. ● He gave the Mantra Sri Ram Jaya Ram Jaya Jaya Ram. ● His literary works include Dasabodh, Manache Shlok (verse addressed to the mind), Karunashtakas (hymns to God). ● Values: Spirituality, devotion to god. 	<ul style="list-style-type: none"> ● Devotion to God and spirituality <ul style="list-style-type: none"> ▶ Being devotee of Lord Rama, he in his entire life, spread the message of universal love and compassion. ▶ He penned down his thoughts through literature.
 <p>Harichand Thakur</p>	<ul style="list-style-type: none"> ● Harichand Thakur was born in 1812 in Orakandi in Bangladesh in a peasant farmer family of the Thakur community (SC community). ● Thakur, whose family were Vaishnavite Hindus, founded a sect of Vaishnavite Hinduism called Matua. <ul style="list-style-type: none"> □ This was adopted by members of the Namasudra community, who were then also known by the common pejorative name of Chandalas and considered untouchable. □ The sect opposed the caste oppression. ● Ideals & Values: social reformer, care and Kindness ● Harichand Thakur devoted his life to the cause of betterment of the oppressed, downtrodden and deprived people in undivided Bengal during the pre-independence era. 	<ul style="list-style-type: none"> ● Care and Kindness <ul style="list-style-type: none"> ▶ From early childhood, he would sing bhajans and get moved by the plight of the downtrodden. He later worked extensively with the 'untouchable' people and his doctrine was to treat all people as equal ▶ He was loved by all of his friends for his love for music and philanthropic attitude.
 <p>Savitribai and Jyotirao Phule</p>	<ul style="list-style-type: none"> ● They stand out as an extraordinary couple in the social and educational history of India. ● Their contributions: <ul style="list-style-type: none"> □ Started a school for girls, Shudras and Ati-Shudras in Poona (1848) □ Opened a care centre for pregnant widows (1853) to have safe deliveries and to end the practice of infanticide owing to social norms. <ul style="list-style-type: none"> ✓ The Balhatya Pratibandhak Griha was started in their own house in Pune. □ Established Satyashodhak Samaj (The Truth-Seeker's Society) in 1873, that advocated for social changes that went against prevalent traditions like inter-caste marriages, eradication of child marriages, and widow remarriage etc. ● Values: Worked towards female education and empowerment, and ending caste- and gender-based discrimination. 	<ul style="list-style-type: none"> ● Rationalism and social justice <ul style="list-style-type: none"> ▶ Phule through his writing (e.g. Gulamgiri) reinterpreted the Indian past and provided scientific understanding of Indian history particularly the origin of its caste based social order. ▶ He and his wife Savitribai Phule, were pioneers of women education in India and started several schools for girls and for children from depressed classes.
 <p>Shyamji Krishna Varma (4 October 1857- 31 March 1930)</p>	<ul style="list-style-type: none"> ● He founded the Indian Home Rule Society, India House (1905) and The Indian Sociologist in London. <ul style="list-style-type: none"> □ India House developed as an organised meeting point for radical nationalists among Indian students in Britain. □ The monthly Indian Sociologist became an outlet for nationalist ideas and through the Indian Home Rule Society, he criticised British rule in India. ● Ideals & Values: Staunch nationalist, revolutionary, social reformer, and leader. ● A memorial called Kranti Teerth dedicated to him was built and inaugurated in 2010 near Mandvi. 	<ul style="list-style-type: none"> ● Patriotism and Selflessness <ul style="list-style-type: none"> ▶ Inspired by the ideas of National liberation, he decided to dedicate his whole life for working to hold the cause of independent nation.
 <p>Rahul Sankrityayan (April 9, 1893- April 14, 1963)</p>	<ul style="list-style-type: none"> ● Bihar government is in the process to translate and publish hundreds of original Buddhist manuscripts from Nalanda and Vikramshila, saved during the burning of the ancient universities in the 12th and 13th centuries by Bakhtiyar Khilji's army and later brought back to India from Tibet by Rahul Sankrityayan. ● Contributions: <ul style="list-style-type: none"> □ A traveller and literary polymath, he was universally called Mahapandit (great scholar) as he knew nearly 30 languages, but he almost wrote in Hindi. □ Wrote "Madhya Asia Ka Itihas" (History of Central Asia); "Volga Se Ganga" (From Volga to Ganga); a grammar and primer of Tibetan in Sanskrit. □ Made a pioneering contribution in preserving and reconstructing the philosophical works of Buddhist logicians like Dharmakirti, Asang and Subandhu. □ His travels prompted him to write travelogues and he is considered 'father of Hindi travel literature.' ● Values: Humanist; anti-colonial political activist etc. ● Awarded by Sahitya Akademi (1958) & Padma Bhushan. 	<ul style="list-style-type: none"> ● Scholarship and Curiosity <ul style="list-style-type: none"> ▶ He was a distinguished -intellectual who was multi-lingual and known for remarkable recollection of writings depicting different landscapes, people, cultures and traditions. ▶ He is the one who played a pivotal role to give travelogue a 'literature form', was one of the most widely travelled scholars of India, spending forty-five years of his life on travels away from his home.
