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Quarterly

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MARCH 2024 TO
MAY 2024



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-Aristotle

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POLITY



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1.1. INDIAN CONSTITUTION, PROVISIONS AND BASIC STRUCTURE

1.1.1. Uniform Civil Code (UCC)



CONTEXT

Recently, President of India has approved Uniform Civil Code (UCC) Uttarakhand Bill, 2024.

- ▶ **Uttarakhand became first State** to pass law on UCC.

ANALYSIS



Arguments for UCC

- ▶ **Constitutional Mandate** under Directive Principles of state policy (Article 44).
- ▶ **Uphold the principles of a secular state**, where religious beliefs do not dictate civil matters
- ▶ **Promote common citizenship and fosters National Unity** by transcending religious and community divisions.
- ▶ **Ensures Gender Justice** by eliminating discriminatory practices in personal laws, promoting gender equality and women's rights.
- ▶ **Simplifies Legal Procedures** associated with marriage, divorce, inheritance, succession etc.
- ▶ **Enable incorporation of modern principles** and ensure that laws align with evolving social landscape, promoting inclusivity and individual freedoms.

Arguments against UCC

- ▶ **Undermine cultural and religious identities** and infringe upon right to religious freedom guaranteed under Article 25.
- ▶ **Lacks consensus among communities** may lead to social unrest and resistance.
- ▶ **Disrupt principles of cooperative federalism** as several experts argued that UCC could encroach upon states' legislative competence.

Way forward

- ▶ **Government should seek Consensus** from all stakeholders, including religious leaders and community representatives to address concerns.
- ▶ **Ensure Political Will** to implement UCC in non-partisan and inclusive manner.
- ▶ **Piecemeal approach**, like marriage age amendment, can foster internal reform within religious frameworks.
- ▶ **Review existing personal laws** to align UCC with principles of justice, equality, and non-discrimination, ensuring fairness for all.

BRIEF BACKGROUND

About UCC

- ▶ UCC provides for formulation of **one law for entire country, which would apply to all religious communities** in their personal matters like marriage, divorce, inheritance, adoption, and succession.
 - ▶ Goa is the only state where **a form of common civil code is in practice**, Portuguese Civil Code 1867.
- ▶ **Personal Laws in India:**
 - ▶ **HSA 1956** governs Hindus, Sikhs, Jains and Buddhists.
 - ▶ **Muslim Personal Law** governs Muslims.
 - ▶ **Indian Succession Act 1925** applies to Christians, Parsis, and Jews.
 - ▶ **SMA** provides for solemnization of interfaith marriage as well as registration by a Marriage Officer.



Important Judgements and committees recommending UCC

- ▶ **Shah Bano Case (1985):** SC Highlighted need for UCC, especially in maintenance matters.
- ▶ **Sarla Mudgal Case (1995):** SC urged UCC for gender equality among religions.
- ▶ **Paulo Coutinho vs Maria Luiza Valentina Pereira (2019):** SC highlights need for uniform laws for consistency.
- ▶ **Law Commission (2018):** No UCC needed now, amends existing laws.

1.1.2. Citizenship (Amendment) Rules, 2024



CONTEXT

Ministry of Home Affairs has amended **Citizenship Rules, 2009** and notified **Citizenship (Amendment) Rules, 2024** to enforce **Citizenship Amendment Act (CAA), 2019**.



Read From Essential Material

Chapter 6th, 'Political Theory' of class XI NCERT

ANALYSIS



Key highlights of Citizenship (Amendment) Rules, 2024

Eligibility	<ul style="list-style-type: none"> ▶ To apply for citizenship by registration/naturalization one must be: <ul style="list-style-type: none"> ➤ Person of Indian origin ➤ Married to an Indian citizen ➤ A minor child of an Indian citizen ➤ A person whose parents are registered as an Indian citizen ➤ Person or either of his parents was a citizen of Independent India ➤ registered as an Overseas Citizen of India Cardholder
Other Qualifications for citizenship by naturalization	<ul style="list-style-type: none"> ▶ Applicant will have to present an affidavit verifying correctness of the statements made in the application and an affidavit by an Indian citizen to testify the character of the applicant. ▶ Applicant must have adequate knowledge of one of the languages listed in 8th Schedule of Indian Constitution.
Proof of nationality	<ul style="list-style-type: none"> ▶ Rules relaxed the requirement of documents to prove the country of origin. Applicants now can provide 20 different documents as proof of entry into India, including visas, residential permits, census slips, driving licenses, Aadhaar cards etc.
Renouncing citizenship of another country	<ul style="list-style-type: none"> ▶ Applicant shall have a declaration saying the citizenship of his country shall stand renounced irrevocably if the application for Indian citizenship is approved.
Authority to which application may be made	<ul style="list-style-type: none"> ▶ Under Section 6B of the Citizenship Act, 1955, an application shall be submitted in electronic form to the Empowered Committee (EC) through the District Level Committee as may be notified by the Central Government.

Need of CAA 2019 and Rules

- ▶ **Human Rights Perspective:** Act upholds **principles of human rights by providing relief to persecuted individuals** and safeguarding their rights to life and liberty.
- ▶ **Strengthening National Security:** Act is aimed at **differentiating between illegal immigrants and persecuted minorities**.
- ▶ **Relief for Partition Victims:** Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians face religious persecution in Pakistan, Afghanistan, and Bangladesh due to state religion provisions.

Concern Raised

- ▶ **Classification of countries:** Migrants from neighbouring countries like Sri Lanka (Buddhism is state religion) and Myanmar (primacy to Buddhism) are not included.
- ▶ **Basis of migration:** There is no test stipulated under CAA Rules, 2024 to prove or scrutinize if applicant was compelled to enter India because they faced persecution.
- ▶ **Constitutional Challenges:** Exclusion of Muslims, Jews and Atheists from CAA is said to be **a violation of Article 14 and principle of secularism**.

- ▶ **Classification based on date of entry:** CAA offers differential treatment to migrants based on their date of entry into India, i.e., whether they entered India before or after December 31, 2014.
- ▶ **Implication on external relations:** Religious persecution of non-minority in Bangladesh is one of the reasons for amendment, potentially leading to tensions with Bangladesh.

Conclusion

While Constitutional Amendment Act aims to address concerns of persecuted minorities, it is imperative to address the raised concerns to ensure a comprehensive and inclusive approach.

BRIEF BACKGROUND

CAA, 2019

- ▶ Give citizenship to target group of migrants even if they do not have valid travel documents as mandated in **Citizenship Act, 1955**.
- ▶ Amendment provides that **illegal migrants who fulfil four conditions will not be treated as illegal migrants under Act**. Conditions are:
 - they are **Hindus, Sikhs, Buddhists, Jains, Parsis or Christians**.
 - they are from **Afghanistan, Bangladesh or Pakistan** they entered India on or before **December 31, 2014**.
 - they are **not in certain tribal areas** of Assam, Meghalaya, Mizoram, or Tripura included in **Sixth Schedule**, or
 - areas under **"Inner Line" permit**, i.e., Arunachal Pradesh, Mizoram, and Nagaland.
- ▶ **Period of naturalisation has been reduced from 11 to 5 years** for above category of migrants.

1.1.3. Other Backward Classes (OBCs) List



CONTEXT

National Commission for Backward Classes (NCBC) is reviewing state list of OBCs using powers granted under the 102nd Constitutional Amendment Act.

- ▶ NCBC has noted **presence of ineligible communities in the OBC lists** of States like Karnataka and West Bengal.
- ▶ Moreover, NCBC is also planning to review OBC lists in Kerala, Odisha, Bihar, Maharashtra, and other states to ensure maximum OBC reservation within the 50% limit.

ANALYSIS



About OBCs and OBCs list

- ▶ **Definition:** There is no standard definition of OBC in the **Indian Constitution**. **Socially and Educationally backward Classes (SEBCs)** are commonly known as **other backward classes (OBCs)**.
- ▶ **OBCs list:** Currently, for each state, there are **two OBC lists one** at the central level (for benefits by the Central Government initiatives) and another **at the state level** (for benefits by the State government initiatives).
 - **Central List:** **Article 342A (1)** of the Constitution **authorized the President** (in consultation of the governor of the state) **to specify the Central list of the OBCs**, in relation to a particular **State or Union Territory**.
 - ◊ Further, **any modification to the central list of the OBCs can be done only by the Parliament**.
 - **State List:** **Article 342A (3)** empowers every State or UT to prepare and maintain for its own purposes, a list of SEBC entries which may be different from the Central List.
- ▶ **Reservations for OBCs:** **Articles 15 and 16** enable reservation for OBCs in admission to educational institutions, and in public employment.

BRIEF BACKGROUND

About NCBC






- ▶ **Constitutional Body:** NCBC was granted **Constitutional Status** under **Article 338B** (inserted through 102nd Constitutional Amendment Act, 2018).
 - Article 338 B mandates Union and every State Government to consult the NCBC **on all major policy matters affecting the rights of OBCs**.
- ▶ **Composition:** Includes a Chairperson, Vice-Chairperson, and three other members **appointed by the President**. Their **service conditions is also determined by the President**.
- ▶ **Power:** Commission has all the powers of a civil court.

- In 1990, Centre implemented 27% reservation for OBCs in Central Educational Institutions and Central Government services as recommended by the Mandal Commission.
- Such reservation for OBC was upheld by the Supreme Court in **Indra Sawhney Vs. Union of India 1992** subject to exclusion of the "Creamy Layer" (different groups based on income and parental rank).

Commissions constituted for the upliftment of OBCs

- ▶ Under Article 340, President, may by order appoint to investigate the conditions of SEBCs and to make recommendations as to the steps that should be taken by the Union or any State to remove such difficulties and to improve their condition.
- ▶ The President had constituted **Kalelkar Commission in 1953, and Mandal Commission in 1979** to investigate the conditions of OBCs.
 - The recommendations of Kalelkar Commission was never implemented.
- ▶ In 2017, the President appointed a **Justice Rohini Commission**, headed by Justice G. Rohini to examine the sub-categorisation of OBC caste groups to ensure more equitable distribution of reservation benefits among OBCs in India.
 - The Commission submitted its report in 2023 but it is yet to be implemented.

Duties of NCBC

-  Investigate and monitor safeguards for backward classes
-  Inquire into specific complaints regarding deprivation of rights of the backward classes
-  Advise on socioeconomic development of the OBC and also evaluate their progress
-  Such other functions in relation to advancement of the OBCs as the President may by rule specify
-  Annually present reports to the President on safeguard implementation and make recommendations

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1.2. ISSUES AND CHALLENGES PERTAINING TO THE FEDERAL STRUCTURE

1.2.1. Fiscal Federalism



CONTEXT

Recently, some states have moved Supreme Court against Centre for disputes over sharing of financial resources by Central Government.



Read From Essential Material

Chapter 2nd, Democratic Politics-II' of class X NCERT

ANALYSIS



Issues between Centre-State Financial Relations

- ▶ **Borrowing limits on states:** Restricted by Centre to equivalent of 3% of Gross State Domestic Product (GSDP) for 2023-24 (recommendations of 15th Finance commission).
- ▶ **Vertical fiscal imbalance:** Power to raise taxes rests with Union government (like income tax, taxing foreign transactions, etc.) while post-GST, state governments may only tax consumption of goods and services (SGST).
- ▶ **Burden of developmental expenditure:** As a proportion of GDP, combined developmental expenditures by all State governments increased from 8.8% in 2004-05 to 12.5% in 2021-22.
- ▶ **Intergovernmental fiscal transfers:** Over the years, share of Union Finance Commission tax transfers has declined for a few States.
- ▶ **Non-sharing of cess revenue with states:** Major cess and surcharge collections rose by 133% from 2017-18 to 2022-23, accounting for 25% of total taxes but excluded from state distribution.
- ▶ **Decline in grants-in-aid:** Grants to states decreased from Rs.1,95,000 crore in 2015-16 to Rs.1,65,000 crore in 2023-24.
- ▶ **Increasing share in centrally sponsored schemes:** States finance a higher proportion of expenditure under these schemes, despite having no role in their design.

Way Forward

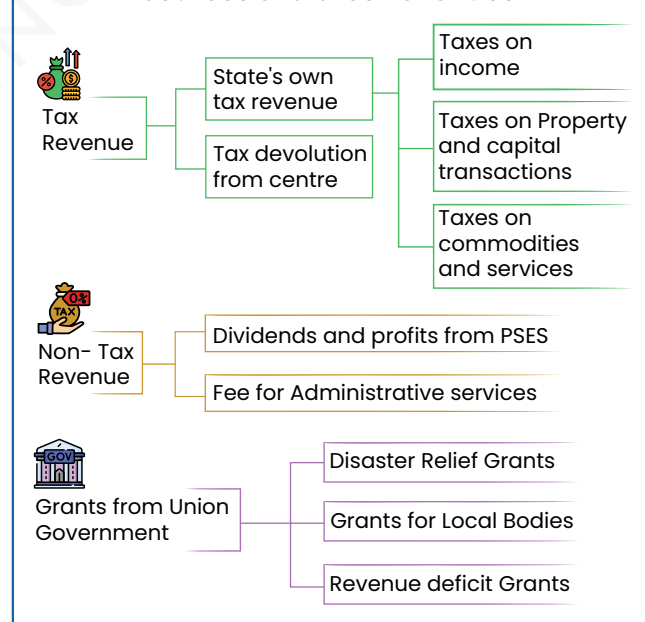
- ▶ **Role of 16th FC:** There needs to be a negotiation with 16th FC for specific-purpose transfers to tackle State-specific issues like demographic transition, inward and outward migration and climate change crisis.
- ▶ **Reviewing Off-budget borrowings** practices of Union and States.

BRIEF BACKGROUND

About Fiscal Federalism

- ▶ It refers to how federal, state, and local governments share funding and administrative responsibilities within India's federal system.
- ▶ It is often associated with three broad principles i.e. Fiscal Equivalency, Decentralization theorem, and Principle of Subsidiarity.

Sources of States Revenues



Constitutional Provisions defining India's Fiscal Federalism Arrangement

- ▶ **Seventh Schedule:** Tax Bases Delineated in Union and State Lists (Article 246)
- ▶ **Distribution of Revenue:**
 - ▶ **Article 269:** Taxes levied and collected by Centre, assigned to states.

- ▶ **Addressing horizontal imbalance:** Recognising that each state requires a certain minimum fiscal resource value regardless of population, rich states should also be guaranteed a minimum share in tax devolution.
 - ▶ Vice-versa, a **ceiling should be defined for poor states also.**
- ▶ **Major principles that should guide fiscal federalism in India include:**
 - ▶ Centre and states should be **financially autonomous.**
 - ▶ Both should have enough funds for legitimate expenses.
 - ▶ Receipts should grow with expenditure needs.

- ▶ **Article 269-A:** GST in inter-state trade.
- ▶ **Article 270:** Taxes distributed between Union and states per Finance Commission.
- ▶ **Grants-in-Aid:** To states by Centre as per **Article 275.**
- ▶ **Borrowings:**
 - ▶ **Union** can borrow domestically or internationally (Article 292).
 - ▶ **State** can only borrow domestically (Article 293).
- ▶ **Finance Commission** constituted to **adjudicate sharing of resources** between Union and States (Article 280).

1.2.2. Sixth Schedule



CONTEXT

The people of Ladakh are protesting for Ladakh to be recognized as a tribal area under the Sixth Schedule.

ANALYSIS



Benefits Ladakh will get if included in Sixth Schedule

- ▶ **Address Local Issues:** Specific to Ladakh like environmental protection, tourism management, and sustainable development practices.
- ▶ **Safeguard Tradition:** Cultural heritage and traditional customs would be recognized and legally protected.
- ▶ **Resource Management:** ADCs would have greater control over mineral resources within their jurisdiction, allowing them to manage them more effectively.
- ▶ **Local Employment:** Increased reservation in government jobs and educational institutions for people of Ladakh.
- ▶ **Safeguard land and forest rights:** Protect tribal communities (Balti, Beda, Drokpa etc) land and forest rights to prevent alienation.

Issues in awarding Sixth Schedule Status to Ladakh

- ▶ **Financial Viability:** Establishing and running ADCs requires significant financial resources.
- ▶ **Inter-Community Dynamics:** Balancing interests of Buddhist majority in Leh and Muslim majority in Kargil within framework of Sixth Schedule.
- ▶ **National Security Considerations:** Ladakh's sensitive border location raises concerns that increased autonomy might complicate coordination with central government on security matters.

Conclusion

Initiating a dialogue involving Ladakhi representatives, political leaders, and central government is crucial. The key lies in finding a solution that respects Ladakh's unique identity and aspirations while considering broader national framework. Open communication and a willingness to explore alternatives are essential for achieving a positive outcome.

BRIEF BACKGROUND

Provisions of the Sixth schedule

- ▶ Empowers Governor to create **Autonomous District Councils (ADCs)** and **Autonomous Regional Councils (ARCs)** in four states (Assam, Meghalaya, Tripura, and Mizoram).
- ▶ Conferred certain executive, Legislative and Judicial powers to ADCs and ARCs.

Fifth and Sixth Schedule		
Feature	Fifth Schedule	Sixth Schedule
 Applicability	Applies to certain tribal areas in any states of India. (Currently in 10 states)	Applies to the tribal areas in the four northeastern states of India.
 Administration	Tribes Advisory Councils (TAC)	District Councils or Regional Councils
 Administrative power	TAC being the creation of the Legislative Assembly of the States has limited powers which are mostly executive.	Extensive powers, including executive, legislative and judicial powers, all derived from the Constitution.
 Emphasizes	More on protection of tribal rights	More on self-governance
 PESA Act 1996	Applicable	Not applicable

1.3. ELECTIONS IN INDIA

1.3.1. One Nation, One Election (ONOE)



CONTEXT

Recently, Cabinet has accepted recommendations of High-Level Committee on ONOE/Simultaneous Elections under chairmanship of former President Shri Ram Nath Kovind.

ANALYSIS



Need for Simultaneous Elections:

- ▶ **Enhance Administrative efficiency:** By reducing frequent deployment of teachers, security personnel etc. in State and local elections.
- ▶ **Focus on development programs:** As frequent imposition of MCC halt development programs in poll-bound areas/State.
- ▶ **Cost savings:** For instance, Central government's total expenditure on 2024 general elections is over Rs 5000 crore.
- ▶ **Enhanced Voter Turnout:** For instance, in 1999, simultaneous elections in Karnataka, Maharashtra, and Andhra Pradesh held along with national elections led to 11.5% surge in voter turnout.

BRIEF BACKGROUND

Simultaneous Election

- ▶ **Simultaneous Election** aimed to **synchronize Lok Sabha, State Assemblies elections, Municipalities and Panchayats** such that voters in a particular constituency vote on same day.
- ▶ It **does not mean that voting across the country for all elections needs to happen on a single day.**



Committees recommended for simultaneous elections

- ▶ **Law Commission of India** (170th Report of 1999, 255th Report of 2015, Draft Report 2018)
- ▶ **National Commission to Review the Working of the Constitution, 2002**
- ▶ **Parliamentary Standing Committee Report in 2015**
- ▶ Working Paper of **NITI AAYOG** in 2017.

Issues with simultaneous election and recommendation given by Committee

Issues	Committee observations/recommendations
Legal challenges to amend Constitution to synchronise election	<ul style="list-style-type: none"> ▶ Two steps to manage this challenge: <ul style="list-style-type: none"> ➤ Firstly, hold simultaneous elections for Lok Sabha and State Legislative Assemblies. For this, <ul style="list-style-type: none"> ◊ Constitutional Amendment Bill will be introduced amending Article 83 (Duration of Houses of Parliament), and Article 172 (Duration of State Legislatures), and insertion of Article 82A will be made. ➤ Secondly, within 100 days of the Sabha and State Legislative Assemblies elections, synchronize the elections for Municipalities and Panchayats. For this purpose, another Constitutional Amendment Bill will be introduced in which, <ul style="list-style-type: none"> ◊ Article 324A will be insert (to synchronise elections of Municipalities and Panchayats) and amendment to Article 325 (to enable Single Electoral Roll and Single Elector's Photo Identity Card).
Issue of hung Parliament/Assembly and premature dissolution	<ul style="list-style-type: none"> ▶ Committee proposes fresh elections for House of the People, serving only unexpired term of the preceding full term. Similarly, for State Legislative Assemblies, new elections shall last until the House of the People's full term ends.
Altering state elections would violate rights of the states	<ul style="list-style-type: none"> ▶ Report counters the concern by mentioning Articles 327 (empowers Parliament to make provisions with respect to Parliament and state elections).

<p>Synchronisation of elections to the House of the People and State Legislative Assemblies</p>	<ul style="list-style-type: none"> ▶ President of India issue a notification on the date of first sitting of House of the People after a General election, designating it as the appointed date for synchronization of elections. ▶ An Implementation Group should be constituted to oversee the execution of recommendations.
<p>Related to logistics and manpower, including EVMs, VVPATs</p>	<ul style="list-style-type: none"> ▶ ECI draw up a plan for making logistical arrangements. ▶ Commission can estimate in advance for procurement of equipment, such as EVMs and VVPATs, deployment of polling personnel and securities forces, and make other necessary arrangements.

Conclusion

'High-Level Committee' reflects a serious consideration of synchronizing elections in India. Addressing the challenges through transparent and inclusive dialogue with stakeholders, including legal experts, state governments is crucial to ensure a comprehensive and inclusive approach to 'One Nation, One Election'.

1.3.2. Municipal Elections

CONTEXT

Supreme Court invalidated and annulled the outcome of mayoral elections held for Chandigarh Municipal Corporation.



Read From Essential Material

Chapter 8th, 'Indian Constitution at Work' of class XI NCERT

ANALYSIS



Need for fair and timely Municipal Elections

- ▶ **'First-mile' Connect:** India has 87,000+ councilors (an elected representative of a ward) across its 4,700+ cities, representing an average of over 4,300 citizens in each ward.
- ▶ **Tackle grassroots level issues:** It includes environmental sustainability, primary healthcare, gender equality and jobs and livelihoods.
- ▶ **Efficient utilization of funds:** Utilization of fund allocated by Fifteenth Commission (allocated Rs. 26,000 crores) for municipalities towards primary healthcare.

Challenges in Municipal Elections

- ▶ **Untimely elections:** Despite SC-specific direction in *Suresh Mahajan v. State of Madhya Pradesh (2022)* State governments do not hold timely elections for urban local governments.
 - Over 1,500 municipalities did not have elected councils in place from 2015 to 2021 across States.
- ▶ **Delay in Council Formation:** In Karnataka, there was a delay of 12-24 months in formation of elected councils after declaration of election results in most of the 11 city corporations.
- ▶ **Delimitation and reservation:** Power of delimitation of wards rests with State government, thus any delay in delimitation process, further delays council elections.

BRIEF BACKGROUND

Urban Local Bodies

- ▶ A Municipal Corporation has three authorities: the Council, the Standing Committee, and the Commissioner.
 - The Council, comprising councilors, is the deliberative and legislative wing of the Corporation that is headed by a mayor. He is assisted by a Deputy Mayor.
 - ◊ Though the Mayor is an ornamental figure, he is recognised as the first citizen of the city.
 - The standing Committees were created to facilitate the working of the Council which is too large in size.
 - The Municipal Commissioner is responsible for the implementation of the decisions taken by the Council and its Standing Committees.
- ▶ Indian cities largely follow the 'commissioner as chief executive' (CACE) model as opposed to the directly elected executive mayor' (DEEM) model:
 - **DEEM Model:** It's a strong mayor model where a mayor has extensive executive power.
 - **CACE model:** It's a weak mayor model where the executive power lies in the hands of the commissioner (An Indian Administrative Service officer).

- ▶ **Inconsistent Mayoral terms:** In India, 17% of cities including five of the eight largest ones have mayoral terms less than five years.
- ▶ **SECs lack power:** As they depend on state governments to complete the delimitation of ward boundaries and to notify reservations for women as well as marginalized communities.
- ▶ **Low voter turnout for municipal elections** than parliamentary and state assembly elections. For Example, 2020 Delhi assembly saw a 62.59% turnout, 11.85% more than local council elections.

Way forward

- ▶ **Empowering SECs:** Strengthening SECs by giving them significant role in **elections of mayors, deputy mayors and standing committees** can help ensure timely, free, and fair municipal elections.
- ▶ **Power of delimitation:** Must be vested in SECs or an independent Delimitation Commission in each State for conducting the delimitation and reservation process.
- ▶ **Single electoral roll:** Single electoral roll for all three tiers of Government as suggested by High-level Committee on Simultaneous Elections will reduce redundancy and duplication across multiple agencies.

About Municipal Elections

- ▶ Elections for **Municipal Corporations** are held as per **Municipal Corporation Act** framed by legislature of respective state government, whereas elections for Municipalities and Town Panchayats are held as per respective Municipal Act.



Constitutional provisions related to Civil Services

- ▶ **Composition of Municipalities (Art 243R):** All seats in a Municipality shall be filled by persons chosen **by direct election** from territorial constituencies in Municipal area.
- ▶ **Reservation of seats (Art 243T):** Seats are reserved for weaker sections, SC/ST, Women, and other groups as per respective municipal Acts.
- ▶ **Duration of Municipalities (Art 243U):** **5 years** from date appointed for its first meeting.
- ▶ **State Election Commission (Art 243ZA):** Superintendence, direction and control of preparation of electoral rolls for, and conduct of, all elections to Municipalities shall be vested in SEC.

1.3.3. EVM-VVPAT

CONTEXT

In **Association for Democratic Reforms vs Election Commission of India and Another (2024)**, Supreme Court dismissed requests for full cross-verification of Electronic Voting Machines (EVMs) data with Voter Verifiable Paper Audit Trail (VVPAT) records.



Read From Essential Material

Chapter 3rd, 'Democratic Politics-I' of class IX NCERT

ANALYSIS



Key highlights of Judgment

- ▶ **Verification of VVPAT:** Court **acknowledged fundamental right** of voters to ensure their vote is accurately recorded and counted.
 - ▶ However, it clarified that **this does not equate to right to count all VVPAT slips** or to physically access these slips.
- ▶ **Return to paper ballot:** Court **refused to return to paper ballot** referring to **checks and protocols** to ensure and ascertain legitimacy and integrity of EVMs and election process.
- ▶ **Direction to enhance public confidence in EVM-VVPAT:** Court issued following two directions:
 - ▶ **Strengthening of Symbol Loading Unit (SLU) protocol:** On completion of symbol loading process in VVPAT, **SLU shall be sealed and secured in containers** which shall be signed by candidates or their representatives.

BRIEF BACKGROUND

About EVM-VVPAT

- ▶ EVM is a **portable microcontroller-based instrument** designed to modernize Election process.
 - ▶ It is manufactured and supplied to ECI by **Bharat Electronics Limited** (under Ministry of Defense) and **Electronic Corporation of India Limited** (under Department of Atomic Energy).
- ▶ It consists of **3-units**
 - ▶ **Ballot unit:** Functions like a keyboard with 16 buttons/key.
 - ▶ **Control unit:** Also called as master unit, remains with polling/presiding officer.
 - ▶ **VVPAT:** Allows voters to **verify that their votes are cast as intended**.
- ▶ VVPATs were fully deployed in **2019 Lok Sabha General Elections**.

- ◇ Sealed containers shall be kept in strong rooms along with EVMs at least for period of 45 days post declaration of results.

Advantages of EVM-VVPAT

- ▶ It runs on battery and does not require any external power supply.
- ▶ Negating a scenario of an invalid vote akin to an invalid paper ballot.
- ▶ It does not permit more than 4 votes per minute, thereby deterring booth capturing.
- ▶ After pressing 'CLOSE' button on control unit, there is no possibility of voting.
- ▶ By pressing 'TOTAL' button on control unit at any time, total number of votes polled up to time of pressing button is displayed, without indicating the candidate-wise result of votes.
- ▶ It is not possible to pre-program EVM in a spurious manner.

Conclusion

To strengthen democracy, it is crucial to foster trust and collaboration among citizens, elected representatives, and electoral machinery, ensuring the value and respect of all citizens' voices.

1.3.4. Mass Media and Election



CONTEXT

Taking the note of misuse of social media, (a type of mass media) by political parties during election campaign the ECI issued guidelines for ethical use of Social Media Platforms (SMPs).

- ▶ ECI directed parties to not to publish content that is false, misleading, or derogatory, especially towards women; not use SMPs to carry any content which use children in any political campaigning, etc.
- ▶ It also mandated Political parties to remove any violating content within three hours of notification and warn responsible members etc.

ANALYSIS



Role of Mass Media in Election Process

- ▶ Emphasizing Election importance including informed voting, voter choice, fostering electoral trust and participation.
- ▶ Dissemination of Information via Doordrshan channel etc. (National and state parties get a minimum of 10 and 30 hours of telecasting time respectively)
- ▶ Influencing Voter Behavior by reducing apathy, and instills sense of civic duty by emphasizing importance of Right to Vote.
- ▶ Shaping Public Image (positive or negative) of Candidates by Newspaper, magazine coverage, and broadcasts.
- ▶ Highlights policy gaps and conveys public expectations to politicians, fostering two-way policy discussions.

Challenges posed by mass media to election process

- ▶ Threat to Sovereignty of country: For example, during 2016 US presidential elections, Russia allegedly used social media to manipulate the outcome.
- ▶ Misinformation and manipulated content: AI-generated deepfakes complicate issue, making it hard to distinguish real information from fake, disrupting election integrity.
- ▶ Create online Echo Chambers: Algorithms reinforce existing biases and limit exposure to diverse viewpoints. For instance, Facebook's failure to address platform abuse in Sri Lanka reportedly fueled widespread violence in 2018.

BRIEF BACKGROUND

About Mass Media

- ▶ It refers to diverse communication channels that transmit information and entertainment content to a large audience.
- ▶ It includes print media (Newspapers, Magazines), electronic media (Radio, Television, Films), and digital media (Internet, social media).
- ▶ Also termed Fourth Estate of democratic country, other three pillars being: Legislature or Parliament; Executive; and Judiciary.
- ▶ Fundamental right of 'Freedom of Speech and Expression' granted to Citizens under Article 19(1) (a) is available to press.

Existing Regulatory Framework for Social Media

- ▶ Information Technology Act, 2000 governs all areas of electronic communication, including social media.
- ▶ IT (Intermediary Guidelines and Digital Media Ethics Code) Regulations, 2021 for ensuring accountability of social media and other intermediaries.

- ▶ **Compromising Model Code of Conduct:** Lack of effective regulation on SMPs makes it challenging to enforce the code of conduct for parties and candidates.
- ▶ **Privacy Concerns and threat to voter's objective opinion:** In 2018, several Indian political parties allegedly hired **Cambridge Analytica**, a data mining and analytics business.

Way ahead for mitigating the adverse impact of Mass Media on Indian elections

- ▶ **Follow advisories of Press Council of India:** To give objective reports about elections and candidates, observe all directions of ECI, Chief Electoral Officer etc.
- ▶ **Effective Implementation of Voluntary Code of Ethics for General Elections 2019:** To promote responsible behaviour on social media platforms.
- ▶ **Strengthen links between civil society groups and internet platforms:** To facilitate timely raising of concerns and consideration of findings by platforms.
- ▶ **Strengthen Data Protection Framework:** To ensure that voter data is protected and used responsibly to maintain the integrity of electoral process.

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1.4. GOVERNANCE

1.4.1. Role of Civil Servants in Governance

CONTEXT



Recently, on occasion of Civil Services Day, Prime Minister highlighted that civil servants play a pivotal role in furthering governance and public welfare.



Read From Essential Material

Chapter 4th, 'Indian Constitution at Work' of class XI NCERT

ANALYSIS



Role of Civil Servants in Governance

- ▶ **Continuity of governance:** Being part of permanent executive Civil servants even when elected governments change.
- ▶ **Interface between government and people:** Act as main channel for communicating people's needs to government and implementing government policies on ground.
- ▶ **Policy formulation:** They provide necessary inputs, identify policy areas, analyse alternatives, solutions to societal issues etc. and advice to ministers.
- ▶ **Cementing Indian democracy:**
 - ▶ **Free and fair elections:** ECI ensures free and fair elections, with reforms introduced by former CEC T.N. Seshan aimed at reducing money and muscle influence.
 - ▶ **Participative democracy:** Example, in 1976, A.M. Gokhale introduced Village Development Board in Nagaland for decentralised grassroots planning and development.
 - ▶ **Inclusive democracy:** played critical role in giving voice to voiceless. For example, in 2020, the Balangir district administration launched 'Sweekruti' to integrate the transgender community into mainstream activities.
- ▶ **Growth and development:**
 - ▶ **Enforcing law and order:** addressing social tensions, conflicts and thus create social unity and harmony.
 - ▶ **Overcoming resource constraints:** For example,
- ▶ **Career Diplomats:** Represent their country in international forums and play an important role in negotiating agreements, promoting national interest, protecting friendly relations with other countries, etc.
- ▶ **Quasi- Judicial role:** Serve on tribunals, like Telecom Disputes Settlement and Appellate Tribunal, Cyber Appellate Tribunal etc.

BRIEF BACKGROUND

About Civil Services

- ▶ Concept of a merit based modern Civil Service in India was introduced in 1854 following Lord Macaulay's Report.
- ▶ **Post-independence:** Civil Services, after Independence, have been categorised into three types:
 - ▶ **All India Services** (common to both Centre & States): recruited and trained by Central Government, but, for work, they are assigned to different States.
 - ▶ **Central Services** (for purely Central subjects) and
 - ▶ **State Services** (for administration of subjects under State jurisdiction).

Constitutional provisions related to Civil Services



Article 310: person in defence or civil service of the Union holds office during the **pleasure of the President**, and every **member of the civil service in the States** holds office during the **pleasure of the Governor**.



Article 311: Provisions related to dismissal, removal or reduction in rank of a member of a civil service.



Article 312: Provides for establishment of **All India Services**.

Challenges associated with the functioning of civil services

- ▶ **Autonomy:** Frequent transfer, political pressure and interference, and need for approval from higher authorities, etc. compromises autonomy of civil servants.
- ▶ **Infrastructure:** Many Indian cities, particularly rural areas, **lack proper infrastructure and resources**, impacting effective implementation of government programs and service delivery.
- ▶ **Red-tapism:** Complex bureaucratic procedures, hierarchical system in civil services, make decision process time-consuming, **slowing down the progress** and make it difficult to implement change in society.
- ▶ **Security:** Civil servants and their family members are often exposed to **risk of violence, and threats from criminals or extremists**.
 - ▶ For example, Death threats to IAS officer, **Tukaram Mundhe** for raiding illegal bars.

Conclusion

Civil servants' transparency, efficiency, and integrity contribute to inclusive development and good governance. Government efforts enhance efficiency, but restructuring civil services is necessary for 21st-century citizen needs.

Initiatives taken to improve the functioning of Civil Servants

- ▶ **National Programme for Civil Services Capacity Building- Mission Karmayogi:** Aims to transform the capacity building apparatus at individual, institutional and process levels.
- ▶ **Integrated Government Online Training (iGOT) - Karmayogi platform** is a comprehensive online platform that guides individual civil service officials in their capacity-building journey.
- ▶ **National Standards for Civil Service Training Institutions (NSCSTI):** Developed by Capacity Building Commission for elevating quality and capacity of training delivery of Central Training Institutes (CTIs).
- ▶ **Aarambh (2019):** First ever common foundation course for civil servants training.
- ▶ **National Training Policy:** To develop professional, impartial and efficient civil servants that are responsible to needs of citizens.
- ▶ **Prime Minister's Awards for Excellence in Public Administration.**

1.4.2. Temple Regulation in India

CONTEXT

Karnataka Legislative Assembly passed **Karnataka Hindu Religious Institutions and Charitable Endowments (Amendment) Bill, 2024** to regulate temples in state.

ANALYSIS

Argument for State control of Temple

- ▶ **Social Reforms:** State regulation has challenged hereditary priesthood, ensuring more inclusive and non-discriminatory practices in public temples.
- ▶ **Representation of Marginalized Sections: Example:** Tamil Nadu HR&CE Act mandates SC/ST representation in temple Board of Trustees.
- ▶ **Efficient Temple Management:** Charitable Endowment Act ensures proper administration and preservation of temple assets, ensuring endowments are used for their **intended purposes**.
- ▶ **Community Welfare:** State oversight can ensure that temple funds are used for community welfare activities, benefiting the local populace.

Argument in against for State control of Temple

- ▶ **Violation of principle of Secularism:** Violates secular spirit of Indian Constitution and basic rights guaranteed under it.

BRIEF BACKGROUND

Legal and Institutional Framework to Regulate Temples

- ▶ **Article 25 (1)** gives freedom of religion and **25 (2)** talks about areas where State may intervene and make laws or regulate religious institutions.
- ▶ **Article 26** provides for freedom to manage **religious affairs** of citizens.
- ▶ **Entry 28** of List III of Schedule VII.
- ▶ **Hindu Religious and Charitable Endowments (HR&CE):** Several states across country enacted legislative and regulatory frameworks to regulate these institutions through powers accorded by Constitution.
- ▶ **Hindu Religious Endowments Commission (1960):** Commission declared that government control over temples was essential to prevent maladministration.

Judicial Pronouncement related to Temple

- ▶ **Kerala's Padmanabhaswamy Temple Case (2020):** SC granted the erstwhile Travancore royal family the shebaitship rights (right to manage

- ▶ **Erosion of Operational Autonomy:** For example, in Chidambaram Case (2014), SC permitted Dikshitar (priest community) to manage temple, emphasizing need to preserve traditional autonomy.
- ▶ **Erosion of Cultural Capital:** Intervention through conservation efforts have led to damage and demolition of historically significant temple structures, as highlighted by **UNESCO fact-finding mission** in 2017 submitted to Madras HC.
- ▶ **Loss of Tourist Potential:** Diversion of temple funds into other activities by state may leave little for investment in temple infrastructure.
- ▶ **Tribals and Indigenous Communities:** State control might not be sensitive to unique customs and traditions of tribal communities associated with their places of worship.

a temple) for the properties belonging to Sri Padmanabhaswamy temple in Kerala.

- ▶ **Seshammal & others versus State of Tamil Nadu (1972):** SC held that the appointment of an Archaka to a temple would be a secular function, and only the performance of religious service by those priests would be an integral part of the religion.

Way Forward

- ▶ **Clear separation of religious and administrative domain.**
- ▶ **Inter Temples Network Structure:** Temples should be categorized by size and organized using a hub-and-spoke model, where larger temples support smaller ones.
- ▶ **Good governance principles:** State-level **Temple Administration Board** (having state officials) assisted by **Temple Management Committee** and **Temple Level Trusts** (having priests, locals etc.) can be constituted to administer different functions.
 - ▶ **Hindu Religious and Charitable Endowment Act, 1991** also provides for a Temples Administration Board.
- ▶ **Special Purpose Vehicle: Temple Development and Promotion Corporation** can be formed to undertake development work of all temples **relating to tourism, networking of temples, promoting research and publication, etc.**
- ▶ **Following Best Practices:** Concept of **Devaswom** (property of God) in Kerala is an interesting model to keep check on corruption.

1.4.3. The Cinematograph (Certification) Rules, 2024



CONTEXT

Under **Cinematograph (Amendment) Act, 2023**, Ministry of Information and Broadcasting (Mol&B), has notified **Cinematograph (Certification) Rules, 2024**, replacing Cinematograph (Certification) Rules, 1983.

ANALYSIS



Key Aspects in Cinematograph (Certification) Rules, 2024

- ▶ **Terms of office:** A member of Board shall hold office during pleasure of Central Government.
- ▶ **Representation of women:** It stipulates that 1/3rd of members in Board shall be women and preferably half shall be women.
- ▶ **Improved efficiency:** By reducing timelines for processing of film certification and adopting complete digital processes for eliminating all transactional time.
- ▶ **Provision for priority screening:** in case of any urgency felt by filmmaker(s) due to their prior commitments to release the film, encouraged 'Ease of Doing Business'.
- ▶ **Change of Category of Film for Television:** Recertification of edited film for Television broadcast, as **only Unrestricted Public Exhibition category** films can be shown on television.
- ▶ **Perpetual validity of certificates:** Removal of restriction on validity of certificate for 10 years.

BRIEF BACKGROUND

Film Certification in India

- ▶ Central Board of Film Certification (**Statutory body** under **Mol&B**) **regulate public exhibition of films** under provisions of Cinematograph Act, 1952.
- ▶ Board of Film Certification shall ensure that film is judged in its entirety **from point of view of its overall impact.**

Judicial Pronouncement related to Cinematograph

- ▶ **S. Rangarajan Etc. vs P. Jagjivan Ram (1989):** SC observed if film is unobjectionable and cannot constitutionally be restricted under Article 19(2), freedom of expression cannot be suppressed on account of threat of demonstration and processions or threats of violence.

Issues with Film Certification in India

- ▶ **Over-the-top (OTT) platforms:** Film certification does not regulate content on OTT platforms.
- ▶ **Censorship and Content Restrictions:** Excessive censorship could potentially hinder artistic freedom and creative expression.
- ▶ **Delays:** There are concerns about CBFC's capacity to handle volume of films submitted for certification in timely and efficient manner.
- ▶ **Fails to tackle online piracy:** It falls short in addressing complexities of online piracy, leaving loopholes like mirroring servers.
 - It does not address instances of film piracy that originate in foreign countries.
- ▶ **Legal Challenges:** Certification process has been challenged in court multiple times.
 - Recently a petition was filed demanding the revocation of certificate for movie 'Adipurush' for allegedly hurting religious sentiments.

Conclusion

While streamlined processes and diverse representation in revamped Cinematograph (Certification) Rules, 2024 are positive steps, concerns linger over censorship, content control etc. Striking right balance between creative freedom and societal responsibility remains the true test ahead.

Categories of Film Certification	
Category	Certified Audience
U	Universal and without restrictions
UA category into three age-based categories: Seven years (UA7+) Thirteen years (UA 13+) Sixteen years (UA 16+) , instead of twelve years.	Without restrictions, but subject to guidance of parents or guardians.
A	Only for adults
S	Only to members of any profession or class of persons.

1.4.4. Internet Shutdowns

CONTEXT

As per an 'Access Now' report, India witnessed 116 shutdowns in 2023, the highest number of shutdowns in world for the sixth consecutive year.

ANALYSIS

Provisions for Internet Shutdown

- ▶ Currently, suspension of telecom services (including internet shutdowns) is governed by **Temporary Suspension of Telecom Services (Public Emergency or Public Safety) Rules, 2017**, notified under Indian Telegraph Act, 1885.
 - It provides for a temporary shutdown of telecom services in a region on grounds of public emergency (up to 15 days at once).
- ▶ Orders of temporary suspension are to be issued by Union/State home secretary only.
 - Under 2017 Rules, a **three-member Review Committee headed by Cabinet Secretary** at central level and **Chief Secretary at state level**, reviews telecom/internet shutdown orders.

Reasons for Internet Shutdown

- ▶ **National Security:** For example, internet shutdown in Kashmir to ensure national security and promote safety of citizens.

BRIEF BACKGROUND

Internet shutdown

- ▶ An intentional disruption of internet communications for specific population or within a location for any duration of time, often to exert control over the flow of information.

SC Judgement in Anuradha Bhasin vs. Union of India and Ors. 2020

- ▶ SC held that **freedom of speech and expression** through medium of internet is an **integral part of Article 19(1)(a)** and accordingly, any restriction on same must be in accordance with Article 19(2).
- ▶ **In relation to internet shutdown, Court had passed following directions**
 - An order suspending internet services indefinitely is impermissible under 2017 Rules. Suspension can be utilised for **temporary duration only**.
 - Any order suspending internet under the Suspension Rules is **subject to judicial review**.

- ▶ **Prevent social Unrest:** For example, Internet services were suspended in **Kolhapur district** of Maharashtra in 2018 during celebrations of **Bhima-Koregaon** battle anniversary.
- ▶ **Preventing Cheating:** For example, in 2021, **internet shutdown** was imposed in Rajasthan to prevent cheating in a teacher eligibility test.
- ▶ **Security and public order:** For example, Internet shutdown across **Manipur** to control ongoing ethnic violence in State.

Impact of Internet Shutdown

- ▶ **Economic loss:** Shutdowns reportedly led to **loss of \$118 million in foreign investment** from Jan- June 2023 alone.
- ▶ **Fundamental rights:** Internet shutdowns **impact access to information, curbing digital freedom and fundamental human rights** such as freedom of speech and expression (Article-19), access to information etc.
- ▶ **Inequality:** Shutdowns disproportionately affect marginalized communities, hindering their access to newer revenue streams and opportunities.
- ▶ **Disaster management:** Loss of communication due to internet shutdown **hinders information dissemination w.r.t. early warning**, evacuation routes, further exacerbating the impact of disasters.
- ▶ **Education and Healthcare:** Shutdowns hinders access to **online services** such as education platforms, healthcare information etc.
- ▶ **Protest and Violence:** Disconnects people from the rest of the world, creating ambiguity and frustration. This can trigger strikes or protests that may become violent.
- ▶ **Human rights abuse:** Shutdowns impedes accountability where attackers utilise the disruption to cover up their offenses such as killing, arson, gender-based violence etc.

Way ahead

- ▶ **Recommendations of Parliamentary Standing Committee:**
 - **Codify defined parameters** that constitute as public emergency and public safety.
 - Putting in place **a mechanism to decide the merit of an internet shutdown.**
 - Lay down a clear **principle of proportionality** (action taken not excessive relative to the desired outcome) and procedure for lifting of shutdown.
 - Department of Telecommunications should formulate a policy to **selectively restrict use of OTT services instead of banning the internet as a whole.**
- ▶ Government should clearly communicate to users any limitations, restrictions, or change to service they may experience and **provide regular updates on status and duration of shutdown.**



1.5. MISCELLANEOUS

1.5.1. National Human Rights Commission (NHRC)



CONTEXT

Recently, United Nations-linked Global Alliance of National Human Rights Institutions (GANHRI) **deferred accreditation of NHRCI (National Human Rights Commission of India) for the second year** in a row.



Read From Essential Material

Chapter 2nd, 'Indian Constitution at Work' of class XI NCERT

ANALYSIS



Issues associated with NHRC

NHRC **cannot consider complaints for human rights violations** which happened more than one year before filing of complaints or issues which are subjudice. This puts limits on its power.