 <p>Morarji Ranchhodji Desai (29 February 1896 - 10 April 1995)</p>	<ul style="list-style-type: none"> ● Morarji Ranchhodji Desai (29 February 1896 - 10 April 1995) <ul style="list-style-type: none"> □ India's first non-Congress Prime Minister. □ He was a social worker, institution builder and a great reformer. □ Contributions <ul style="list-style-type: none"> □ Pre independence <ul style="list-style-type: none"> ✓ Joined Civil Disobedience Movement in 1930, actively participated in the freedom movement. □ Post-independence <ul style="list-style-type: none"> ✓ Prominent opposition leaders to be jailed during the Emergency in 1975. ✓ Made serious efforts to improve relations between India and Pakistan. 	<ul style="list-style-type: none"> ● Bravery and commitment to the cause <ul style="list-style-type: none"> ▶ Being a freedom fighter, she exhibited tremendous courage through her brave acts. ▶ She inspired a large number of people in Uttarakhand to join the freedom movement.









	<ul style="list-style-type: none"> ▫ Awards: Only Indian to receive the highest civilian awards of both Pakistan (Nishan-e-Pakistan) and India (Bharat Ratna). ▫ Values: Strict follower of Mahatma Gandhi's principles, probity in public life. 	
 <p>Bishni Devi Shah (1902-1974)</p>	<ul style="list-style-type: none"> ● Born in Bageshwar, Uttarakhand. ● She is known as the first woman activist of Uttarakhand and the first woman to be jailed during the freedom movement. ● She used to sing the songs of Kumaoni poet Girda in Ratri Jagran. ● She was inspired by mass awakening of Mahatma Gandhi and participated in Individual Satyagraha in 1940-41. ● In the Quit India Movement in 1942, she made the British government realize the role of the agitating woman. ● She promoted the idea of Swadeshi and khadi. ● Personal values: Patriotism, bravery, swadeshi. 	<ul style="list-style-type: none"> ● Bravery and commitment to the cause <ul style="list-style-type: none"> ▶ Being a freedom fighter, she exhibited tremendous courage through her brave acts. ▶ She inspired a large number of people in Uttarakhand to join the freedom movement.
 <p>Subhadra Kumari Chauhan (16 August 1904– 15 February 1948)</p>	<ul style="list-style-type: none"> ● She joined Mahatma Gandhi's Non-Cooperation Movement against the British. ● A trailblazing writer whose work rose to national prominence during a male-dominated era of literature. ● Her poem, Jhansi ki Rani, is regarded as one of the most recited poems in Hindi literature. ● She wrote in the Khariboli dialect of Hindi. ● Her poems also depicted the hardships and challenges faced by Indian women during the freedom movement of India. 	<ul style="list-style-type: none"> ● Patriotism and Zeal <ul style="list-style-type: none"> ▶ Through her prolific writing, she inspired the generations on the theme of patriotism and nation building. Her poems are considered to have played significant role in creating awareness about freedom struggles. ▶ She demonstrated utmost dedication by participating in various freedom struggle movements.
 <p>Durgawati Devi (1907-1999)</p>	<ul style="list-style-type: none"> ● Also known as 'The Agni of India'. ● She had tremendous influence on revolutionaries such as Bhagat Singh, Ashafaqullah and Chandra Shekhar Azad, and on members of the Hindustan Socialist Republican Association (HSRA). ● She was an active member of Naujawan Bharat Sabha, and assisted in the escape of Bhagat Singh from Lahore after the Saunders killing (1928). ● She established a school for poor children in Lucknow in 1935. ● For her anti-British campaigning, she was arrested and imprisoned for three years. ● Personal values: Freedom fighter; Indian revolutionary 	<ul style="list-style-type: none"> ● Fearlessness and Sacrifice <ul style="list-style-type: none"> ▶ She revolted against the British Government and challenged the social taboos and prejudices. ▶ She even risked her life for the sake of the other revolutionaries and become successful in averting the Britishers plan to trap Bhagat Singh.