Moreover, GANHRI has pointed out **following issues**:

- ▶ **Lack of diversity:** Only 95 out of 393 staff positions are held by women in leadership positions in NHRCI.
- ▶ **Selection committee for appointing is dominated by ruling party,** curbing dissent of opposition.
- ▶ **Government interference:** PHR Act provides for **recruiting civil servants with rank of Secretary as Secretary General of NHRCI** which may lead to government interference in violation of Paris Principles.
- ▶ **Investigation resources:** NHRC rely on deputed officials for investigation. They may lack accountability due to insufficient oversight mechanisms.
- ▶ **Lack of effective engagement with civil society and human rights defenders.**

Way forward

- ▶ **Independence:** PHR Act should be amended, allowing independent appointment of qualified persons for investigative positions in line with Paris principles.
- ▶ **Investigation:** There is need for an **independent police complaint commission to deal exclusively with human rights issues**, as in UK and South Africa. Also, steps should be taken to **develop the investigation wing of NHRC.**
- ▶ **Effective utilisation of statutory power:** Section 17 of PHR Act empowers NHRC to conduct its investigation if Centre/state government do not respond within stipulated time.
- ▶ **Wider collaboration:** Regular and constructive engagement with all relevant stakeholders like civil society is essential for NHRIs to effectively fulfil their mandates.

BRIEF BACKGROUND

About National Human Rights Commission (NHRC)

- ▶ **Genesis:** It is a statutory body, established under **Protection of Human Rights Act (PHRA), 1993** as amended in 2006 and in 2019.
- ▶ **Appointment:** Chairperson and Members of the Commission are **appointed by the President of India**, on the recommendations of a **committee, headed by the Prime Minister**, consisting of:
 - Speaker of Lok Sabha
 - Minister-in-Charge of Ministry of Home Affairs
 - Leader of Opposition in Lok Sabha and Rajya Sabha
 - Deputy Chairman of Rajya Sabha
- ▶ **Powers of NHRC:** It has all the **powers of a civil court trying a suit under the Code of Civil Procedure, 1908.**

Functions of NHRC



Inquire into human rights violation on its own or on a petition by a victim



Intervene in proceeding involving human right violation pending before a court with approval of such court



Visit any jail or institution under control of State Government to study living condition of inmates



Review law and procedure for protection of human rights



Review factors, including acts of terrorism that inhibit human rights

- ▶ **Other reforms:** Appointment process must ensure composition of NHRC reflects India's diversity, a time limit of one year should be relaxed, etc.

Accreditation of NHRC

- ▶ NHRCI got 'A' status of accreditation first time in 1999. In 2016, NHRCI's accreditation was deferred by a year after which it received an 'A' rating in 2017 by SCA of GANHRI.
- ▶ In 2023, accreditation of NHRCI was deferred. Current accreditation by GANHRI is differed due to lack of diversity in staff and leadership and insufficient action to protect marginalised groups.

1.5.2. Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014



CONTEXT

Recently, enactment of Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act 2014 completed 10 years.

ANALYSIS



Key Provisions of Street Vendors Act, 2014

- ▶ **Defines Street Vendor (SV):** A person engaged in vending of articles, goods, food items or offering services to general public in street, lane, footpath, or by moving from place to place.
- ▶ **Defines vending zones:** Refers to an area/place/location designated as such by local authority for specific use by SVs for street vending and includes footpath, sidewalk, pavement, etc.
- ▶ **Street vending plans (SVPs):** Local authorities must frame SVPs which should cover:
 - identification of vending zones,
 - spatial plans for SVs, and
 - establishing measures for efficient, and cost-effective distribution of goods and services.
- ▶ **Enumerates duties**
 - **Duty of SV:** Adherence to local laws and regulations, payment of vending fees, and compliance with hygiene and safety standards.
 - **Duty of Government:** Appropriate Government may undertake promotional measures of making available credit, insurance and other welfare schemes of social security for SVs.
- ▶ **Town Vending Committees (TVCs):** Headed by Municipal Commissioner or CEO, TVCs must survey all SVs at least once every five years to identify them.

Challenges in implementation of Street Vendors Act, 2014 (as per Parliamentary Standing Committee on Urban Development)

- ▶ **Suboptimal registration of SVs:** Identity cards and Certificate of Vending (CoV) that provide legal rights to SV to conduct their businesses have not been issued to all vendors.

BRIEF BACKGROUND

About street vendors

- ▶ According to government estimates, street-vending accounts for 14% of total (non-agricultural) urban informal employment in country.
- ▶ For poor, Street vending acts as best opportunity for self-employment with lowest capital.
- ▶ **Challenges faced by street vendors:** Financial insecurity due to irregular employment; Poor working conditions like long working hours; Lack of access to basic facilities like sanitation to women etc.



Constitutional Provisions related to Street Vendors

- ▶ **Article 19(1)(g):** Right to practice any profession, or to carry on any occupation, trade or business.
- ▶ **Articles 39 (a):** Citizens, men and women equally, have right to an adequate means of livelihood.
- ▶ **Article 39 (b):** Ownership and control of material resources of community are so distributed as best to sub-serve the common good.



Other Initiatives to safeguard Street Vendors in India

- ▶ PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) Scheme.
- ▶ Support to Urban Street Vendors (SUSV).
- ▶ Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 3.0.

- ▶ **Persistence of vulnerability to eviction:**
 - ▶ TVCs have not been constituted in several states, leaving street vendors vulnerable to eviction.
 - ▶ 60% of a TVC is composed of government-nominated officials. This may overshadow concerns raised by SV representatives.
- ▶ **Lax implementation by States:**
 - ▶ Only 31% of towns in states which have notified a scheme under Act have framed Street vending plans.
 - ▶ Certain states like Assam have notified vending zones without formulating the vending plans.
 - ▶ Only nine states (including Assam, Kerala, and Punjab) have constituted Grievance Redressal Committees.
- ▶ **Exclusionary urbanisation:** Many cities are being developed as smart cities or are formulating master plans without consideration of SVs.

Way forward (Parliamentary Standing Committee on Urban Development Recommendations)

- ▶ **Issuance of SVs Smart card:** with relevant information (like identification and details of vending certificate), which may be more durable compared to paper-based documents.
- ▶ **Strengthen TVCs:** Expedite constitution of TVCs in all states. Also, ensure that no eviction or relocation should be enforced without consultation with TVCs.
- ▶ **Ensure inclusive urbanisation:** MoHUA shall issue guidelines for:
 - ▶ integrate Act with developmental missions and urban planning processes,
 - ▶ consultation with TVCs while planning projects under smart city mission,
 - ▶ ensure representation of vendor community in Committee formulating master plan of a city.
- ▶ **Enhancing Implementation:**
 - ▶ Constitute monitoring committee to review progress of implementation, and share good practices for implementing Act.
 - ▶ Conduct annual surveys similar to Swachh Survekshan to recognize and incentivize effective implementation by urban local bodies.

Rights of SVs under the Act

- Right to Conduct Business:** Every SV has the **right to carry out vending activities** as specified in their Certificate of Vending (CoV).
- Prevention from harassment:** SVs holding a valid CoV and complying with its conditions cannot be prevented from vending by anyone.
- Relocation or eviction:** SVs cannot be relocated or evicted from their designated areas without a **30-day prior notice**.
- Reclaiming of goods:** Confiscated good of an SV must be released by the local authority either on same day (perish- able goods) or within two **working days** (non-perishable goods) after the SV claims them.



1.6. TEST YOUR LEARNING

MCQs

Q.1 Consider the following statements with reference to National Commission for Backward Classes (NCBC)

1. NCBC is a Constitutional body under Article 338B which is inserted through 102nd Constitutional Amendment Act, 2018.
2. NCBC has all the powers of a civil court.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.2 Consider the following statements with regard to Sixth Schedule

1. It empowers Governor to create Autonomous District Councils and Autonomous Regional Councils.
2. It applies to the tribal areas in Assam, Meghalaya, Tripura, and Mizoram.
3. PESA Act 1996 is applicable in Sixth Schedule.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Q.3 Consider the following

1. High-Level Committee under chairmanship of former President Shri Ram Nath Kovind
2. National Commission to Review the Working of the Constitution, 2002
3. Dinesh Goswami Committee
4. Law Commission of India

How many of the above recommended for simultaneous elections?

- a) Only one
- b) Only two
- c) Only three
- d) All of the above

Q.4 Consider the following statements regarding the National Human Rights Commission (NHRC)

1. It is a statutory body and established under Protection of Human Rights Act, 1993.
2. Its chairperson and members are appointed on the recommendations of a committee, headed by the President of India.
3. It has all the powers of a civil court.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Q. 5 Consider the following statements with regard to Film Certification in India

1. Central Board of Film Certification regulate public exhibition of films under provisions of Cinematograph Act, 1952.
2. Board of Film Certification shall ensure that film is judged in its entirety from point of view of its overall impact.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Questions

1. Discuss the role of civil servants in governance in India. Also, explain the challenges hampering their effectiveness in fulfilling their duties. (150 Words)
2. Discuss the reasons behind internet shutdowns and their socio-economic impacts. What measures can be implemented to mitigate these challenges? (250 words)

ESSAY

ENRICHMENT PROGRAMME 2025

19 OCT, 5 PM

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INTERNATIONAL RELATIONS



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2.1. BILATERAL RELATIONS

2.1.1. India-Bhutan Relations



CONTEXT

During his visit to Bhutan, the Prime Minister of India was conferred the "Order of the Druk Gyalpo", the highest civilian honor in Bhutan. Indian PM is the first foreign leader to be given this prestigious award.

ANALYSIS



Areas of Cooperation between India and Bhutan

- ▶ **Diplomacy:** Relationship based on the Treaty of Friendship and Cooperation signed in 1949, which was renewed in 2007.
- ▶ **Trade:**
 - ▶ India is Bhutan's top trade partner (balance of trade in India's favour); FTA signed in 2016.
 - ▶ India is the leading source of investments in Bhutan.
- ▶ **Development Partnership:** India committed to stand for 'Brand Bhutan' and 'Bhutan Believe'.
- ▶ **Connectivity:** Bhutan is planning to build an international city- Gelephu Mindfulness City- that will connect its border with Assam.
- ▶ **Hydropower:** India constructed four major hydroelectric projects in Bhutan which are supplying electricity to India- Kurichhu, Tala, Chukha and Mangdechhu.
- ▶ **Cultural Relations:** Buddhism connects both countries.
- ▶ **Security:** The Indian Military Training Team (MTRAT) is permanently based in western Bhutan; India's Border Road Organisation (BRO) has built the majority of roads in Bhutan under project 'DANTAK'.
- ▶ **New initiatives of Cooperation:** Launch of RuPay, and BHIM app; join development of 'India-Bhutan SAT', etc.

Importance of Bhutan for India

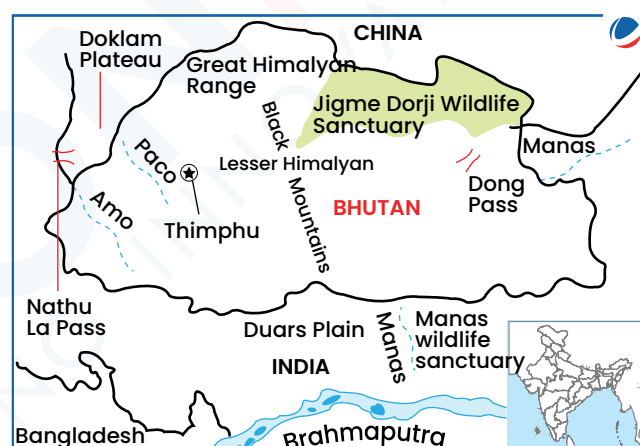
- ▶ **Geostrategic importance:** Bhutan's strategic location, sharing borders with both China and India, makes it essential to India's national security.
- ▶ **Economic significance:** Bhutan has an abundance of hydropower resources to meet India's energy requirements.
- ▶ **Environmental cooperation:** Both nations can work together on conservation, disaster management, and climate change adaptation because of their shared Himalayan ecosystem.
- ▶ **Regional Integration** within SAARC and BIMSTEC.

Major Challenges in India-Bhutan Relationship

- ▶ **Issues in hydropower trade:** India not able to fairly negotiate power tariff delay in completion of projects.
- ▶ **Hideout for militants:** India's North-East Militant E.g., ULFA, National Democratic Front of Bodos (NDFB), etc.
- ▶ **Bangladesh-Bhutan-India-Nepal Motor Vehicle Agreement** is on hold by Bhutan due to environmental concerns.

BRIEF BACKGROUND

About the country- Bhutan (Capital: Thimpu)



- ▶ **Political Features:**
 - ▶ **Landlocked country** between India and China in Eastern Himalayas.
 - ▶ Shares an **open border of 699 kms** with four Indian states (Assam, Arunachal Pradesh, West Bengal and Sikkim).
- ▶ **Geographical Features:** All the rivers flow southward and join the Brahmaputra River in India.
- ▶ **Other Key Facts:**
 - ▶ Bhutan is the world's first carbon negative country
 - ▶ Bhutan is best known for its philosophy of promoting Gross National Happiness (GNH) over GDP.

- ▶ **Increased financial burden on Bhutan** as India shifted from 60% grant, 40% loan to 30:70 model.

Way Forward

- ▶ **Diversifying economic engagements:** Strengthening collaboration in fields such as fintech, space tech, etc.
- ▶ **Initiating Trilogue with China:** It can minimize uncertainties with regard to border disputes.
- ▶ **Improving people-to-people ties:** Soft power diplomacy can be induced through Buddhism.
- ▶ **Security measures:** Establish contact points and mechanisms for real time sharing of information.

2.1.2. India-Bhutan-China Triangle



CONTEXT

The Triangle reflects the complex geopolitical dynamics as a result of India's close ties with Bhutan, China's rising influence in Bhutan, Bhutan's border disputes with China, and the broader India-China rivalry.

ANALYSIS



Implications of increasing China's role in Bhutan for India

- ▶ **Threat to India's security interests:** Bhutan-China negotiated Doklam border deal, which will have Security implications for India, due to its close proximity to Siliguri Corridor.
- ▶ **Geopolitical Implications:** China's increased presence in Bhutan could upset the regional geopolitical balance.
 - In 2017, a military standoff occurred between the Indian Army and the Chinese People's Liberation Army in the Doklam tri-junction.
- ▶ **Erosion of India's Influence:** Close ties with China can impact traditional pro-India foreign policy of Bhutan.

BRIEF BACKGROUND

China's rising influence in Bhutan

- ▶ **Economic influence:** China accounts for more than a quarter of Bhutan's trade. China is involved in several infrastructure projects in Bhutan. E.g., Chukha and Punatshangchu hydropower project.
- ▶ **China's territorial assertiveness:** On territories of Jakarlung and Pasamlung in north Bhutan and the Doklam plateau in west Bhutan highlights Bhutan's vulnerability to external pressures.
 - In 2020, China began claiming 650 sq. km of the Sakteng Wildlife Sanctuary in Bhutan's eastern district of Trashigang.
- ▶ **Political maneuvering:** The first ever visit of Bhutan's Foreign Minister to China (2023); a cooperation agreement for boundary delimitation and demarcation was signed, indicating a step towards normalizing relations.

2.1.3. India and Indonesia Relations



CONTEXT

In 2024, India and Indonesia commemorated 75 years of the establishment of diplomatic relations.

ANALYSIS



Significance of India-Indonesia bilateral relations for both countries

- ▶ **Maritime security in the IOR:** Samudra Shakti (Navy), and (IND-INDO CORPAT)
- ▶ **Synergy in the vision for the Indo-pacific region:** India's Act East Policy and IPOI and Indonesia's Global Maritime Fulcrum vision.

BRIEF BACKGROUND

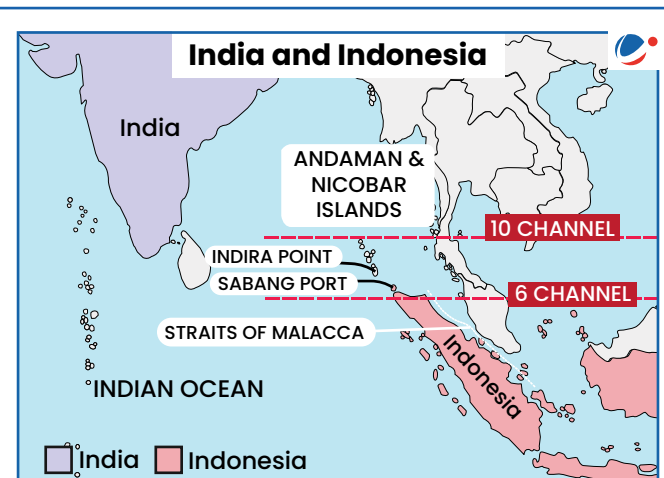
Political Features

- ▶ It's located off the coast of mainland Southeast Asia in the Indian and Pacific oceans.
- ▶ **Boundaries:** Malaysia (northern part of Borneo) Papua New Guinea (centre of New Guinea).
- ▶ **Indira Point in Andaman and Nicobar Island and Banda Aceh in Indonesia,** just 80 nautical miles apart.

- ▶ **Strategic partnership:** Established in 2005, later elevated to a **New Comprehensive Strategic Partnership** in 2018.
- ▶ **Cooperation in multilateral forums:** Both nations cooperate on matters like maritime security, digital transformation, etc.
- ▶ **Sharing of best practices:** India–Indonesia Economic and Financial Dialogue (EFD Dialogue) was launched in July 2023 to provide a distinctive platform for mutual learning and policy coordination.
- ▶ **Expanding military-to-military engagements:** E.g., **INS Sindhukesari** docked in **Jakarta**, as part of **military-to-military engagements**, for the first time in February 2023 for operational turnaround.
- ▶ **Shared history and Cultural values**
 - ▶ Both countries were instrumental in establishment of the **Non-Aligned Movement (1961)**.
 - ▶ Stories from great epics of **Ramayana** and **Mahabharata** form source of Indonesian folk art.

Challenges in the relationship

- ▶ **Trade Imbalance:** The balance of trade favors Indonesia due to India's large imports of palm oil and coal.
- ▶ **Unrealized trade potential:** Bilateral trade potential is US\$ 61 billion, 33% higher than current trade.
- ▶ **Dominance of China:** Indonesia has accepted substantial Chinese investment under the **Belt and Road**.
- ▶ **Regulatory and procedural Challenges:** **Joint production and defense supplies have failed.**
- ▶ **Lack of connectivity:** Limited direct air connectivity and visa issues hinders greater people-to-people interactions.



Geographical Features:

- ▶ Almost **3/4th** of Indonesia's area is embraced by **Sumatra, Kalimantan, and western New Guinea**.
- ▶ Located in **Ring of Fire** volcanic belt and holding about 40% of the world's geothermal reserves.
- ▶ **Indonesia** is an archipelago that lies across the **Equator**.
- ▶ **Important volcanoes:** Mt Merapi, Mt Agung, etc.
- ▶ **Important Straits:** Malacca and Sunda straits.

Significance Of Relations

For India

- ▶ **Enhancing India's Defence exports:** Indonesia has expressed interest in the **BrahMos missile and Light Combat Aircraft** among others.
- ▶ **Important trade partner:** Indonesia is **India's largest trade partner in ASEAN region**.
- ▶ **Internationalization of Indian rupee:** MoU signed by RBI and the Bank Indonesia (BI) in 2024.
- ▶ **Enhancing maritime Connectivity:** E.g., **SAGAR initiative**.

For Indonesia

- ▶ **Important export destination:** India is the 2nd largest buyer of coal and crude palm oil from Indonesia.
- ▶ **Humanitarian Assistance:** India launched **Operation Samudra Maitri** to provide humanitarian assistance to Indonesia, post-earthquake and tsunami in 2018.
- ▶ **Development Partnership:** Indonesia is a major recipient of capacity-building platforms like ITEC.

Way Forward



Tourism Diplomacy: India-Indonesia should establish '**RICH**'- Religious, Cultural & History, theme-based **tourism plan** to strengthen the sector and **people to people exchanges**.



Enhancing Trade: Accelerating **CEPA** to address trade and investment barriers.



Enhance strategic Interfaces: Indonesia should consider joining **ISA, CDRI, and Global Biofuels Alliance**.



Substantive Cooperation through Engagement: Both countries shall **utilize regional multilateral forums** such as IORA, IONS, ARF, etc

2.1.4. India Australia Security Partnership



CONTEXT

Australian Government in its National Defense Strategy (NDS) 2024 identified India as 'top-tier security partner' in the Indo-Pacific Region (IPR).

ANALYSIS



Significance of India-Australia Partnership

- ▶ **Shared Strategic Interests:** In maintaining a free, open, and inclusive Indo-Pacific region.
- ▶ **Counterbalancing China:** While not explicitly stated, partnership is widely seen as a counterbalance to China's growing influence in the region.
- ▶ **Addressing non-traditional issues:** E.g., terrorism, piracy, illegal fishing, marine pollution, and climate change more effectively.
- ▶ **Cooperation in new Initiatives:** Australia expressed support for India's Indo-Pacific Oceans Initiative (IPOI).

Divergence in India Australia Security Relations

- ▶ **Geopolitical Divergence:** Australia's alliance with the U.S. and India's strategic autonomy pose challenge to aligning their geopolitical interests completely.
- ▶ **The dynamics of the Indo-Pacific Construct:** India has traditionally seen itself as an Indian Ocean power, while Australia has historically focused more on the Pacific.
- ▶ **Asymmetric Priorities:** Australia views the challenge of China in terms of its politics, society, and economy, as well as regional security. In contrast, India sees China as a direct military threat along its contested border.

Measures to strengthen India Australia Security Relations

- ▶ **Mutual Expansion in Indo-Pacific:** While Australia can facilitate India's involvement in the South Pacific, India needs to work with Australia as a part of CDRI initiative in the Western Indian Ocean Region.
- ▶ **Deepen technological Cooperation:** Unexplored opportunities can be explored like the joint production of armoured vehicles, undersea sensors, radar systems, and various subsystems.
- ▶ **Improve interoperability:** Interoperability in maritime sphere can deepen in terms of maritime domain awareness (MDA), search and rescue operations, and humanitarian assistance and disaster relief.
- ▶ **Implementation of Agreements:** MLSA should be fully implemented to enable routine logistical support, facilitating tri-services exercises, cross-basing, and joint operations.

BRIEF BACKGROUND

Concept of Indo-Pacific:

- ▶ **The Indo-Pacific** is the world's economic and strategic centre of gravity, home to more than half of the world's population, and nearly 2/3rd of the global economy.
- ▶ **India's definition:** It stretches from the Eastern coast of Africa to the islands of the South Pacific.
- ▶ **India's policy includes:** "Inclusiveness", "openness", "ASEAN centrality".



2.1.5. International Maritime Boundary Line and Kacchatheevu Issue



CONTEXT

Sri Lankan fishermen protested against their Indian counterparts for their alleged poaching in the Sri Lankan waters by sailing to the International Maritime Boundary Line (IMBL).

ANALYSIS



- ▶ The problem has three interrelated facets:
 - Disagreements over Kachchatheevu island
 - Poaching by Indian fishermen in Sri Lankan waters
 - And their use of trawlers that causes environmental damage.
- ▶ While Indian fishermen believe they're fishing in their **traditional grounds**, Sri Lanka accuses them of **trespassing into its territorial seas**.
- ▶ Indian fishermen claim that **climate change and depletion of fish stocks** on the Indian side of the IMBL have driven them to sail farther out to sea.

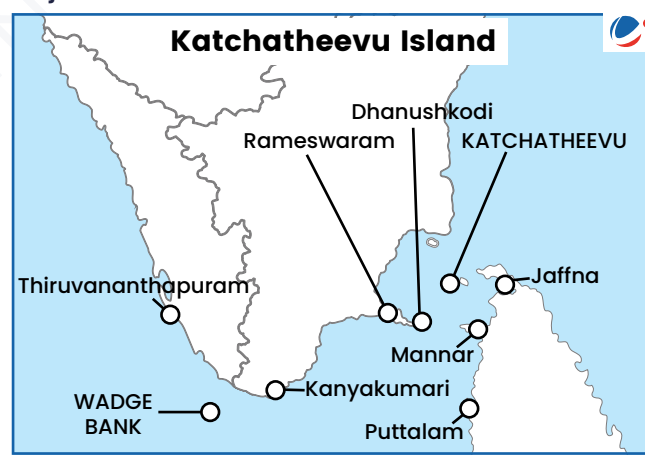
The Kachchatheevu Island Issue

- ▶ **About Kachchatheevu and Wadge Bank**
 - Kachchatheevu is a **285-acre patch** in the sea within the maritime boundary line of Sri Lanka.
 - It is **located to the northeast of Rameswaram** and southwest of Sri Lanka's Delft Island.
 - **Wadge Bank** is **one of the world's richest fishing grounds** and is a much more strategic part of the sea than Kachchatheevu Island.
- ▶ **Article 15 of UNCLOS** allowed exemptions from using the median line to determine maritime boundaries, acknowledging adjustments agreed upon by the contracting nations.
- ▶ **1974 Agreement between India and Sri Lanka** established an adjusted equidistant line under this exemption. As a result, Kachchatheevu Island fell within Sri Lanka's maritime boundaries.
 - Indian fishermen were given access to Kachchatheevu for rest, for drying of nets and for the annual St. Anthony Church festival.
- ▶ **Later, the 1976 agreement between the countries** settled the maritime boundary between by giving sovereign rights to India over **Wadge Bank** near Kanyakumari.
 - **Sri Lankan fishing vessels were prohibited from fishing** in the Wadge Bank, except for a limited number under specific conditions.

BRIEF BACKGROUND

About International Maritime Boundary Line (IMBL)

- ▶ The India-Sri Lanka IMBL was **delineated by the 1974 Maritime boundary agreement** demarcating it in the Palk Strait.
- ▶ It was determined based on principles under United Nations Convention on the Law of the Sea (UNCLOS).
- ▶ According to UNCLOS, Maritime boundaries are often defined by the **equidistance principle**, which asserts that a nation's marine boundary should follow **a medial line equidistant from the coastal areas of two neighboring countries**.
- ▶ This boundary is established to define each country's exclusive economic zones, territorial waters, and other maritime zones, helping to **prevent disputes and conflicts over maritime jurisdiction**.



2.1.6. Indus Water Treaty [IWT]



CONTEXT

India has marked the completion of the Shahpur Kandi Barrage on the Ravi River, stopping the water flow to Pakistan.

ANALYSIS



Issues with the treaty

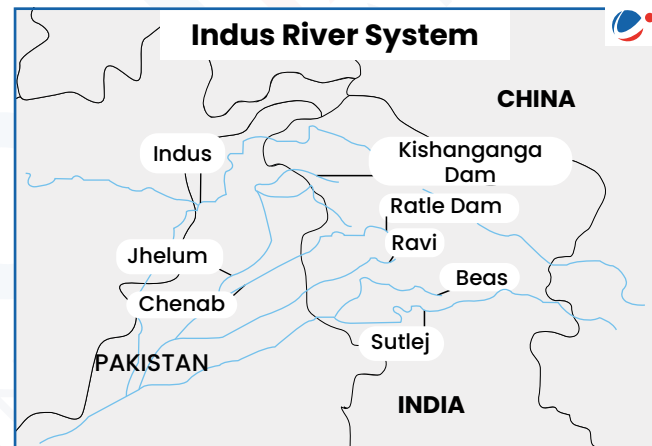
- ▶ **Pakistan's frequent opposition to the Indian projects:** E.g., Pakistan's opposition to Kishanganga Hydroelectric Project (KHEP) on Jhelum River and Ratle Hydroelectric Project on River Chenab.
- ▶ **Limitations of Judicial Recourse:** India seeks resolution of differences through a **neutral expert**, while Pakistan has opted to approach the Permanent Court of Arbitration.
 - PCA unanimously rejected India's concerns in **July 2023**, rendering a **legally binding decision on both sides without an appeal**, although India rejected the verdict.
- ▶ **Strained bilateral relations:** E.g., the biannual talks between the commissioners of the Indus treaty were suspended due to Pakistan's State sponsored terrorism.
- ▶ **Impact of climate change:** That has altered the form, intensity and timing of precipitation and runoff.
- ▶ **Conflict-resolution method through a third-party guarantor:** The World Bank, as a guarantor of IWT, cannot definitely know if illegal intervention really happened or it is only a case of low seasonal flows.
- ▶ **No regular data sharing as planned in the treaty:** It is important to understand the dynamics of river basin.
- ▶ **Technical nature of the Treaty:** Prompting diverse and wide-ranging interpretations.

Way Forward

- ▶ **Revisiting the IWT:**
 - Water experts believe that countries need to **take into account the technological advances**, which were absent at the time of drafting the IWT.
 - **Inclusion of Principles of International Water Law:** Principles of Equitable and Reasonable Utilization (ERU) and No Harm Rule (NHR).
- ▶ **Indus Water Commissioners from both sides should be empowered** to work together and make rational decisions.
- ▶ **Implement adaptive measures**, such as improving water storage and management practices, to ensure the long-term sustainability of the river and its tributaries so as to **address the challenges posed by climate change**.
- ▶ **Promoting open data policy** for promoting transparency and applied scientific research.

BRIEF BACKGROUND

- ▶ India has exclusive rights to the water of the Ravi River under the IWT
- ▶ At present, some of the water of the River Ravi is going waste through the Madhopur Headworks downstream to Pakistan.
- ▶ Now, with the Shahpur Kandi Dam (River Ravi, Pathankot, Punjab) project, India will redirect 1,150 cusecs of water towards J&K, Punjab, and Rajasthan.



About Indus Waters Treaty (IWT)

- ▶ **Genesis:** Signed between India and Pakistan and brokered by the World Bank in 1960.
- ▶ **Objective:** Fixed and delimited the rights concerning the use of the waters of the Indus River system.
- ▶ **Provisions for water usage rights:**
 - India: unrestricted use of **Ravi, Beas, and Sutlej**.
 - Pakistan: **Indus, Jhelum, and Chenab**.
 - ◊ Can be used by India with for irrigation, transport, etc.
- ▶ **Implementation:** Created **Permanent Indus Commission** to maintain a channel for communication; meet at least once every year.

Mechanism for resolving disputes

- ▶ **Step 1:** Permanent Indus Commission-to resolve questions about implementation of the treaty.
- ▶ **Step 2:** Neutral Expert- Appointed by World Bank to deal with unresolved differences on water sharing and involves rendering a binding decision.
- ▶ **Step 3:** Court of Arbitration (CoA)- If a neutral expert fails, the dispute goes to CoA. It is a seven-member arbitral tribunal, determines its own procedures and decisions by majority vote.

2.1.7. India's Act of Balancing Bilateral Relationship



CONTEXT

Recently, United States of America warned of potential sanctions on India as it signed Chabahar port deal with Iran.

ANALYSIS



- ▶ USA fears that India-Iran Chabahar deal may act against trade sanctions imposed by USA.
- ▶ Earlier, there were also apprehensions of sanctions on India as per Countering America's Adversaries through Sanctions Act (CAATSA) for purchase of the S-400 missile defence system from Russia (No such sanctions were imposed).
- ▶ Such events, along with the Russia-Ukraine and Israel-Palestine crises, have tested India's strategies to manage its bilateral relationships with various players in the region as well as the globe.

Issues and challenges India faces with respect to balancing bilateral relations

- ▶ **Accusation of being a "Fence Sitter"**: Not taking stand even when it aspires to a world leader.
- ▶ **Allegations of Financing Wars** in favour of aggressor: E.g., European powers accused India of funding Russia's War by buying cheap Russian crude oil
- ▶ **Emergence of New Axis**: E.g., India's movement towards USA is leading to development of Russia-China Pakistan axis.
- ▶ **Reputational damage**: Maintaining neutrality while balancing its bilateral with conflicting nations can impact India's reputation with said nations.
 - E.g., India did not condemn the USA's withdrawal from the Joint Comprehensive Plan of Action (JCPOA).
- ▶ **Dependence on Imports for energy** as well as defence at times compromises India's stand at global position.
- ▶ **Emergence of Mini-laterals** in the Indo-Pacific, such as QUAD, compromises the ideal vision of global cooperation.

Way forward

- ▶ **Emerge as an alternative**: India is suitably placed to emerge as an alternative to the US and China, and also focus on representing Global South in an increasingly polarized world order.
- ▶ **Strategic Hedging**: E.g. Balancing China involves developing the capacity and linkages to counter China's political and military efforts against India, despite maintaining civil diplomatic ties and trade.
- ▶ **Self-dependency or diversification of risks**: It is especially needed in critical sectors such as defence, energy etc.
- ▶ **Following Internationalist and Multi-aligned foreign policy**: Such policy can be based on issues-based coalition (E.g. BRICS, QUAD, G20, G7, SCO).
- ▶ **Playing leadership role in tackling global challenges**: Related to climate change, connectivity, terrorism, supply chain resilience (E.g. Supply Chain Resilience Initiative, Biopharmaceutical Alliance, Asia-Africa Growth Corridor).

BRIEF BACKGROUND

- ▶ **Strategic autonomy**: Denotes the ability of a state to pursue its national interests and adopt its preferred foreign policy without being constrained in any manner by other states user.
- ▶ **Global South**: Generally, refers to countries described as "developing," "less developed" or "underdeveloped."
 - The concept originated from the Brandt report which distinguished between those countries with comparatively higher GDP per capita.

Strategies Adopted by India in Balancing Bilateral Relationships

- ▶ **Maintenance of Strategic Autonomy**: E.g. India maintains its independent relationship with Russia and the US.
- ▶ **De-hyphenation**: E.g. India's relationship with Israel and Palestine are independent of each other.
- ▶ **Wider diplomatic engagements and outreach**. E.g., Evacuated students (Operation Ganga) during Russia-Ukraine crisis by engaging with neighbouring countries.
- ▶ **Vision of Multi-polarity and Multilateralism**: E.g., India's push for reforms at the UNSC, WTO, etc.
- ▶ **Offering alternative mechanisms** such as Rupee-Rouble trade, Rupee-Rial mechanism enhances India's credibility in balancing its bilateral relationships.
- ▶ **Use of soft power**: E.g. Indians in the USA lobbied for the Indo-US Nuclear Deal.



2.2 REGIONAL AND MULTILATERAL FORUMS

2.2.1. QUAD



CONTEXT

US House of Representatives has passed 'Strengthen US-Australia-India-Japan Cooperation' or Strengthening the Quad Act.

ANALYSIS



Significance of Quad for India

- ▶ **India's active engagement in Indo-Pacific:** As it accounts for 50% of global maritime trade and over 60% of global GDP.
- ▶ **Boost to Act East:** As QUAD serves strategic objectives of strengthening ties with countries in East Asia and Southeast Asia.
- ▶ **Defence engagements:** India's defence ties with Australia, Japan and United States.
- ▶ **Diverse areas of cooperation:** E.g., Australia, India, and Japan have launched supply chain resilience initiative.
- ▶ **Bolstering bilateral cooperation:** Through information sharing agreements, arms exchange agreements, etc.
- ▶ **Economic advantage:** India can be a preferred destination for investment, with supply chain disruptions caused by dependence on China.

Challenges to QUAD

- ▶ **Less institutionalization:** It is neither a security arrangement nor a trade group. This ambiguous nature of QUAD could undermine its credibility and influence.
- ▶ **Seen as cold war mentality:** China has criticized the Quad diplomacy as an attempt to establish an "Asian NATO".
- ▶ **Maintain its unique character:** Difficulty in defining the Quad's purpose as distinct from other regional groupings E.g., ASEAN.
- ▶ **Problem of delivery:** Quad is criticized for its inability to effectively promote its efforts. E.g., it could not deliver promised "800 million COVID-19 vaccine doses".
- ▶ **India's concerns within Quad:**
 - ▶ **Possibility of reactivating tensions with China on different fronts:** Since India shares borders with China, it's imperative for India to ensure that Quad is not reduced to an anti-China grouping.
 - ▶ **India's flexible approach:** India continues to nurture flexible partnerships with countries, including some that are antagonistic toward the Quad, like BRICS and SCO (Shanghai Cooperation Organization).
 - ▶ **Impact on other partners:** India's involvement in Quad could risk alienating other important Indian partners like Russia and Iran.

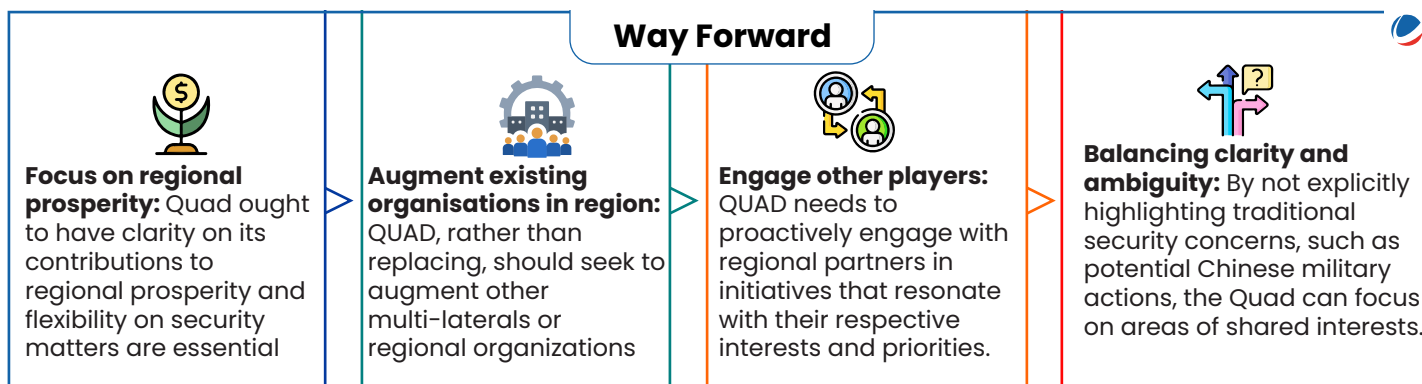
BRIEF BACKGROUND

About Strengthening the Quad Act:

- ▶ **Aims** to strengthen joint cooperation between Quad's four members, to promote a free, open, inclusive, resilient and healthy Indo-Pacific.
- ▶ **It established Quad Intra-Parliamentary Working Group**

About QUAD

- ▶ Quad, formally **Quadrilateral Security Dialogue** is a plurilateral framework comprising **India, Australia, Japan, and the USA.**
- ▶ **Timeline:**
 - ▶ **2007:** Formalized by former Japanese Prime Minister and first Quad meeting took place on the sidelines of the ASEAN Regional Forum.
 - ▶ **2017:** First official talks took place in Philippines on the margins of the East Asia Summit.
- ▶ **Working:** Work of the Quad is done by **six Leader level Working Groups.**
 - ▶ **Climate:** Clean Energy Supply Chains Initiative, Q-CHAMP, etc.
 - ▶ **Critical and Emerging Technologies:** Open RAN in the Pacific, launched QUIN.
 - ▶ **Cyber:** Joint Principles for Secure Software and for Cyber Security of Critical Infrastructure.
 - ▶ **Health:** Comprehensive Health Security Partnership
 - ▶ **Infrastructure:** Quad Partnership for Cable Connectivity and Resilience.
 - ▶ **Space:** exchange Earth observation satellite data.
- ▶ **Other QUAD initiatives:** Quad Partnership on HADR (an India-led initiative); Quad Debt Management Resource Portal, etc.



2.2.2. AUKUS

CONTEXT

AUKUS members are considering cooperation with Japan on advanced capabilities projects.

ANALYSIS

- ▶ **Japan's inclusion in Pillar II** could enhance alliance partnerships as well as potentially rationalize export control and information security regulations among the four countries.

Implications of AUKUS

- ▶ **Strategic implication for Indo-Pacific:** By strengthening the defense capabilities of Australia, AUKUS aims to achieve the vision of free, open, resilient and inclusive Indo-Pacific.
- ▶ **USA's Renewed push in Indo-Pacific:** AUKUS is seen as US's strong commitment to security of Indo-Pacific region.
- ▶ **Re-establish UK's strategic footprint:** AUKUS will renew UK's claim for a long-term role in Indo-Pacific security
- ▶ **Concerns related to AUKUS**
 - AUKUS lacks clarity in its narratives and strategic purpose.
 - China opposes AUKUS, which may trigger regional tensions in Indo-pacific.
 - Australia's intent to acquire nuclear-powered submarines also resulted in a deterioration of Australia's relations with France (which is against nuclear proliferation).

India and AUKUS

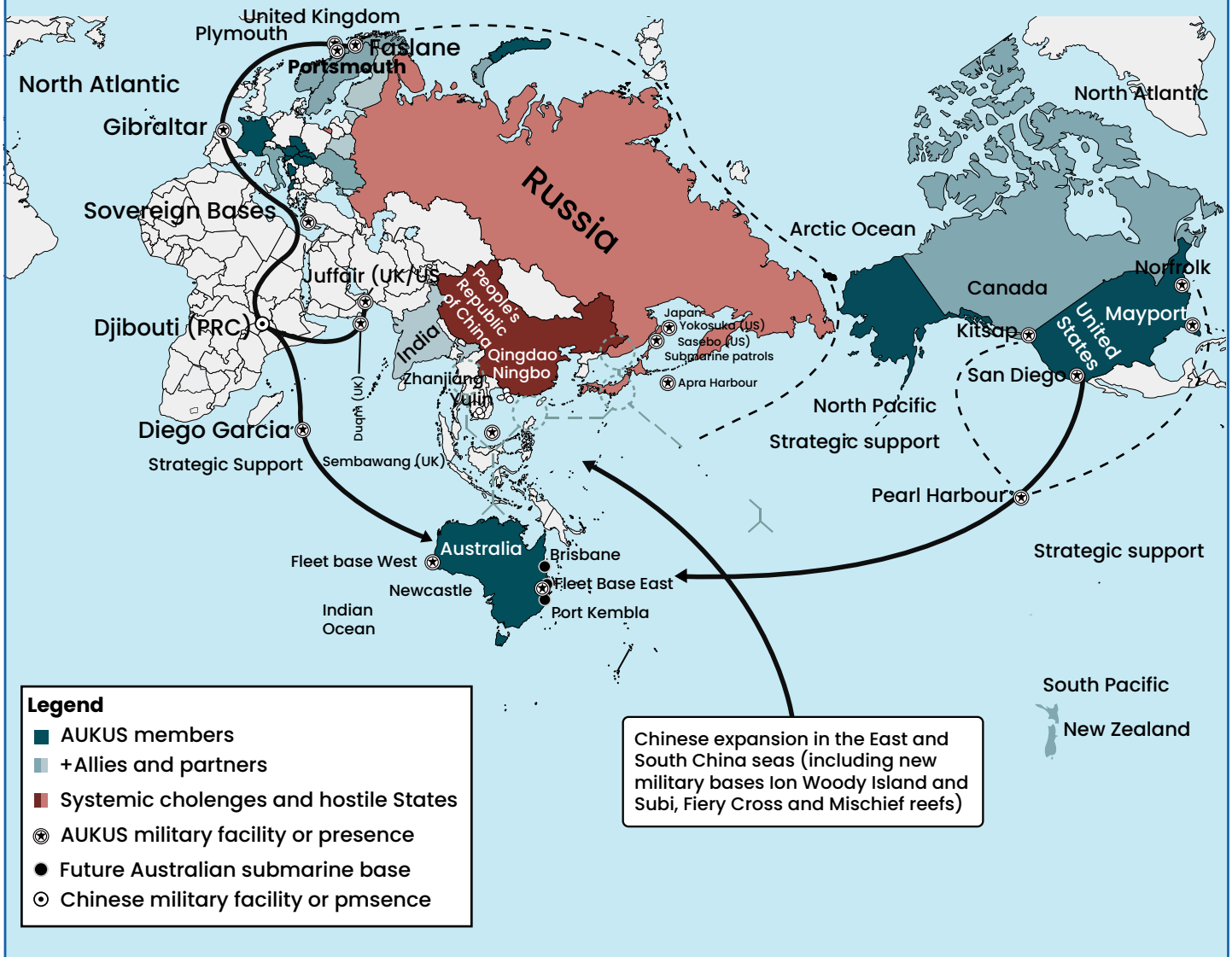
- ▶ **Importance of AUKUS for India:**
 - **Complements the Quad:** AUKUS would strengthen Quad to deal with China as a common threat.
 - **Strategic collaboration with France:** It also provides a window of opportunity for strategic collaboration with France and deepening trust with European nations.
- ▶ **Concerns for India**
 - **Erosion of India's regional influence** in the Eastern Indian Ocean with the crowding of nuclear attack submarines in the future.
 - AUKUS may shift balance of power in Indo-pacific, and may also diminish the value of the Quad.

BRIEF BACKGROUND

About AUKUS

- ▶ **Genesis:** Announced in 2021
- ▶ **Nature:** It is a new three-way strategic defense alliance between **Australia, the UK and US.**
- ▶ **Aim:** To boost defense capabilities, accelerate technological integration, and expand the industrial capacity.
- ▶ AUKUS partnership is composed of **two pillars:**
 - **Pillar I – Conventionally Armed, Nuclear-Powered Submarines**
 - **Pillar II – Advanced Capability Development.**
- ▶ For facilitating sharing of critical technology, a legally binding tripartite agreement known as the Exchange of Naval Nuclear Propulsion Information Agreement (ENNPIA) was signed in 2021.
- ▶ AUKUS is different from Quad: AUKUS prioritizes defense partnership, unlike Quad, which has a broader focus on strategic cooperation in the Indo-Pacific.

The Geopolitics of AUKUS



Current Affairs Quarterly Revision (March to May 2024)



2.2.3. North Atlantic Treaty Organization (NATO)



CONTEXT

Recently, the North Atlantic Treaty Organization (NATO) marked 75 years of its formation and **Sweden** has joined NATO as its **32nd** member.

ANALYSIS



Story of NATO's Expansion in Eastern Europe

- ▶ The Soviet Union responded to NATO by creating its own military alliance in 1955, called the **Warsaw Pact**.
- ▶ **Collapse of the Soviet Union in 1991** led to Warsaw Pact countries became NATO members. E.g., Poland.
- ▶ NATO's **Open-door policy** (Article 10), allows any European country to join.

Implications of East ward expansion of NATO

- ▶ **Creating mistrust between Russia and West:** That threatens to undo decades of security cooperation and tilt Russia towards an anti-Western alliance with China and Iran.
- ▶ Reverse trend of demilitarization in region: New NATO members would need to devote enormous funds to integrate with the Western command structure.
- ▶ **Sharpening existing divisions in Europe:** Between more prosperous North and the less prosperous South, between Eastern Europe and countries of former Soviet Union.
- ▶ Increased Militarization in Europe: E.g., actions in Georgia and ongoing tensions in Ukraine.