 <p>Sucheta Kripalani (1908-1974)</p>	<ul style="list-style-type: none"> ● She was India's first woman Chief Minister (of United Provinces). ● She was married to freedom fighter Acharya Kripalani. ● Values: committed to the Gandhian ideology, patriotism, Independence, fearless in mind and spirit. ● Significant contribution/achievements <ul style="list-style-type: none"> ▫ Founded the women's wing of the Congress in 1940. ▫ Actively participated in independence movement in the 1940s (including Quit India movement). ▫ Was elected to the Constituent Assembly. ▫ In 1949, she was a delegate to the United Nations General Assembly and led the Indian delegation to the International Labour Organisation in 1961. ▫ She authored Sucheta: An Unfinished Autobiography. 	<ul style="list-style-type: none"> ● Patriotic and Indomitable spirit <ul style="list-style-type: none"> ▶ As a fearless fighter, she actively participated in freedom movement ▶ She throughout her life, advocated for greater participation for women in politics
 <p>Mina Swaminathan</p>	<ul style="list-style-type: none"> ● Mina Swaminathan, an educationist, died due to old age. ● She was the wife of agricultural scientist M. S. Swaminathan. ● She was emeritus trustee of M S Swaminathan Research Foundation. ● Contributions: <ul style="list-style-type: none"> ▫ Chaired the committee that recommended the Integrated Child Care Development Scheme (ICDS) in Tamil Nadu. ▫ One of the founders of the mobile creches. ▫ Founding member of Centre for Women's Development Studies. ▫ An international consultant with UNESCO and UNICEF on early childhood care and education. ● Values: Social welfare, gender equality etc. 	<ul style="list-style-type: none"> ● Social Justice and Vision <ul style="list-style-type: none"> ▶ A fiery advocate and practitioner, she devoted with passion and conviction, five long decades to childcare and education and gender equality. ▶ She chaired the committee that took a bold and powerful vision to propose setting up anganwadis across the country.

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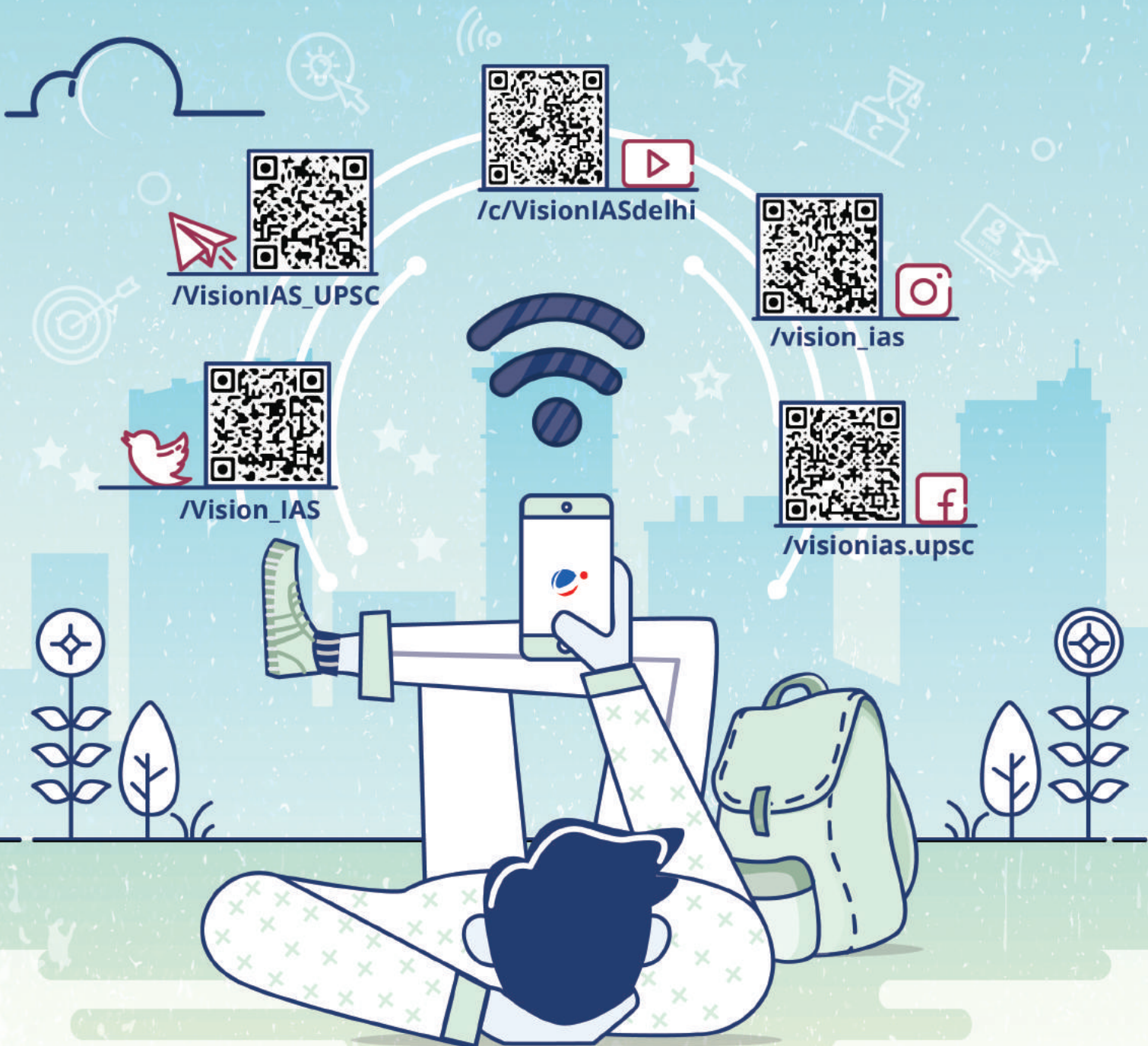
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