Major challenges faced by NATO

- ▶ **Funding Issues:** Majority of NATO members do not meet commitment of 2% of their countries' GDP towards defense.
- ▶ **Right-Wing Nationalism:** Its spread has caused discontent with NATO.
- ▶ **US' commitment to Europe's defense:** Former US President questioned value of the alliance.
- ▶ **Russian Aggression:** NATO's admission of several members since the fall of the Soviet Union, despite verbal assurances to Russia regarding no eastern expansion undermines trust between NATO and Russia, thereby, fuelling aggression.
- ▶ **Rise of China:** Pose a challenge to NATO.

Conclusion

Embracing a comprehensive strategy of innovation, resilience-building, and strategic foresight will be imperative for NATO to navigate complex geopolitical realities and sustain its role as a pillar of international security and stability.

BRIEF BACKGROUND

About NATO

▶ **Established** in 1949 with the North Atlantic Treaty.

▶ **Purpose:** Deter Soviet expansion post-WWII.

Key Facts:

▶ **Headquarters:** Brussels, Belgium

▶ **Nature:** Political and military alliance of 32 countries

▶ **Core principle:** Collective defence (Article 5)

Membership: 12 founding members; Notable additions: Finland (2023); Ukraine applied in 2022.

Functions: Provides transatlantic link between Europe and North America; Facilitates defence cooperation and crisis management

Funding: Contributions from all members based on GNI.

Partnerships:

▶ **Engages with 40+ non-member** countries and organizations

▶ **Programs:** Partnership for Peace, Mediterranean Dialogue, Istanbul Cooperation Initiative

▶ **Collaborates** with UN, EU, and OSCE.

2022 Strategic Concept: Identifies Russia as primary threat; Addresses China's influence; Focuses on emerging challenges (terrorism, cyber threats, maritime security)

Other related terms

▶ **Major Non-NATO Ally (MNNA) status:** Under U.S. law it provides foreign partners with certain benefits in the areas of defense trade and security cooperation. Currently **18 countries** are MNNA.

▶ **NATO plus five:** The countries are- Australia, New Zealand, South Korea, Japan and Israel.



2.2.4. The Commonwealth



CONTEXT

The year 2024 marks 75 years since the creation of the modern Commonwealth, with the signing of the London Declaration.

ANALYSIS



India's relations with the Commonwealth

- ▶ India is the largest member state of the Commonwealth, with nearly 60% of the total population of the association.
- ▶ It is the fourth largest contributor to the Commonwealth.
- ▶ India hosted the Commonwealth Summit (CHOGM) and Commonwealth Games (CWG) in 1983 and 2010 respectively in New Delhi.
- ▶ Commonwealth Sub Window (US\$ 50 Million over 5 years) under the India-UN Development Fund was established in 2018.

Is the Commonwealth relevant in the present times?

- ▶ Arguments in favour:
 - Election Observation Missions: Since 1967, the Commonwealth has sent 140 missions to monitor elections in around 40 countries.
 - Evolving Membership: Newer members indicate the forum's potential for cooperation and dialogue.
 - Advocacy for Sustainable Development Goals (SDGs): Particularly Goal 16 focusing on peace and development.
 - Trade: Bilateral costs for trading partners in Commonwealth countries are on average 21% less than between those in non-member countries.
 - Unity through Shared Experiences: Common bonds, language (English), history, diaspora connect, etc.
- ▶ Arguments against:
 - Critics point out that its very existence is legitimizing colonization.
 - Less relevant in addressing contemporary global issues.
 - Lack of cohesion among members
 - Funding Constraints hampers its effectiveness, with British investment primarily bilateral rather than directed to the Secretariat's programs.

Conclusion

Leveraging the Commonwealth network for mitigating climate Change, enhanced business, trade, and people-to-people connections and is essential for long-term growth and prosperity.

BRIEF BACKGROUND

- ▶ **About:** It is a voluntary association of countries, most of which are formerly British colonies, collaborating on democracy, trade, and climate change.
- ▶ **Genesis:**
 - **The British Commonwealth of Nations:** At the 1926 imperial conference, Britain and the Dominions (semi-independent countries) agreed as equal members of a community within the British Empire.
 - **India's Independence (1947):** India wanted to stay a member of the Commonwealth.
 - **Adoption of London Declaration (1949):** Republics and other countries could be part of the Commonwealth. Henceforth, the Modern Commonwealth of Nations was established.
- ▶ **Current Members: 56 members (including India)**
- ▶ **Working:** Commonwealth Heads of Government (CHOGM) meet every two years (latest being in Rwanda in 2022) to discuss pertinent issues and release a summit communiqué.
- ▶ **Other Key Information**
 - **Commonwealth represents:** 14.5 trillion of global economy; 32% of world population.
 - All members are considered equal, and decisions are made by consensus.
 - **Member countries choose the Head** of the Commonwealth.

Initiatives Major of the Commonwealth



Agreements such as the **1971 Declaration of Commonwealth Principles** and the **1991 Harare Commonwealth Declaration**



Commonwealth charter (2012) sets out **16 core shared principles** such as Rule of Law, etc.



Commonwealth's advocacy and support played a significant role in ending apartheid in South Africa.



Only intergovernmental organisation to have a dedicated youth programme. Commonwealth Youth Programme (CYP).



Commonwealth Cyber Declaration (2018) to support the development of a cyberspace

2.2.5. Global Institutions in the Changing Times



CONTEXT

Major global institutions such as the UN System, WTO, IMF, and World Bank (WB) among others have been under scrutiny for not being able to fulfil their desired objectives.

ANALYSIS



Relevance of the current Global Institutions:

- ▶ **Unparalleled Membership:** UN - 193, IMF - 190 etc. showcases global trust in these institutions.
- ▶ **Guardian of Global Peace:** Since 1948, the UN has helped end several conflicts in Cambodia, Mozambique, etc.
- ▶ **Source and regulator of international law** with institutions like UNHRC and International Court of Justice.
- ▶ **Global Financial Stability:** IMF and World Bank, on several instances have supported countries in their weaker times (including India).
- ▶ **Mapping Global Development:** UN's (SDGs) provide a direction towards collective development.

What are the issues in continuing with current structures?

- ▶ **Lack of Adequate Representation & Inclusiveness:** E.g., India with the largest population and 3rd largest (in PPP terms) economy in the world but has only 2.75% **Special Drawing Rights (SDR)** quota in the IMF.
- ▶ **Growing Bilateral and Multilateral Groupings:** Alternative forums have decreased the overall importance of global institutions. E.g., BRICS countries established the New Development Bank (NDB), as an alternative to World Bank.
- ▶ **Misuse of Veto Power:** Veto powers conferred to permanent UNSC members are often **misused to protect self-interest**. E.g., Russia used it to block resolutions condemning its actions in Ukraine.
- ▶ **Rising Protectionism and Trade Tensions:** The surge in protectionist policies, such as tariffs and trade barriers has disrupted the global trade system and multilateral frameworks like the World Trade Organization (WTO).
 - ▶ The U.S. blocked the appointment of WTO's Appellate Body, effectively crippling WTO.
- ▶ **Inability to handle emerging challenges:** E.g., climate change, cyber-security, data protection etc. The COVID-19 pandemic underscored the **failure of the UN and WHO**.
- ▶ **Backlash Against Globalization:** It is being fueled by **concerns over job losses, income inequality**, which has led to calls for more inward-looking economic policies.

Way Forward

- ▶ **Governance Overhaul:** Bodies like the UN Security Council must be reconstituted. E.g., expanding the permanent membership.
- ▶ **Financing Revamp:** Diversification needed including tapping private capital and emerging donors.
- ▶ **Strengthening Enforcement:** More teeth to global institutions to enforce rules. E.g., empowering UNCLOS.
- ▶ **Embracing Technology:** From monitoring climate change to verifying disarmament or human rights. E.g., the Secretary-General has called for **UN 2.0 to tackle 21st-century challenges**.
- ▶ **Strengthen the global financial system** through robust regulation, supervision, and risk management frameworks to prevent systemic crises.
- ▶ **Diversifying Funding Sources:** Exploring **innovative financing mechanisms**, such as voluntary contributions, international taxes, or public-private partnerships.

BRIEF BACKGROUND

Context of formation of major Global Institutions

- ▶ **United Nations (UN) System:** The UN was formed in 1945 in the background of World War I and II, with a primary agenda to **prevent another global conflict and promote international cooperation**.
- ▶ **World Bank and International Monetary Fund (IMF):** Both formed in 1944 at the Bretton Woods Conference, to support economic reconstruction and development in the aftermath of WW II.
 - ▶ The WB promotes **long-term economic development and poverty reduction**.
 - ▶ IMF aims to establish a **new international monetary and financial system**.
- ▶ **World Trade Organization (WTO):** WTO was formed in 1995 in the background of gradual liberalization of international trade and the transition from the General Agreement on Tariffs and Trade (GATT) framework.

2.3. MISCELLANEOUS

2.3.1. Geopolitical Significance of Ports

CONTEXT



Recently, India signed a 10-year agreement with Iran for the development of the **Shahid Beheshti Port Terminal at Chabahar Port**.

ANALYSIS



- ▶ The contract was signed between India Ports Global Limited (IPGL) and Ports and Maritime Organization (PMO) of Iran.
- ▶ India, Iran, and Afghanistan signed a **trilateral agreement in 2016** for the development of the Chabahar port.
- ▶ It'll **minimize distance from India's west coast to Afghanistan, Central Asia and European nations bypassing Pakistan**.

Strategic Significance of Ports

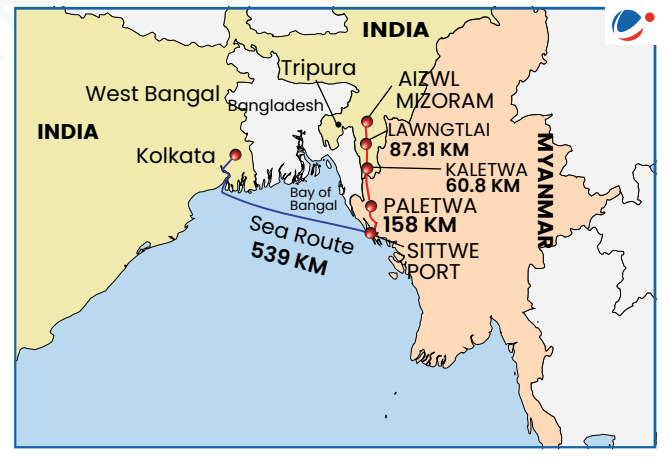
- ▶ **Act as geopolitical assets:** Ports enhance the projection of strategic reach. E.g., Indian Navy's base at **Agalega Islands** will enable marine patrols over the Mozambique Channel.
- ▶ **Strengthens Maritime Security:** E.g. Access to Sittwe port will improve India's presence in the **Indian Ocean Region**.
- ▶ **Strengthening Bilateral and multilateral relationship:** E.g. **Duqm Port (Oman)** improved India's engagement with Gulf countries easier.
- ▶ **Port Diplomacy:** Ports have become important nodes in network of trade and projection of sea power. E.g. Access to **Chabahar port by Iran** improves India's trade with Central Asia.
- ▶ **Economic significance of ports:**
 - **Enhance connectivity, facilitate trade and enable country's participation in the global value chain.**
 - **Opens avenues for transactions in local currency (e.g. rupee) leading to its internationalisation.**
 - **Port cities as global cities** position a country at the centre of global trade and financial networks.
 - **Alternative route** to safeguard economic and energy security.

BRIEF BACKGROUND

- ▶ In a related development, MEA has also approved the proposal for IPGL to take over the operations of the entire Sittwe port in Myanmar.
 - Port, located on the Kaladan River, is a component of Kaladan Multimodal Transit Transport Project.

Kaladan Multimodal Transit Transport Project

- ▶ **Genesis:** To create a multi-modal mode of transport to the North East through Myanmar (2008).
- ▶ **Purpose:** Facilitates movement- from the eastern ports of India (E.g Vizag and Kolkata); North-East through Myanmar bypassing Bangladesh.
- ▶ **Aims:** Reduce dependency on the Siliguri Corridor, known as the chicken's neck.



Challenges in Strategic use of Ports

- ▶ **Rivalry among Nations:** E.g., China and India expand their influence through creation of **string of pearls (China) and necklace of diamonds (India)** strategies.
- ▶ **Loss of Sovereignty:** Hold of rival nations on strategic port facilities may undermine long-term national interests. E.g. **China's debt trap diplomacy (with respect to Hambantota)**.
- ▶ **Security and Safety concerns:** Arise due to piracy as well as foreign or rival ownership of seaports.
- ▶ **Heightened vulnerability:** Chokepoints may be disrupted during periods of heightened geopolitical tension.
- ▶ **Challenges related to India:**
 - Smaller neighbourhood nations (such as Srilanka, Bangladesh, Maldives etc.) consider themselves to be **caught in**

geopolitical rivalry of China and India.

- ▶ **Limited financial resources** to further expand its geopolitical influence through development of overseas ports.

Conclusion

As ports not only connect the two geographical realms of land and sea but also play the dual roles of economic gateways and nodes of geostrategic projection, their management becomes important in the current geopolitical transition.

Way Forward

At global level

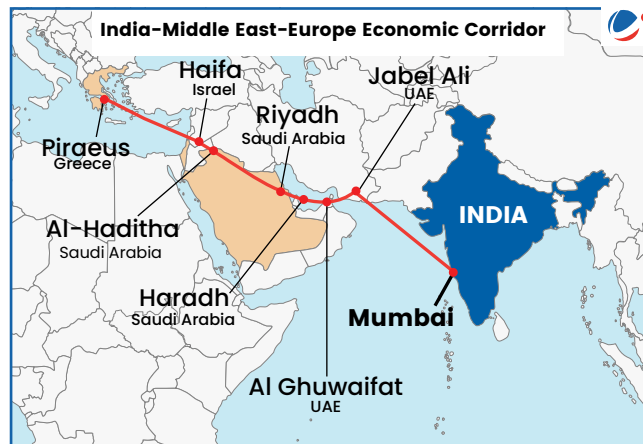
Monitoring of risks which include irresponsible lending and misuse of commercial arrangements at host country ports to support military functions.

Building security partnerships at the global level to safeguard seaports from opaque economic activity, which threatens host country sovereignty and global interests

India Specific measures

Explore multilateral partnerships with like-minded countries (e.g. QUAD countries) to protect India's maritime security interests while restricting China's larger footprint in the region.

Establish a stronger presence in the Western Indian Ocean Region, where China is at a geographical disadvantage due to its more distant location



Related News

- ▶ Cabinet has approved Inter-Governmental Framework Agreement (IGFA) with UAE on IMEC.
- ▶ **Aim of the IGFA:** To enhance bilateral relations and further strengthen relations between the two countries in the Ports, Maritime, and Logistics sectors.
- ▶ **About IMEC**
 - ▶ It is a proposed transit network that aims at integration of Asia, Europe, and the Middle East.
 - ▶ It consists of railroad, ship-to-rail networks (road and sea), and road transport routes (and networks)
 - ▶ MoU was signed between India, European Union, France, Germany, Italy, Saudi Arabia, UAE, and the US at New Delhi G20 summit to establish it.

Strategic Competition in the Indian Ocean region



2.3.2. Disaster Diplomacy



CONTEXT

Recently, 6th edition of the International Conference on Disaster Resilient Infrastructure (ICDRI) held in India, which emphasized the nation's expanding contribution to global crisis response efforts

ANALYSIS



Disaster diplomacy

- ▶ It refers to 'a country's efforts to provide aid and support to other countries affected by disasters or conflicts.
- ▶ **The Use of Foreign Military and Civil Defense Assets in Disaster Relief - "Oslo Guidelines"** sets the guiding principles.

Significance of India's disaster diplomacy

- ▶ **Soft Power Projection:** By providing humanitarian assistance during crises.
- ▶ **Increased geopolitical reach:** Stretching from Japan in the Far East to Turkey in the Middle East.
- ▶ **Breakthroughs in bilateral ties:** India's **Operation Maitri during the Nepal earthquake of 2015** played a crucial role in India's outreach to Kathmandu.
- ▶ **Strategic Importance of Humanitarian Assistance and Disaster Relief (HADR):** To counter geopolitical influences.

Factors contributing to India's global crisis response

- ▶ **India's aspiration** to become regional power and secure a UN Security Council membership.
- ▶ **Leveraging domestic disaster management capacities** developed from past emergencies.
- ▶ **India's robust economic growth** enhances its global influence and resources for disaster diplomacy.

Key challenges faced by India in its Disaster diplomacy

- ▶ **Lack of technological capacities:** e.g., India's response to the 2011 Fukushima disaster in Japan was tardy.
- ▶ **Limited Impact:** India's assistance to Nepal has also not delivered lasting benefits as the bilateral relationship.
- ▶ **Geopolitical tensions:** India's diplomatic efforts in disaster response can be hindered by existing geopolitical tensions with neighboring countries, impacting collaboration and coordination during crises.
- ▶ **Potential rejection due to historical hostilities:** Pakistan rejected India's aid during 2022 floods.

BRIEF BACKGROUND

About CDRI

- ▶ **HQ:** New Delhi
- ▶ **Genesis:** A global partnership launched in 2019 by Indian Prime Minister at UN Climate Action Summit (New York).
- ▶ **Objectives:** To promote the resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development.
- ▶ **Members:** 31 Countries. Is India a member
- ▶ **Other Key information:** Works at intersection of the Sendai Framework for Disaster Risk Reduction and the Paris Climate Agreement.
- ▶ **Reports:** "Global Infrastructure Resilience: Capturing the Resilience Dividend".

India's initiatives



Launched **Operation Dost** in the aftermath of **Turkiye earthquake**



India launched **Operation Karuna** to assist **cyclone-hit Myanmar**



India assists **Nepal, Maldives, Sri Lanka, Bangladesh, and Mauritius** in developing Early Warning Systems under the **UN'S "Early Warnings for All (EW4All initiative)"**



Relief, rehabilitation and reconstruction in Nepal, Sri Lanka and Afghanistan,



India's peacekeeping missions to facilitate **stabilization and reconstruction**



India's **COVID-19 Vaccine Maitri program**, which has assisted over 100 nations

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2.3.3. India's Telecom Diplomacy



CONTEXT

India celebrated its 'Telecom Diplomacy' on World Telecommunication and Information Society Day.

ANALYSIS



- ▶ Telecom Diplomacy has helped attract new business ventures, forge partnerships, and demonstrate India's commitment to secure its leadership position in the global telecommunications landscape.
- ▶ **Achievements of Telecom Diplomacy**
 - Indian companies have exported Rs 25200 crores worth of telecom equipment and accessories 2023-24.
 - Securing Indian Interests and leadership positions in international forums
 - ◊ India's active participation at the **World Radio Conference (WRC)** resulted in **safeguarding spectrum for Indian operations** in airspace and sea and **enabling future 5G deployments**.
 - The **World Telecommunication Standardization Assembly (WTSA)** will be held for the first time in **India (October 2024, New Delhi)** to decide the future direction of standards for the next generation of telecommunication systems.

BRIEF BACKGROUND

Steps taken for Telecom Diplomacy

- ▶ **Strategic Partnerships with partner countries and Telecom chip companies:** 'US-India OpenRadio Access (ORAN) Network Acceleration Roadmap'.
- ▶ **Exchange of Best Practices:** India-USA collaboration facilitated dialogue on international best practices in spectrum allocation, quality of service assurance, etc.
 - The DoT explored **potential collaborations to elevate R&D, foster innovation, and fortify the startup ecosystem** in Quantum Communications within India.
- ▶ **Transforming India Mobile Congress (IMC):** Significant efforts were undertaken to make IMC a global event like Mobile World Congress by 2025.

Related Term

Animal Diplomacy

- ▶ Malaysia is aiming to improve its environmental image by putting forward "**orangutan diplomacy**", a type of Animal diplomacy.
- ▶ **About Animal Diplomacy**
 - Involves **giving or lending animals as a sign of friendship or goodwill between countries**.
 - ◊ These creatures possess **cultural significance** or are **indigenous to the country** that gifts them.
 - Considered as an element of **soft power**.
 - **Key Examples:** China's panda diplomacy; Australia's koala diplomacy, etc.
 - **Ethical Concern:** Animals are being used as a means (considering them as an object) to fulfil interest of Nations.

Way Forward



Need for Capacity Building: India needs to enhance its HADR capabilities **through investments**.



Improve budgetary allocation: To improve emergency preparedness and logistic capabilities.



Projection of Achievements: Amidst its ambition to become global power



Utilizing Forums like the Quad: For humanitarian assistance and disaster relief efforts



2.3.4. Instability In West Asia



CONTEXT

Recently, escalation in the West Asia has reached new heights as Israel's strike on the Iranian consulate in Syria led to a retaliatory attack from Iran. Recently, attacks by Houthis in the Red Sea were also reported.

ANALYSIS



What are the impacts of instability in the West Asia?

On India	At Global Level
<ul style="list-style-type: none"> ▶ India's act of diplomatic and strategic balancing may be tested due to engagement with countries with conflicting interests, <ul style="list-style-type: none"> ▶ E.g. emergence of Iran-Russia- China axis ▶ Maritime Security challenges include drone strikes, hijackings (Houthis attack in Red Sea) impacting freedom of navigation in India's maritime region. ▶ Safety and Security of the Indian diaspora in the middle east region may become a concern. ▶ Threat to Energy Security as India is highly dependent on imports of Crude oil (~85%). ▶ Delay in completion of infrastructure projects such as India Middle East Europe Economic Corridor (IMEC). ▶ Impact on Indian Economy <ul style="list-style-type: none"> ▶ Rise in fuel prices. ▶ Negative impact on inflation rate, pharma's export, trade balance, forex reserves, etc. ▶ Rise in shipping costs and insurance premiums. 	<ul style="list-style-type: none"> ▶ Diplomatic milestones (E.g. Abraham Accords, Israel-Saudi) may get compromised. ▶ Intensification of maritime security challenges across the Indo-Pacific region. ▶ Competition between nations for arms race or possession of Nuclear weapons may lead to global instability issues. ▶ Impact on Global Economy <ul style="list-style-type: none"> ▶ Higher oil prices may lead to higher food prices intensifying food insecurity. ▶ Economies directly exposed may get downgraded and investment across the globe may suffer due to downgraded sentiment. ▶ International Humanitarian Crisis due to loss of lives, forced displacements and instances of War Crimes (E.g. Rafah Offensive stance of Israel) ▶ Questions being raised on the role and relevance of international institutions such as United Nations Security Council.

Way Forward

- ▶ **Enhance Diplomatic Engagements and negotiations** within all parties to refrain them from further violence and seek solutions through diplomacy.
- ▶ **Building Normative Framework and Process** through arms control and security negotiations declaration of regional "Weapons of Mass Destruction Free Zone" leading to demilitarization.
- ▶ **Resolution of the Israel-Palestine** issues based on the Two Nation Theory for long-term security, peace and stability.
- ▶ **Safeguarding Fiscal and External Sustainability** by countries by strengthening policy buffers.
- ▶ **Opportunity for India to emerge as a net security provider and mediator for South-South cooperation.**

BRIEF BACKGROUND

Other Major conflicts in the West Asia

- ▶ **Terrorism factions:** Hezbollah in Lebanon, ISIS in Syria etc.
- ▶ **Civil Wars and Insurgency**
 - ▶ **Sudan:** Between two factions of military
 - ▶ **Yemen:** Houthis conflict.
 - ▶ **Egypt:** Insurgency in Sinai Peninsula.



2.3.5. International Criminal Court (ICC)



CONTEXT

ICC prosecutor sought arrest warrants for Israel's Prime Minister and Hamas leaders for committing crimes against humanity and war crimes.

ANALYSIS



Jurisdiction of ICC under the Rome Statute

- ▶ In case of **Genocide, crimes against humanity or war crimes** (committed on or after 1 July 2002) which are-
 - Committed by a **State Party national, or in territory of a State Party**, or in a State that has accepted the jurisdiction of the Court.
 - Referred to the ICC Prosecutor by the **United Nations Security Council (UNSC)** under chapter VII of the UN Charter.
- ▶ In case of **Crimes of aggression**:
 - Crimes referred to the ICC Prosecutor by the **UN Security Council**, irrespective of whether it involves States Parties or non-States Parties.
 - Prosecutor may also **initiate an investigation on own initiative or upon request from a State Party**.
- ▶ No jurisdiction if the person is under age of 18.

Limitations of the International Criminal Court (ICC) in Criminal Justice

- ▶ **Lack of Enforcement Mechanism** as it relies on cooperation with countries for arrests, transfers,
 - Further, **Non-States Parties (such as Israel) have no obligation to cooperate with the Court** on its requests for arrest and surrender.
 - Some major countries are not parties to the ICC.
- ▶ **Many State Parties are reluctant to cooperate with the Court's requests** for arrest and surrender.
- ▶ **Insufficient Checks and Balances** due to lack of effective oversight on the authority of the ICC prosecutor and judges.
- ▶ **Lack of Retrospective Jurisdiction** as ICC can only address crimes committed after 1st July 2002.
- ▶ **Scarcity** of human resources and funds.
- ▶ **Allegations of Bias** with ICC being criticized as a **tool of Western imperialism**.

Why did India not join the Rome Statute?

- ▶ **Subordination of the ICC to the UN Security Council**, may potentially lead to political interference.
 - As per **Article 16 of Rome statute**, no investigation may be commenced after the Security Council has requested ICC to that effect.
- ▶ **UN Security Council's power** to bind non-States Parties to the ICC, violates principles of sovereignty.
- ▶ **Wide competence and powers of the ICC prosecutor on a proprio motu basis** (without a referral from the Security Council or a state party) **could be misused for political purposes**.
- ▶ **Exclusion of nuclear weapons and terrorism from ICC jurisdiction** whose use would constitute a war crime

Conclusion

For effective functioning of ICC all States Parties should put in place **effective national frameworks** to cooperate fully with the ICC. There should be **Concrete arrest strategies** required to arrest the suspects. Also, **ICC member states should focus on electing highly qualified judges** with knowledge and experience in criminal law and procedure.





BRIEF BACKGROUND

- ▶ Earlier, in March 2023, ICC issued **arrest warrant against Russian President** in the context of situation in Ukraine.
- ▶ **Consequences of the ICC issuing arrest warrants:** The accused would be arrested and if not, would **restrict their freedom of movement**

About International Criminal Court (ICC)

- ▶ It is the **first international permanent court** to investigate and prosecute individuals accused of serious international crimes.
- ▶ ICC's founding treaty, called the **Rome Statute** (adopted in 1998 entered into force in 2002), grants the ICC jurisdiction over 4 main crimes (see infographic).
- ▶ **Membership:** 124 countries are States Parties to Rome Statute of ICC.
 - **India, Israel, the US, Russia and China are not parties** to the Rome Statute.
 - **Palestine became the 123rd member (2015) and Malaysia became 124th State party (2019).**
- ▶ **Enforcement:** ICC's decisions are **binding**.
- ▶ **Complementarity Principle:** The ICC complements national criminal systems and prosecutes only when states are unwilling or unable to do so genuinely.

4 Categories of crimes under ICC

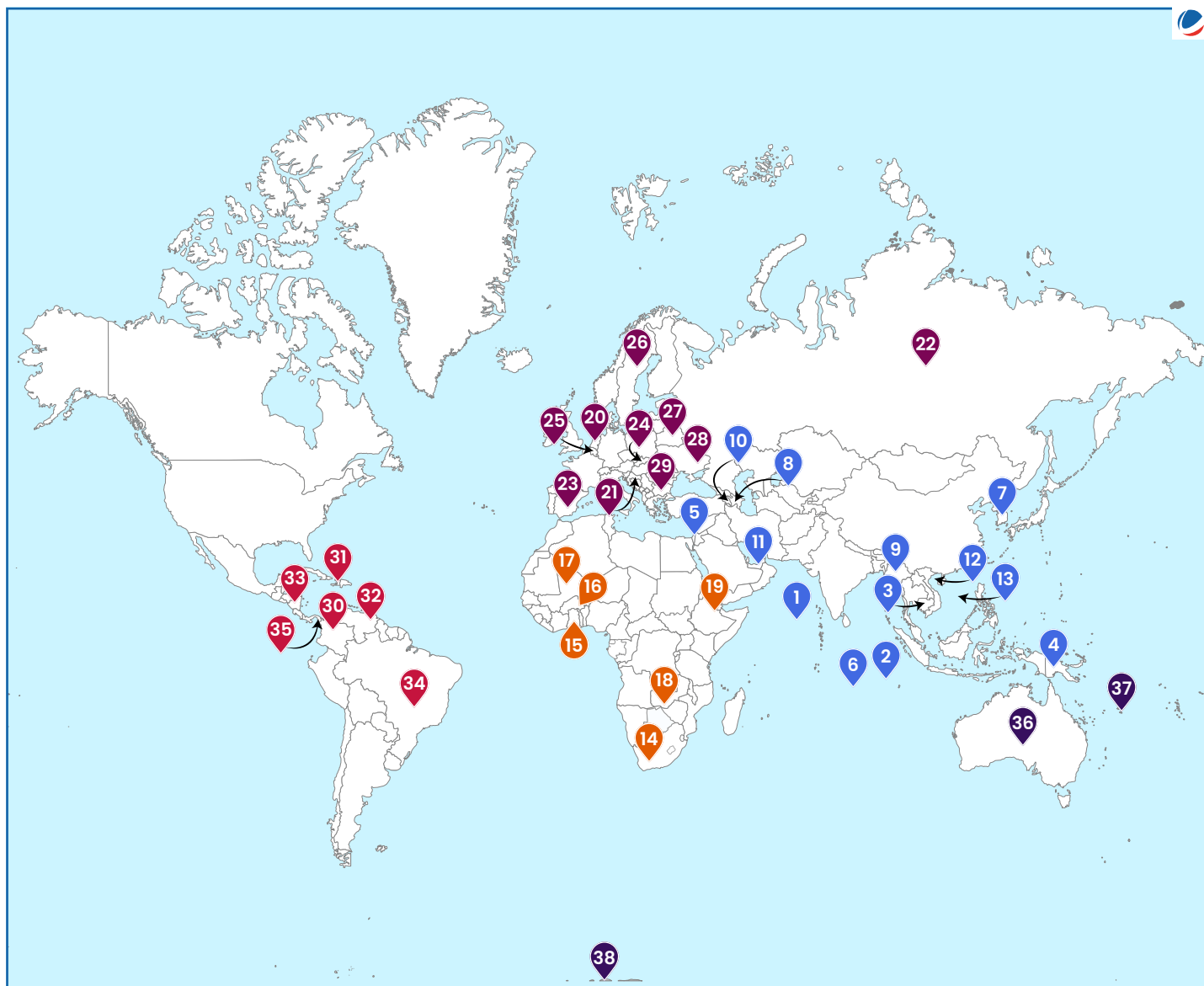
 Genocide	 Crimes against humanity	 War crimes	 Crime of aggression
<ul style="list-style-type: none"> • Specific intent to destroy a national, ethnic, racial or religious group by killing its members or by other means 	<ul style="list-style-type: none"> • Serious violations committed through large-scale attack against civilian population • 5 forms listed in the Rome Statute includes offences like murder, rape, imprisonment, enforced disappearances, enslavement, torture, apartheid etc. 	<ul style="list-style-type: none"> • Grave breaches of the conventions in the context of armed conflict • Includes use of child soldiers; killing or torture of civilians/prisoners of war; intentional attacks against hospitals, historic monuments etc 	<ul style="list-style-type: none"> • Use of armed force by a State against the sovereignty, integrity or independence of another State

2.3.6. Gas Exporting Countries Forum (GECF)

- ▶ 7th GECF Summit concluded with **Algiers Declaration**, which is related to **Natural Gas for a Secure and Sustainable Future**.
- ▶ **About GECF**
 - GECF, an intergovernmental organisation, seeks to **build a mechanism for a meaningful dialogue between gas producers and consumers** to improve the stability and security of supply and demand in gas markets around the world.
 - **Vision:** To make natural gas a pivotal resource for inclusive and sustainable development.
 - **Members:**
 - ◊ **Full-fledged Members:** Algeria, Bolivia, Egypt, Equatorial Guinea, Iran, Libya, Nigeria, Qatar, Russia, Trinidad and Tobago, UAE and Venezuela. **India is not a member.**
 - ◊ **Observer Status:** Angola, Azerbaijan, Iraq, Malaysia, Mauritania, Mozambique, Peru and Senegal.
 - Together, they represent 69% of the world’s gas reserves, 39% of the marketed production, and 40% of global gas exports.
 - GECF member countries collectively account for **more than half of world LNG exports (51%)**.



2.4. PLACES IN NEWS



Current Affairs Quarterly Revision (March to May 2024)

Places	Context
ASIA	
1. Iran (Tehran)	Iran President Dies in Helicopter Crash.
2. Second Thomas Shoal	Philippines denied China's claim on agreement over disputed South China Sea's Second Thomas Shoal.
3. Cambodia (Phnom Penh)	Cambodia formally accepted the Agreement on Fisheries Subsidies.
4. Papua New Guinea (Port Moresby)	Papua New Guinea is hit by a massive landslide.

5. Israel (Jerusalem)	<ul style="list-style-type: none"> ▶ Israel has approved the reopening of the Erez crossing (also known as Beit Hanoun) to allow the flow of more humanitarian aid into Gaza. ▶ US envoy to Lebanon emphasised situation along the blue line has to change to guarantee peace and security. ▶ Israel and Lebanon have no official border separating them, except the Blue Line.
6. Afanasy Nikitin Seamount (AN Seamount)	India applied to the International Seabed Authority (ISBA), Jamaica, for rights to explore a cobalt-rich crust long known as the Afanasy Nikitin Seamount which lies in Indian Ocean.
7. South Korea (Seoul)	South Korea puts second military spy (reconnaissance) satellite successfully into orbit.
8. Azerbaijan (Baku)	Russian peacekeepers have begun withdrawing from Nagorno-Karabakh following Azerbaijan's recapture of disputed territory from Armenian separatists.
9. Myanmar (Naypyidaw)	Guerrilla fighters from Myanmar's Karen ethnic minority claimed to be close to seizing control of a major trading town bordering Thailand.
10. Armenia (Yerevan)	Armenia has withdrawn its participation from Russia-led security bloc Collective Security Treaty Organisation (CSTO).
11. UAE (Abu Dhabi)	UAE was dropped from the Jurisdictions under Increased Monitoring (Grey list) of the Financial Action Task Force (FATF).
12. Gulf of Tonkin	China has delineated the baseline in the Gulf of Tonkin, known in Chinese as Beibu Gulf.
13. South-China Sea	Philippines denied China's claim on agreement over disputed South China Sea's Second Thomas Shoal .
Africa	
14. South Africa {Pretoria (executive), Cape Town (legislative), Bloemfontein (judicial)}	South Africa is celebrating 30 years of the end of Apartheid, a system of racial discrimination. SKAMPI, a prototype telescope of SKA Observatory (SKAO) constructed in South Africa achieved first light, demonstrating its potential.
15. Ghana (Accra)	India-Ghana agreed to strengthen trade ties at 4th joint trade committee meeting in Accra.
16. Burkina Faso (Ouagadougou)	Burkina Faso suspended BBC and Voice of America after covering report on mass killings
17. Mali (Bamako)	Mali has banned media from reporting on activities of political parties and associations.
18. Zambia (Lusaka) and Zimbabwe (Harare)	Water levels in Lake Kariba have dropped to 13% of its capacity, due to El Nino induced drought.
19. Afar Triangle	Geologists predict potential emergence of a new ocean at the Afar Triangle (also known as the Afar Depression), located in the Horn of Africa.
Europe	
20. Netherlands (Amsterdam)	26th World Energy Congress, co-hosted by the World Energy Council (WEC), concluded in Rotterdam.
21. Croatia (Zagreb)	Incumbent Croatian Prime Minister has secured office for third consecutive time
22. Russia (Moscow)	Newly captured aerial footage of Batagay Crater has revealed that it is growing every year as the frozen ground melts.
23. Spain (Madrid)	Spain becomes 99th member of International Solar Alliance (ISA)
24. Slovakia (Bratislava)	Slovakian Prime Minister was shot multiple times after a cabinet meeting in Handlova town

25. Belgium (Brussels)	World's first ever Nuclear Energy Summit held in Brussels. Belgium has become the first country in Europe to recognize 'ecocide' as a national as well as an international crime
26. Sweden (Stockholm)	Sweden becomes 38th country to join Artemis Accords. Sweden officially became the 32nd member of NATO (North Atlantic Treaty Organization).
27. Belarus (Minsk)	Foreign Minister of Belarus paid official visit to India.
28. Ukraine (Kyiv)	Russia claims capture of Avdiivka city after Ukraine withdraws from key city.
29. Bulgaria (Sofia)	The Indian navy rescued hijacked Bulgarian ship "Ruen" and its crew.
Americas	
30. Colombia (Bogotá)	Bogota started water rationing due to low levels of water in its reservoirs.
31. Haiti (Port-au-Prince)	Haiti is experiencing a surge in Gang violence as gangs demand for resignation of the Prime Minister. India launched Operation Indravati to evacuate its nationals from Haiti to the Dominican Republic.
32. Venezuela (Caracas)	According to reports, Humboldt (or La Corona) - Venezuela's last standing glacier in the Andes, has shrunk to a size that no longer qualifies it as a glacier.
33. Nicaragua (Managua)	A group of UN-mandated experts said that Nicaragua's President has committed systematic human rights violations "tantamount to crimes against humanity."
34. Brazil (Brasília)	India and Brazil hold First '2+2' Defence and Foreign Ministerial Dialogue
35. Darien Gap	Darien Gap has emerged as one of the world's most dangerous and fastest-growing border crossings for illegal immigration. It connects northern Colombia and southern Panama. Part of the Isthmus of Panama .
Oceania	
36. Australia (Canberra)	5th Mass bleaching event hits Great Barrier Reef (GBR) in 8 years.
37. New Caledonia	France declares a state of emergency in New Caledonia. France becomes the only country to make abortion a constitutional right
38. Antarctica	Mount Erebus is expelling pockets of gas containing crystallised gold everyday which is worth around \$6,000. India Post opened a post office at its Bharati station in Antarctica.



2.5. TEST YOUR LEARNING

MCQs

Q.1. How many of the pairs given above are correctly matched?

	Bhutan Signing cooperation agreement for boundary delimitation	Country
1	Bhutan Signing cooperation agreement for boundary delimitation	India
2	'Strengthen US-Australia-India-Japan Cooperation' or Strengthening the Quad Act.	Japan
3	32nd member of North Atlantic Treaty Organization (N NATO)	Finland

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the pairs

Q.2. Consider the following statements:

Statement-I: The AUKUS partnership between Australia, the UK, the US and India aims to boost defense capabilities and expand industrial capacity in the Indo-Pacific region

Statement-II: AUKUS is composed of two pillars: Conventionally Armed, Nuclear-Powered Submarines and Advanced Capability Development.

Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct, and Statement-II explains Statement-I
- (b) Both Statement-I and Statement-II are correct, but Statement-II does not explain Statement-I
- (c) Statement-I is correct, but Statement-II is incorrect
- (d) Statement-I is incorrect, but Statement-II is correct

Q.3. Consider the following statements regarding the North Atlantic Treaty Organization (NATO):

1. It was established in 1949 with the primary purpose of deterring Soviet expansion post-World War II.
2. NATO's core principle of collective defense is outlined in Article 5 of the North Atlantic Treaty.
3. NATO's headquarter is in Brussels, Belgium
4. NATO's 2022 Strategic Concept identifies China as the primary threat to the alliance.
5. The term "NATO plus five" refers to NATO's collaboration with Australia, New Zealand, South Korea, Japan, and India

Which of the statements given above are correct?

- (a) 1, 2, and 3 only
- (b) 2, 3, and 5 only
- (c) 1, 2, 3, and 5 only
- (d) 1, 2, 3, 4, and 5

Q.4. Consider the following statements about India's involvement in port operations and transportation projects in neighboring countries:

1. India Ports Global Limited (IPGL) has been approved to take over operations of a port in Myanmar.
2. The Kaladan Multimodal Transit Transport Project aims to connect India's eastern ports with its western states.
3. This project involves a port located on the Irrawaddy River in Myanmar.
4. The primary purpose of the project is to reduce dependency on the Siliguri Corridor.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 4 only
- (c) 1 and 4 only
- (d) 1, 2, 3, and 4

Q.5. Consider the following statements regarding the Coalition for Disaster Resilient Infrastructure (CDRI):

1. It is one of the specialized agencies of the United Nations.
2. CDRI was launched by the Indian Prime Minister at the UN Climate Action Summit in New York in 2019.
3. The main focus of its function is to grant funds to developing countries to build disaster-resilient infrastructure.

Which of the statements given above is/are not correct?

- (a) 1 and 3 only
- (b) 2 only
- (c) 1 and 2 only
- (d) 3 only

Questions

1. Evaluate the strategic importance of ports in shaping international relations and regional power dynamics. Also, consider the economic and security implications, challenges in their strategic use, and provide specific examples of how different nations leverage ports for geopolitical advantage. (250 Words)
2. Analyze the global implications of the recent escalation in West Asia, focusing on its impact on India's strategic interests, energy security, and economic stability. How does this affect regional power dynamics and international diplomacy? (250 words)



ECONOMY



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VISIONIAS
DAKSHA MAINS
MENTORING PROGRAM 2025

DAKSHA MAINS MENTORING PROGRAM 2025

(A Strategic Revision, Practice, and Enrichment Mentoring Program for Mains Examination 2025)



DATE
11 OCTOBER

DURATION
4 Months

HIGHLIGHTS OF THE PROGRAMME

<ul style="list-style-type: none">  Highly experienced and qualified team of mentors  Scheduled group sessions for strategy discussions, live practice, and peer interaction  Well-structured revision and practice plan for GS Mains, Essay & Ethics  Access to Daksha Mains Practice Tests 	<ul style="list-style-type: none">  Emphasis on score maximization and performance improvement  Personalized one-to-one sessions with mentors  Subject-wise strategy documents based on thorough research  Continuous performance assessment, monitoring and smart interventions
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3.1. FINANCE & TAXATION

3.1.1. Gross Fixed Capital Formation (GFCF)



CONTEXT

Sluggish growth of private Gross Fixed Capital Formation (GFCF) as a percentage of GDP at current prices has been a significant challenge for the Indian economy.

ANALYSIS



What are Capital Formation (CF) and Gross Fixed Capital Formation (GFCF)?

- ▶ **Capital formation:** Refers to process by which resources are invested in assets like plants, equipment, machinery, etc. as well as in human capital through education, health, skill, etc.
- ▶ **Gross Capital Formation (GCF):** It refers to growth in size of fixed capital in economy. It includes -
 - ▶ **GFCF:** Like land improvements; plant, machinery, & equipment purchases; road construction etc.
 - ▶ **Change in stock (CIS) of raw materials, semi-finished and finished goods:** Stocks of goods held by firms to meet temporary fluctuations in production/sales.
 - ▶ **Net acquisition of valuables:** like gold, gems, ornaments, precious stones etc.
- ▶ **Net capital formation (NCF)** is distinguished from GCF in that NCF includes **depreciation, obsolescence and accidental damage to fixed capital.**

What GFCF Includes?

- ▶ **Structure equipment** such as airport, roads etc.;
- ▶ **Addition to livestock used repeatedly** (such as dairy cattle, sheep etc.);
- ▶ **Addition to cultivated crops** harvested repeatedly;
- ▶ **Major repair and maintenance** that prolong economic life of assets; and
- ▶ **Intangible assets** like software or artistic originals

Why GFCF is an important economic variable?



Growth Multiplier:
Increase in GFCF invariably leads to an increase in GDP.



Increased productivity:
GFCF helps workers produce a greater amount of goods and services each year.



Promotes Self-sufficiency:
Through creation of capital assets.



Indicator of Market Confidence: Rough indicator of how much private sector in an economy is willing to invest.



Read From Essential Material

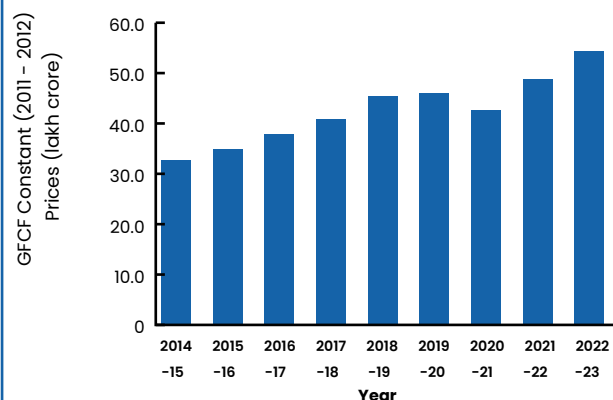
NCERT 12th Chapter 2- National Income Accounting

BRIEF BACKGROUND

Evolution of GFCF (also called Investment):

- ▶ From **independence to economic liberalisation**, investment remained slightly **below/above 10% of GDP.**
- ▶ It rose from **around 10% of GDP** in the 1980s to **around 27% in 2007-08.**
- ▶ From **2011-12 onwards**, however, **private investment began to drop** and hit a low of **19.6% of the GDP in 2020-21.** And again started rising. (Refer Infographic)

Global Fixed Capital Formation at Constant Price



Reasons for fall in Private GFCF:

- ▶ Historically **higher consumption** in India led to **lower private investment.**
- ▶ **Unfavorable government policy** and **policy uncertainty** E.g., disputes associated with tax laws.

What is hindering the growth of GFCF?

- ▶ **Slow pace of reforms** especially land acquisition has deterred investors from investing in the economy.
- ▶ **Financial problems of Indian banks** that indirectly locks capital available in market.
- ▶ **High cost of borrowing** slows down the cycle of lending and borrowing, deterring effective channelling of investment.
- ▶ **Other:** Historically **higher consumption, Unfavorable government policy and policy uncertainty** E.g., disputes associated with tax laws.

Conclusion

For India to realise its dream of a \$ 5 trillion economy, investment will have to play a major role. To ensure a seamless development of capital formation, economic reforms accompanied by stability in other macroeconomic variables (such as inflation) should be the way forward.

3.1.2. Inheritance Tax as a tool of Wealth Redistribution

CONTEXT

Introduction of inheritance tax similar in USA to address economic inequality is widely debated in India

ANALYSIS

What is Inheritance Tax?

- ▶ **Inheritance tax** is levied on **property/asset inherited** upon an **individual's death**. It differs from **estate tax**, which is levied on the **total value of a deceased person's estate**.
- ▶ It is levied in Japan, South Korea, USA etc.

Benefits of Inheritance Tax

- ▶ **Increased Revenue Generation:** Can be used for social sector programs to uplift poor people.
- ▶ **Reducing Wealth Inequality:** By redistributing a portion of inherited wealth to fund public programs and services.
- ▶ **Promoting Meritocracy:** Taxing inherited wealth ensures that success is based more on individual effort & talent rather than family wealth and privilege.
- ▶ **Encouraging Productive Investment:** **Wealthy individuals may invest their wealth more productively** during their lifetimes, rather than simply passing it on to their heirs.
- ▶ **Intergenerational Equity:** It may reduce perpetuation of dynastic wealth accumulation.

Implications of Inheritance Tax

- ▶ **Potential Tax Evasion:** Due to **high taxation rate & loopholes**. Also, it may lead to distressed sales for depositing taxes.
- ▶ **Discourage savings and investment:** As individuals may be reluctant to accumulate wealth if a significant portion is to be taxed on inheritance.
- ▶ **Affect Business:** Many businesses may move their businesses abroad to avoid taxes. It may also force the sale or break-up of family-owned businesses to pay the tax liabilities.
- ▶ **Double Taxation Concerns:** Critics argue that inheritance taxes represent double taxation, as the wealth being transferred has already been subject to income and other taxes.

Conclusion

Inheritance tax can effectively **reduce wealth inequality**, but implementation requires careful balancing to **avoid unintended consequences**. A **well-designed progressive inheritance tax system** can **promote wealth equity** while **raising revenue** for social programs.



Read From Essential Material

NCERT 12th Chapter 5- Government Budget & the Economy

BRIEF BACKGROUND

History of Inheritance Tax in India

- ▶ **In India**, currently there is **no inheritance tax**.
- ▶ Earlier, **estate duty** was imposed in 1953. The high tax rate up to 85% made it unpopular, leading to abolition in 1985.
- ▶ Similar to Estate duty, **gift tax** and **wealth tax** were imposed in India.
 - ▶ These were abolished in 1998 and 2015 respectively. However, **gift tax** was re-introduced in 2004.
 - ◊ Under **Gift Tax**, **any gifts received exceeding Rs 50,000 in a financial year** is added to the person's "income from other sources" and taxed according to the income tax slab.
 - ◊ Exceptions include donations, inheritance, and gifts from close relative, gifts during weddings etc.

3.1.3. Advance Pricing Agreements (APAs)



CONTEXT

Central Board of Direct Taxes (CBDT) has signed highest ever record 125 APAs (including Unilateral and Bilateral APAs) in FY 2023-24 with Indian taxpayers.

ANALYSIS



Indian Advance Pricing Agreement Regime:

- ▶ **APA Scheme in India:**
 - ▶ Ministry of Finance (MoF) notified APA Scheme in 2012 through insertion of sections 92CC & 92CD in Income-tax Act, 1961.
 - ▶ Signed between Central Board of Direct Taxes (CBDT) and any person to determine ALP for international transaction.
 - ◊ CBDT, a statutory authority (created by Central Board of Revenue act, 1963) is part of department of Revenue in MoF.
 - ▶ **Nature of Scheme:** It's a voluntary & supplements appeal & other Double Taxation Avoidance Agreement (DTAA) mechanism for resolving transfer pricing dispute.
 - ▶ **Term of APA:** Maximum five years.
 - ▶ **Rollback provisions:** Allows agreed ALP to be rolled back to a period prior to the commencement of the APA.

Issues with Advance pricing Agreement in India:

- ▶ **Complex International transactions:** Challenging to accurately determine arm's length prices.
- ▶ **Lack of Internal Co-ordination:** Often different entities take different positions on similar international transactions.
- ▶ **Delay in Processing APAs:** Process is usually fact intensive and need a lot of data analysis.

Significance of APAs

 Double Taxation Avoidance	 Promoting ease of doing business	 Reduction of compliance costs to companies
 Less burden of record keeping	 Reduced cost of administration due to reduced future tax litigation.	

BRIEF BACKGROUND

About Advance Pricing Agreements (APAs)

- ▶ **Definition:** APAs are an agreement between a taxpayer and tax authority. They endeavor to provide certainty to taxpayers in domain of transfer pricing by specifying methods of pricing.
 - ▶ **Transfer Pricing** is the price of goods and services exchanged between companies that are under common ownership or control.
- ▶ **Significance:** APA helps determine arm's length price (ALP) of international transactions in advance for a maximum of 5 future years.
 - ▶ **Arm's Length Principle of Pricing** states that price agreed in a transaction between 2 related parties must be same as price agreed in a comparable transaction between 2 unrelated parties.
- ▶ Taxpayer has option to **roll back APA for 4 preceding years**, as a result of which, tax certainty is provided for 9 years.

Types of APAs

- Unilateral:** Involves only tax payer & tax authority of the country where tax payer is located.
- Bilateral:** Includes taxpayer & tax authority of country where the taxpayer is located, as well as an **associated enterprise (AE) of the taxpayer** in another country, along with **corresponding foreign tax authority**.
- Multilateral:** Involves **tax payer**, 2 or more **AEs of tax payer in different foreign countries**, tax authority of the country where the tax payer is located, & tax authorities of AEs.

Conclusion

To address APA issues, **Outsourcing to subject matter experts** from private sector can not only solve human resource crunch issue but will also bring clarity to emerging complexities with their expertise.

3.1.4. Double Taxation Avoidance Agreement (DTAA)



CONTEXT

India & Mauritius signed (not yet ratified) a protocol amending the Double Taxation Avoidance Agreement (DTAA).

ANALYSIS



Key Changes Introduced by Amendment

- ▶ Amendment included **Principal Purpose Test (PPT)** to avail tax benefits under the DTAA to plug the abuse of treaty for tax evasion and avoidance.
 - PPT lays out the condition that **tax benefits under treaty will not be applicable if obtaining that duty benefit was the principal purpose** of any transaction or arrangement.
 - Amendment to DTAA made it compliant with **Base Erosion and Profit Shifting (BEPS) Minimum Standards**.

About DTAA

- ▶ DTAA is an agreement between two countries/ territories with an objective to avoid double taxation on same declared asset in two different countries/ territories.
- ▶ DTAA between India and Mauritius was first signed in 1982 and amended in 2016.

Issues associated with DTAA

- ▶ **Treaty Shopping:** Takes place when residents of a country, which is not a party to the DTAA, take advantage of the provisions through indirect routes.
- ▶ **Double non-taxation:** Abuse of DTAA to avoid paying taxes in both countries.
- ▶ **Differential interpretations** of tax treaties leading to protracted litigations.

Conclusion

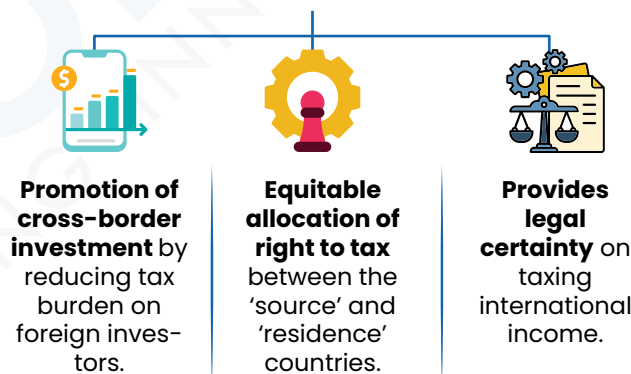
DTAAs are valuable tools for promoting international economic integration and reducing the adverse effects of double taxation. By addressing existing challenges and ensuring their effective implementation, countries can continue to reap the benefits of these agreements.

BRIEF BACKGROUND

Base Erosion and Profit Shifting (BEPS)

- ▶ Refers to **tax planning strategies that exploit gaps and mismatches in tax rules** for tax avoidance by **shifting profits from higher tax to lower tax jurisdictions**.
- ▶ **Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS** aims to update international tax rules and lessen opportunity for tax avoidance by multinational enterprises.
- ▶ **India signed** the convention in 2017.

Significance of DTAA



Mutual Agreement Procedure (MAP)

- ▶ MAP is an **alternative available to taxpayers for resolving double taxation disputes** whether juridical or economic in nature.
- ▶ MAP is a **mechanism laid down in tax treaties (E.g. DTAA)** to ensure that taxation is in accordance with the tax treaty.
 - A tax treaty is a **bilateral (two-party) agreement** made by two countries to **resolve** issues involving **double taxation of passive and active income** of each of their respective citizens.
- ▶ **Difference between MAP and APAs:**
 - MAP resolves transfer pricing disputes while APAs prevents transfer pricing disputes.
 - Tax payers file MAP for **pending disputes** while they opt for APA for same transactions for **future years** as an effective dispute resolution/ avoidance strategy.

3.2. BANKING AND PAYMENT ECOSYSTEM

3.2.1. RBI Surplus Transfer



CONTEXT

Reserve Bank of India (RBI) approved highest-ever surplus transfer of Rs 2.11 lakh crore to government for FY24 which is more than double the previous year's ₹86,416 crore

ANALYSIS



About RBI Surplus

- ▶ Surplus implies **excess of income over expenditure**. RBI's total expenditure is only about 1/7th of its total net interest income, thereby generating surplus.



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NCERT 12th Chapter 2- Money and Banking

RBI's Income	RBI's Expenditure
<ul style="list-style-type: none"> ▶ Interest on holding of Rupee Securities (RS) ▶ Interest earned on Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF) operations ▶ Interest earned on Loans & Advances extended to Central and State Governments, banks and financial institutions and employees. ▶ Interest earned from Foreign Sources: Consists of Interest Income from Foreign Currency Assets (FCA). 	<ul style="list-style-type: none"> ▶ RBI incurs a major chunk of its expenditure in making Risk Provisions viz., Contingency Fund (CF) and Asset Development Fund (ADF). <ul style="list-style-type: none"> ▶ CF: kept for unforeseen contingencies like depreciation of securities values, risks from monetary rate policy, etc. ▶ ADF: Provisions made towards investments in subsidiaries and associated institutions and to meet internal capital expenditure. ▶ Printing of notes, agency charges, and employee cost etc.

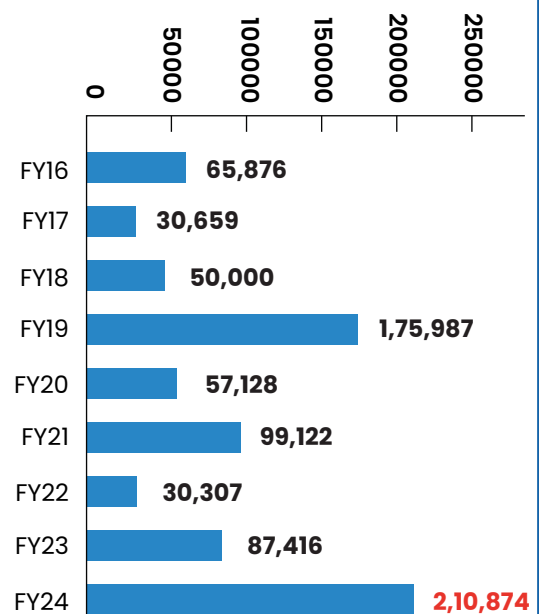
Provisions regarding RBI transfer surplus to the government

- ▶ **RBI Act, 1934: Section 47 of the RBI Act, 1934** mandates that any profits made by the RBI from its operations be sent to the Centre.
- ▶ **Committees' recommendations:** After the Malegam Committee (2013) recommendations, RBI's transfer of surplus to government increased.
- ▶ **Economic Capital Framework (ECF):** As per Revised ECF recommended by **Bimal Jalan Committee**, the amount of surplus that the RBI must transfer to the Centre is determined based on two factors -
 - ▶ **Realized equity (essentially existing amount in CF):** CF is maintained within 6.5% to 5.5% of RBI's balance sheet and excess amount is to be transferred to the government.
 - ▶ **Economic capital (essentially CGRA):** Kept in the range of 20.8-25.4% of the balance sheet and rest should be transferred to government.
 - ◊ CGRA includes its **capital, reserves, risk provisions and revaluation balances** which are unrealized gains, net losses resulting from movement of exchange rate, gold price or interest rate.

Benefits of Surplus Transfer for Government

- ▶ **Reduce Fiscal Deficit:** It will help government to meet the 5.1 % fiscal deficit target set for FY2024-25.
- ▶ **Meeting Revenue Targets:** Important source of non-tax receipts for government, improving government spending to ensure economic growth.

RBI's payout to Centre over the years (In Rs. Cr)



- ▶ **Reduce Government Borrowing:** It may help government to reduce its gross borrowing for the current financial year (2024-25/FY25) by up to Rs 1 trillion or to step up capital expenditure.
- ▶ **Keeping Interest Rates Low:** Lowers borrowing costs across the economy as sovereign debt yields are the benchmarks for determining the price of corporate borrowing.

Conclusion

The current surplus transfer by the RBI constitutes an important element which is considered by the Central Government in arriving at overall budget provisions for the fiscal year. These additional funds can be utilized for public spending or specific projects, which could lead to a revival in demand in certain sectors and boost economic activity.

3.2.2. Umbrella Organisation (UO) For Urban Cooperative Banks (UCBS)



CONTEXT

Ministry of Cooperation constituted National Urban Cooperative Finance and Development Corporation Limited (NUCFDC), an Umbrella Organisation (UO) for UCBS.

ANALYSIS



About NUCFDC

- ▶ **Background**
 - ▶ **2006:** The need for an Umbrella Organisation (UO) for India's UCB sector was first emphasized by an RBI Working Group chaired by Shri N.S. Viswanathan.
 - ▶ **2009:** RBI's Working Group under the chairmanship of Shri V.S. Das recommended a model of a national level UO i.e., NUCFDC.
 - ▶ **2019:** RBI accorded regulatory approval to the NAFCUB (National Federation of Urban Co-operative Banks and Credit Societies Ltd) (refer to the box) for the formation of NUCFDC.
- ▶ **Need**
 - ▶ UO can serve as a **gateway for resolving the issues of UCBS** (refer to the infographics).
 - ▶ UO provides an **alternative to merger of smaller UCBS**, which was earlier done in order improve the economies of scale. (Report by RBI Expert Committee 2021).
 - ▶ According to the **N.S. Viswanathan committee**, UO appears to be the **only long-term solution** to enhance the **public and depositors' confidence** in the sector.
- ▶ **Global example:** In countries having a large presence of co-operative banks (called credit unions), such as the **USA, Canada, and France**, cooperative banks are networked closely and thrive under an apex institution known as UO.
 - ▶ In India, UO will be helpful to **modernize and strengthen** around 1,502 UCBS in the country.
- ▶ **Legal status**
 - ▶ NUCFDC is a UO registered with RBI as a **Type II -Non-Banking Financial Company-Non deposit (NBFC-ND)**.
 - ◊ **Type II non-deposit taking NBFCs (NBFC-ND) accept** (or intend to accept) **public funds** and/or have or intend to **have a customer interface**.
 - ▶ It will be allowed to **operate as a Self-Regulatory Organization (SRO)** for the sector.

Existing issues in UCB that could be eliminated by the NUCFDCs



Poor governance: As board members are necessarily elected from amongst the members of the bank. Example, poor governance resulted in failure of the Punjab and Maharashtra Co-operative Bank (PMC).



Constraints in Raising Capital: because listing of the securities issued by cooperative banks on recognized stock exchanges is not legally feasible.



Acute market competition: Small Finance Banks (SFBs), FinTechs, etc. which are equipped with state-of-the-art technology coupled with deep pockets **and can disrupt UCBS' traditional market segments**.



High gross non performing assets (GNPA): As per Financial Stability report of the RBI, GNPA of UCBS stand at **10.9% till September 2023**.

Major functions envisaged for NUCFDC



Offering liquidity and capital support: To raise capital, with plans to reach a **capital base of Rs.300 crores** to support UCBs; NUCFDC can also offer **fund management** and other consultancy services to UCBs.



Facilitate regulatory compliance: Prepare small banks for compliance with the **Banking Regulation Act (BRA), 1949**; Facilitate **communication between UCBs and regulators.**



Develop a shared technology platform: NUCFDC will enable UCBs to **widen their range of services at a relatively lower cost.**

3.2.3. Asset Reconstruction Companies (ARC)



CONTEXT

Reserve Bank of India (RBI) has issued **master Direction – RBI (Asset Reconstruction Companies) Directions, 2024.**

ANALYSIS



About RBI (ARC) Directions, 2024

- ▶ **Issued Under:** powers conferred by Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (**SARFAESI Act, 2002.**
 - **Applicable** for every ARC registered with RBI under Section 3 of the SARFAESI Act, 2002.
- ▶ **Aim:** Streamline & regulate functioning of ARCs in India, ensuring transparency, accountability, and integrity in financial system.

Key Provisions

- ▶ **Net Own Fund (NOF):** To commence the business, an ARC is required to have a **minimum NOF of Rs 300 crore.**
- ▶ **Registration:** Before commencing business, an ARC shall obtain a certificate of registration (CoR) from the RBI.
- ▶ **Leadership Positions:** It set age limit of **70 for MD/CEO or Whole-time Director** & tenure of 5 years at a time, with a **maximum tenure of 15 years** continuously.
- ▶ **ARCs shall report to IBA:** Details of CAs, advocates & valuers (who committed serious irregularities) for including in **Indian Banks' Association (IBA)** database.
- ▶ **Internal audit:** ARCs shall put in place an system for periodical **checks and review** of the asset acquisition procedures and asset reconstruction measures.
- ▶ **Other Provisions:** ARCs are **prohibited from raising money by way of deposit.**
 - **Mandated to maintain a capital adequacy ratio** of a minimum of 15% of its total risk-weighted assets.



Read From Essential Material

NCERT 12th Chapter 2- Money and Banking

BRIEF BACKGROUND

About ARCs

- ▶ **Definition:** It is a **financial institution that buys Non-Performing Assets (NPAs)** from banks & financial institutions so that the latter can clean up their balance sheets. E.g., **National Asset Reconstruction Company Limited.**
 - ARCs are required to **resolve the assets within a maximum of 8 years of acquisition** of financial assets and redeem the security receipts representing the assets.
- ▶ **Genesis:** **SARFAESI Act in 2002** envisaged that ARCs would be registered and regulated by RBI. There are 29 ARCs in operation in India (2022).
 - **Narsimham Committee – II (1998)** proposed asset reconstruction companies, on the similar lines of asset management companies' prevalent globally.
- ▶ **Types (Based on ownership):** **Public, private or public-private partnership.**
- ▶ **Significance:** **Free up stressed assets & help banks** to focus on their core lending function by removing bad loans from their books, **Facilitate asset recovery & revive businesses** by restructuring their loans etc.

Other Recent Changes by RBI

- ▶ **Strengthened corporate governance of ARCs:** RBI mandated that the chair of the board and at least half the directors in a board meeting must be **independent directors**.
- ▶ **Increased Transparency:** ARCs must disclose their track record on returns generated.
- ▶ **Fair Practices Code (FPC):** ARCs are advised to put in place a Board-approved FPC.
- ▶ **Member of CIC:** Every ARC shall become a **member of at least one credit information company (CIC)** having certificate of registration from the RBI.

How ARCs Work?

- ▶ **Asset Acquisition:** ARCs acquire financial assets from banks/ FIs either on their own books or in the books of a trust set up for the purpose of securitisation and/ or reconstruction.
- ▶ **Security Receipts:** Lenders sell stressed loans to ARCs at a discount. Unless the transaction is entirely in cash, ARC issues security receipts that are redeemable as and when it recovers the specific loan.
- ▶ **Management Fee:** ARCs charge bad-loan sellers a management fee of **1.5% to 2% of the value of the asset every year**.

Need of Reforms in ARCs



Sub-optimal performance of the ARCs: Banks and FIs could recover only about 14.29% of amount owed by borrowers in stressed assets sold to ARCs (FY04 to FY13).



Sales of stressed assets to ARCs decreased: In 2021-22, only **3.2% of previous year's gross NPAs** sold to ARCs.



Other: Vintage NPAs being passed on to ARCs, lack of debt aggregation, emergence of IBC as alternative resolution mechanism etc.

Way Forward

- ▶ **Broaden scope of ARCs:** Permitting ARCs to **acquire financial assets from all regulated entities** - FPIs, all NBFCs irrespective of asset size and from retail investors.
- ▶ **Regulatory Disincentives:** For delay by lenders in internally resolving the NPA assets.
- ▶ **List of NPAs (intend to sell/auction):** This should be prepared by **all regulated lenders and disclosed to ARCs** after entering into a confidentiality agreement for **increasing predictability of stressed assets**.
- ▶ **Fraud Accounts:** Selling fraudulent accounts to ARCs may be allowed, but banks must still be held accountable and criminal cases against the responsible persons should continue.



3.2.4. Internationalization Of Rupee



CONTEXT

Prime Minister asked RBI to prepare a 10-year strategy to make the Indian rupee a globally accessible and acceptable currency, enabling its internationalization.

ANALYSIS



About Indian Currency:

- ▶ India moved toward **partial convertibility in the late 1990s** & made subsequent progress with multiple reforms.
- ▶ India **enabled capital-account transactions** through **external commercial borrowings & Masala bonds** (rupee-denominated bonds issued by Indian entities outside India).
 - **Capital account convertibility** is the ability or freedom to convert domestic currency for capital account transactions.

Approach for internationalization of Rupee

- ▶ **Capital Account Convertibility:** INR (Indian National Rupee) is fully convertible in the current account but partially in the capital account.
 - There is need to **review extant Foreign Exchange Management Act (FEMA) provisions** and extending incentives for international trade settlements in INR.
 - **Banking Services** (loans, guarantees, credit lines, etc.) in INR through offshore branches of Indian banks.
- ▶ **Promoting international use of INR:** An **efficient settlement mechanism, availability of liquidity** and development of **robust cross-border payments system** would be required.
 - **Currency Swaps & Local Currency Settlement (LCS):** It stabilises local currency, protect businesses against currency risk exposure & reduces transaction costs.
 - **Internationalisation of Indian Payment Systems:** Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), Unified Payments Interface (UPI) etc.
 - **Inclusion of INR in Continuous Linked Settlement (CLS):** CLS is a global system for the settlement of foreign currency transactions on a Payment vs Payment (PvP) basis. It currently settles trades in 18 currencies.
 - **INR as a vehicle currency/contender to Special Drawing Rights (SDR) basket:** SDR is an international reserve asset created by IMF in 1969 to supplement its member countries' official reserves.
 - ◊ Value of the SDR is calculated from a weighted basket of 5 major currencies – U.S. dollar, Euro, Japanese yen, Chinese Renminbi, & British pound.
- ▶ **Strengthening Financial Markets:**
 - **Harmonisation of KYC norms of RBI and SEBI** to ease access of foreign investors to INR assets.
 - **Global 24x5 INR market:** While customer transactions are facilitated round-the-clock in the offshore market, the inter-bank market operates only for a limited set of hours onshore.
 - **Inclusion of Indian Government Bonds in Global Bond Indices:** It will enable widening of investor base, stable passive flows, appreciation of INR, and reduction of overall borrowing costs.

BRIEF BACKGROUND

About Internationalization of Currency

- ▶ **Definition:** Refers to currency that is used and held beyond the borders of issuing country, not just by country's residents, but also by non-residents. E.g., US dollar, Euro etc.
- ▶ **Determining Factors:** Economic fundamentals such as economy's size & trade network; Depth and liquidity of capital markets; Stability and convertibility of currency.
- ▶ **Challenges:** Integration of financial markets could affect stability, Vulnerability to External Shock, Exchange Rate Volatility, Monetary Policy Dilemma or Triffin Dilemma etc.
 - **Triffin Dilemma** refers to conflict that arises when a country needs to supply enough of its currency to meet global demand while also maintaining its domestic monetary policies.

Benefits of Internationalization of Currency



Reduced exchange rate risk: It enhances access to international financial markets for domestic firms and institutions.



Financing budget deficit: Issuing domestic currency debt internationally can help finance budget deficits.



Regulating capital flows: It mitigate the impact of sudden stops and reversals, improving debt repayment capacity.



Reducing requirement of Forex Reserves: Presently, **India's foreign exchange reserves are at a record high of \$642.63 billion** (March 2022).

Steps taken for Internationalization of INR



Internationalization of Indian Payment Infrastructure: UPI is adopted in Singapore, France, UAE, Sri-Lanka, Bhutan etc.



Special Vostro Rupee Accounts (SVRAs): RBI has enabled INR trade settlement with 22 countries by allowing banks to open SVRAs.



INR as a Designated Foreign Currency in Sri Lanka: Paved the way for INR-based bilateral trade



Bilateral Swap Arrangements (BSA): India currently has a BSA with Japan, UAE etc.

3.2.5. Cross-Border Remittances



CONTEXT

India submitted a draft proposal to reduce the cost of cross-border remittances at MC13. However, it was not included in the final Abu Dhabi Ministerial declaration.

ANALYSIS



Key Highlights related to the proposal

- ▶ **Remittance Flow:** Out of total remittances of USD 860 billion in 2023, USD 669 billion (about 78%) went to low and middle-income countries.
- ▶ **Remittance Costs:** The remittance costs are about 6.18% globally which is well above the UN's SDG target of 3%.
- ▶ **India's Recommendations:** Encouraging digital transfers, fostering interoperable systems, promoting competition, streamlining regulations, and enhancing pricing transparency.
- ▶ **Vetoed by US & Switzerland:** The US and Switzerland have been opposing this idea as they tend to be the home to banks which facilitate these high-cost transactions.



Read From Essential Material

Chapter "Money and Banking" of 12th Macroeconomics NCERT

Significance of cost reduction in cross-border remittance

- ▶ **Increased Flow of Remittances:** Cost reduction can increase the inflow of remittances to developing countries.
- ▶ **Economic Growth:** Remittance cost reduction can translate into increased trade and business efficiency.
 - India received the highest remittances about \$125 billion in 2023, however, the cost for the remittance was around \$7 billion - \$8 billion (World Bank report)
- ▶ **Enable UPI to become Global:** Remittance cost cut will lead to a big boost for UPI transactions, which has been a game changer in India, and it will have a much greater footprint overseas. E.g., Bhutan, Singapore and UAE etc.
 - It will also help the Indian banking sector, which has been at the forefront of technology, to obtain a larger footprint in the global economy.

Conclusion

While proposals at the WTO may take time to arrive at a consensus and then move towards implementation, India should meanwhile make it easier for individuals and businesses to make or receive cross-border payments.

To know more about Insurance Sector in India, refer Article 3.2.2. of the Current Affairs Quarterly Revision Magazine of September 2023 to November 2024.

3.2.6. Reserve Bank – Integrated Ombudsman Scheme (RB-IOS)



CONTEXT

Reserve Bank of India released the Annual Report of the Ombudsman Scheme 2022-23. It is the **first stand-alone report** under the Reserve Bank – Integrated Ombudsman Scheme (RB-IOS), 2021.

ANALYSIS



Key Findings of Annual Report of Ombudsman Scheme 2022-23

- ▶ **Complaints:** Around 7 lakh complaints were received at ORBIOs and CRPC during FY 2022-23, showing an **increase of 68.24%** over last year.
- ▶ **Mode of complaint:** Around **85.64%** of the total complaints were received through **digital modes**.
- ▶ **Disposal Rate:** Overall disposal rate for FY 2022-23 at the ORBIOs stood at about **98%** with an average Turn Around Time (TAT) of 33 days.
 - Majority of maintainable complaints (**57.48%**) disposed of by ORBIOs were resolved through **mutual settlement/conciliation/mediation**.
- ▶ **Regulated Entities (REs):** **Complaints against banks formed the largest portion**, accounting for 83.78% of complaints received by the ORBIOs.
- ▶ **Major reasons for increasing complaints:**
 - **Unauthorized/fraudulent digital transactions & significant delay in reversal of failed transactions.**
 - **Lack of proper communication** from REs/ (Digital Lending Apps) **regarding terms and conditions of the loan.**
 - **Non-availability** of adequate and centralized bank-level mechanism for resolution of pension related issues.
 - **Inordinate delay in reporting updated credit information** to the CICs resulting in wrong credit report.

Way Forward

- ▶ **Utkarsh 2.0:** RBI's medium-term strategy framework (Utkarsh 2.0) has identified the following goals for enhancing consumer protection and improving grievance redress mechanisms:
 - Review and integrate the **internal ombudsman schemes**, applicable to different RE types;
 - Establish a **Reserve Bank Contact Centre** at two additional locations for local languages, including disaster recovery and business continuity facility.
- ▶ **Technology use:** E.g., leveraging **Artificial Intelligence** in the Complaint Management System (CMS).
- ▶ **Standardization:** Regulated entities should develop a **comprehensive Standard Operating Procedure (SOP) for grievance redress** based on the inputs received from the RBI Ombudsman.
- ▶ **Review:** The CMS of the REs should be designed in such a way that all **rejected complaints** are auto-escalated directly to the Internal Ombudsman without any manual intervention.

BRIEF BACKGROUND

Reserve Bank – Integrated Ombudsman Scheme (RB-IOS), 2021

- ▶ **Background:** Launched in 2021 as part of the **Alternate Grievance Redress (AGR) Framework of RBI** for resolving customer grievances in relation to services provided by the Regulated Entities of RBI.
- ▶ **Formation:** Under Banking Regulation Act, 1949, RBI Act, 1934, and Payment and Settlement Systems Act, 2007.
- ▶ **Objective:** To provide **cost-free redress of customer complaints**
- ▶ **Coverage:** Scheme covers the following Regulated Entities:
 - All **commercial banks**, Regional Rural Banks, Scheduled Primary (Urban) Co-operative Banks and Non-Scheduled Primary (Urban) Co-operative Banks with deposits size of ₹50 crore and above.
 - All **Non-Banking Financial Companies** (except Housing Finance Companies), authorized to accept deposits or have customer interface, with an assets size of ₹100 crore and above.
 - All **Payment System Participants and Credit Information Companies (CICs)**
- ▶ **Appointment of Ombudsman:** RBI may appoint one or more of its officers as Ombudsman and Deputy Ombudsman for a tenure not exceeding three years at a time.
- ▶ **Handling of complaints:** Redressal/adjudication of complaints is presently handled by 24 Offices of the RBI Ombudsman (ORBIOs) and Centralised Receipt and Processing Centre (CRPC).

3.2.7. Basel III Endgame



CONTEXT

Consumer Bankers Association (CBA) released a White Paper, "The Impact of the **Basel III Endgame Proposal** on Consumers on the Margins of the U.S. Financial System".

ANALYSIS



About Basel III Endgame

- ▶ The final set of rules of Basel III norms has been called "Basel III Endgame."
 - ▶ **Basel III is a set of measures** developed by the **Basel Committee on Banking Supervision** to strengthen the regulation, supervision, and risk management of banks.
 - ◊ **Established in 1974 Basel Committee on Banking Supervision** has 45 members comprising central banks and bank supervisors (RBI is a member).
 - ◊ Its decisions do not have legal force.
 - ▶ **Potential impact of Endgame** includes **Globally Systemically Important Banks (G-SIBs)** experiencing an increase of 21% in capital requirements.
 - ▶ **Proposed changes** are aimed at improving "strength and resiliency" of the banking system while also improving transparency and consistency in banks' capital frameworks.

Basel Norms

- ▶ **Description:** These rules focus on the **amount of capital** that banks must have against the credit, operational, and market risk of their business.
- ▶ **Basel I Norms (1987):** In 1987, the Committee introduced capital measurement system which **focused on the credit risk and risk-weighting of assets.**
 - ▶ These norms set minimum level of capital requirements that banks should have.
- ▶ **Basel II norms (2004):** Sought to improve the risk calculation in capital measurement by introducing three important pillars: **Minimum capital requirements, Supervisory Review and Market Discipline.**
- ▶ **Basel III Norms (2010):** Released in response to the financial crisis of 2007-08.
 - ▶ It aims to build robust capital base for banks and ensure sound liquidity and leverage ratios.
- ▶ **New Banking Capital Requirement Parameters Introduced by Basel III**
 - ▶ **Capital Conservation Buffers to RWAs:** Banks have to maintain a capital conservation buffer of 2.5 %.
 - ▶ **Leverage Ratio:** Banks have to maintain a leverage ratio of 3 %.
 - ▶ **Counter Cyclical Buffer:** A buffer ranging from 0 % to 2.5%.
 - ▶ **Minimum Liquidity Coverage Ratio:** It should be $\geq 100\%$.
 - ▶ **Minimum Net Stable Funding Ratio:** NSFR should be $\geq 100\%$.



Read From Essential Material

Chapter "Money and Banking" of 12th Macroeconomics NCERT

BRIEF BACKGROUND

Basel norms implementation in India:

- ▶ **Basel 1 norms** were adopted in India with the announcement by RBI in its Mid-term Review of Monetary and Credit Policy for 1998-99 to raise Capital to Risk Weighted Assets Ratio (CRAR) from 8 per cent to 9 %.
 - ▶ In 2007, RBI announced the final guidelines for implementation of Basel II.
- ▶ **Draft guidelines** for implementation of Basel III capital regulations were issued in Dec 2011.
 - ▶ **The Basel III capital regulations (Pillar I of Basel III Norms)** were implemented in India with effect from April 2013 and have been fully implemented as on October 2021.
- ▶ As compared to Basel norms, RBI's prescribed norms are stricter and more prudential.



Significance of Basel Norms



Development of better risk assessments system through capital requirement parameters



Aid in Strengthening **soundness of financial** system during extreme stress



Help improving corporate governance



Ensure that **banking system as a whole** does not crumble and its spill-over impact on the real economy is minimized

Important Terminologies related to Basel Norms

- ▶ **Tier I capital (Core Capital):** It include paid up share capital, stocks and disclosed reserve.
- ▶ **Tier II capital (Supplementary Capital):** It includes all other capital e.g. Undisclosed/revaluation/loss reserves; general provisions etc.
- ▶ **Risk weighed Assets (RWA):** RWA is linked to minimum amount of capital that banks must have relative to bank's risk from its lending activities. The more the risk, the more the capital needed to protect depositors.
- ▶ **Leverage ratio:** It shows how much of a company's capital comes from debt, or how well it can meet its financial obligations.
- ▶ **Net Stable Funding Ratio (NSFR):** It promotes resilience by creating incentives for banks to fund their activities with more stable sources.
- ▶ **Countercyclical Buffer:** It is a mechanism that allows banks to build up capital during periods of excessive credit growth to help the absorb losses during downturns.



Important Ratios Related with Basel Norms

$$\text{Leverage Ratio} = \frac{\text{Tier I capital}}{\text{Exposure Measure}}$$

$$\text{LCR} = \frac{\text{High quality liquid assets}}{\text{Total net cash outflow over next 30 days}}$$

$$\text{NSFR} = \frac{\text{Available Stable Funding}}{\text{Required Stable Funding}}$$

$$\text{CAR} = \frac{\text{Capital (Tier I and Tier II)}}{\text{Risk Weighed Assets}}$$



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3.3. AGRICULTURE & ALLIED SECTOR

3.3.1. India's Agriculture Export Policy



CONTEXT

Agricultural exports in India registered 8% decline this year (2023 – 24) and fell short of the ambitious target of \$ 60 billion by 2022 (set by India's Agricultural Export Policy, 2018).

ANALYSIS



Agriculture Export Policy (AEP) 2018

- ▶ **Objective:** To Increase Farmer income through value addition and minimize losses across value chain.
- ▶ **Elements of Agriculture Export Policy Framework:**
 - ▶ **Strategic Recommendations:** Consist of Stable trade Policy Measures, Infrastructure and Logistics Support, Holistic Approach to boost exports & Greater involvement of States in Agriculture Exports.
 - ▶ **Operational Recommendations:** Focus on building Clusters, Promoting Value added exports, Marketing & promotion of "Brand India", Attract private investments into production & processing, Increased Research & Development etc.
- ▶ **Key Targets/Aims:**
 - ▶ Double agricultural exports to over US\$ 60 billion by 2022.
 - ▶ Diversify our export basket and boost high value and value-added agricultural exports.
 - ▶ Promote novel, indigenous, organic, ethnic, and traditional agricultural exports.
 - ▶ Strive to double India's share in world agri exports by integrating with the global value chain.
 - ▶ Provide an institutional mechanism for pursuing market access, dealing with sanitary and phytosanitary issues.

BRIEF BACKGROUND

Key Data of Agricultural Exports

- ▶ Agricultural Exports touched \$48.9 billion in 2023-24, registering a decline from \$53.2 billion in 2022-23.
 - ▶ Rice constitutes 21% of total exports followed by Marine products (15%), spices (9%) etc.
- ▶ India's agricultural imports in 2023-24 declined 8%, (dropping from \$35.7 billion in 2022-23 to \$32.9 billion).
 - ▶ Vegetable oil constitutes 45%, followed by pulses (11%), fruits & vegetables (8%) etc.
- ▶ The share of India's agricultural exports and imports in world agriculture trade in 2022 were 2.4% and 1.9%, respectively (WTO's Trade Statistical Review, 2023)
 - ▶ India was ranked 9th in ranking of the global Agri exporters.

Need for New Export Policy

- ▶ **Prevalence of Export Restrictions** such as Export prohibition, export duties, minimum export price etc. Creates uncertainty for India's agricultural producers and exporters.
 - ▶ It also leads to ambiguity on India as a reliable supplier of agricultural products to world markets.
- ▶ **WTO issue:** Export restrictions are seen as a violation of WTO rules.
- ▶ **Limited Basket of Export:** Rice and sugar account for 37.4% of India's exports.
- ▶ **Virtual water export:** Producing rice uses a lot of water (3,000-5,000 liters per kg) and exporting 16.3 million tons of rice equals exporting 32.6 billion cubic meters of water.

Way-forward

- ▶ **True export competitiveness:** Focusing on improving domestic production through productivity growth, product differentiation, value addition & branding etc.
- ▶ **Technological solutions:** E.g. Netherlands is 2nd largest exporter in agriculture due to widespread use of technology.
- ▶ **Considering Climatic variations while determining Import Policies:** To ensure food security and price stability.
- ▶ **Other: Focus on Organic & Processed food products & Environmental sustainability** (emphasis on crops like pulses which require less water and fertilizers) etc.



Steps taken for promoting Agricultural Exports



Trade Infrastructure for Export Scheme



Market Access Initiatives Scheme



Agricultural & Processed Food Products Export Development Authority (APEDA)



Transport & Marketing Assistance Scheme

3.3.2. Primary Agricultural Credit Societies (PACS)



CONTEXT

Various initiatives have been taken for the expansion and modernization of PACS.

ANALYSIS



Initiatives for PACS

- ▶ **Expansion:** Foundational stone for an **additional 500 PACS** for construction of godowns & other agri-infrastructure was laid down.
- ▶ **Modernization of PACS:**
 - **Project for computerization in 18,000 PACS across the country.**
 - ◊ Under 'centrally sponsored project for computerisation of PAC' scheme, government aims to **computerise 63,000 functional PACS.**
 - **National Cooperative Database (NCD)**, inaugurated by Ministry of Cooperation, provides **all information about the cooperative sector.**
- ▶ **Other Initiatives:**
 - **Formation of 1,100 additional Farmer Producer Organizations (FPOs)** by PACS.
 - **National Cooperative Development Corporation (NCDC)** provides loans and grants to State Governments for financing primary and secondary level cooperative societies.
 - **Diversifying business portfolio:** Laws enabling PACS to undertake more than 25 business activities including dairy, fishery, floriculture etc.
 - ◊ **PACS to also function as** Pradhan Mantri Kisan Samridhhi Kendras, Pradhan Mantri Bhartiya Jan Aushadhi Kendras and Common Service Centers (CSCs).

Issues faced by PACS

- ▶ **Infrastructure:** Absence of digital infrastructure.
- ▶ **Financial:** Inadequate capital, low levels of deposits, and high non-performing assets (NPAs).
- ▶ **Human resource:** **Lack of trained staff and insufficient managerial skills among PACS members.**
- ▶ **Governance:** Managed by a body elected from local village groups which results in **political interference.**
- ▶ **Regional disparity:** Largely concentrated in **western and southern states** (Maharashtra, Gujarat, Karnataka etc.).

Way Forward

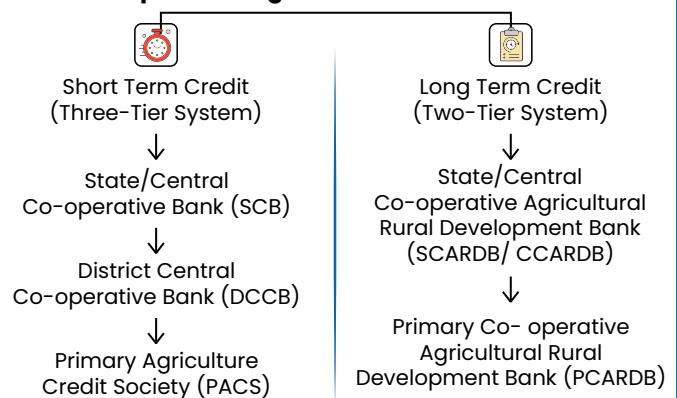
- ▶ **Encourage technology adoption:** Implementation of **Common Accounting System (CAS)** and **Management Information System (MIS)**, establish common hubs that can provide technological and other support services to PACS.
- ▶ **Financial strengthening:** Introduced a **risk-based lending model**, **implement effective** recovery measures and enhance capital base of PACS.
- ▶ **Human Resource:** Implement capacity-building programs, provide better compensation and career progression opportunities to skilled staff.
- ▶ **Improving governance:** **Regular audits, strict disclosure norms** and insulating PACS from **undue political influence.**

BRIEF BACKGROUND

About PACS

- ▶ **Definition:** PACS are the **grassroot level arms of short-term co-operative credit structure** (refer to infographics).
- ▶ **Regulation:**
 - PACS are registered under **Cooperative Societies Act** and are administered by concerned **State Registrar of Cooperative Societies (RCS).**
 - ◊ **SCBs/DCCBs** are also registered under provisions of **State Cooperative Societies Act** of State concerned and **are regulated by RBI.**
 - ◊ However, PACS are **outside purview of Banking Regulation Act, 1949** and are not regulated by RBI.
- ▶ **Refinancing:** They are refinanced by **NABARD through DCCBs and SCBs.**
- ▶ **Functions:** Gives **short-term credit loans** and also provide other **input services**, like seed, fertilizer, and pesticide distribution to **member farmers.**
- ▶ **Significance:** PACS play a key role in financial inclusion and **PACS account for 41 % of the KCC loans**, 95% of which are to small and marginal farmers (2022).
- ▶ **Current Status:** There are **more than 65000 functional PACS** across country.

Co-operative Agriculture Credit Structure



3.3.3. Agriculture and Food Security



CONTEXT

WTO's 13th Ministerial Conference (MC13), Abu Dhabi concluded without a permanent solution to the public stockholding (PSH) issue.

ANALYSIS



About PSH Policy

- ▶ **Objective:** PSH makes it possible for governments to procure crops from farmers at MSP, and store and distribute these food grains to the poor.
- ▶ **DE MINIMIS limits:** Under it country's subsidy bill should not breach limit of 10 % (for developing countries) & 5 % (for developed countries) of value of production.
 - Currently, it is **calculated as the reference price for 1986-88.**

Global Divide over PSH

- ▶ **Developing Countries:** Demands increase in DE MINIMIS limit & amendments in formula to calculate price support subsidies given to farmers for government procurement.
- ▶ **Developed Countries:** Most developed countries claim that PSH is market-distorting and that there should be no export restrictions.

Peace Clause & India's Stand

- ▶ **Peace Clause:** WTO at 9th Ministerial Conference (MC9) in Bali agreed to a "peace clause" as an interim solution for public stockholding for food security.
- ▶ **India's Demand:** India seeks a **permanent solution** to the issue of PSH and has proposed **amendments in the formula** to calculate the food subsidy cap.
 - It would legitimize higher subsidies for food stockholding programmes & protect interests of the poor and vulnerable farmers.

BRIEF BACKGROUND

About World Trade Organization (WTO)

- ▶ WTO is the international organization whose primary purpose is to open trade for the benefit of all.
 - It is the only global international organization dealing with the rules of trade between nations.
- ▶ **Established:** January 1995, **Headquarters** in Geneva, Switzerland
- ▶ **Members:** 166 (including Comoros and Timor-Leste, 2024). **India is a founding member of WTO.**
- ▶ **Objective:** To help its members use trade as a means to raise living standards, create jobs, and improve people's lives.
- ▶ **Organizational Structure**
 - **Ministerial Conference:** Highest decision-making body of the WTO and usually meets every two years.
 - **General Council: Decision-making body in Geneva,** meeting regularly to carry out functions of WTO.
 - ◊ It also meets as Dispute Settlement Body & as Trade Policy Review Body.
- ▶ **Functions:**
 - Administering WTO trade agreements;
 - trade negotiations; Settling trade disputes;
 - Monitoring national trade policies;
 - Technical assistance and training for developing countries etc.
- ▶ **Reports published by WTO:** World Trade Report; World Trade Statistical Review; Global Trade Outlook etc.
- ▶ **Challenges Faced by WTO:**
 - **Consensus between developing & developed countries.**
 - Dysfunctional Dispute Settlement System (DSS).
 - US-China Trade War

Domestic Support In Agriculture: The Boxes



Amber Box

Nearly all domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box.



Blue Box

Any support that would normally be in the amber box, is placed in the blue box if the support also requires farmers to limit production.



Green Box

Green box subsidies must not distort trade, or at most cause minimal distortion.



Related News

- ▶ WTO’s ministerial conference ended with no decision on finding a permanent solution to curbing fisheries subsidies.
- ▶ **WTO Agreement on Fisheries Subsidies (Geneva Package)** was adopted during the 12th Ministerial Conference of WTO in 2022 held in Geneva, Switzerland.
 - **Aim:** To curb harmful subsidies, which contribute to depletion of the world’s fish stocks.
 - **Special and Differential Treatment (S&DT):** Developing Countries and Least Developed Countries (LDCs) have been allowed a transition period of 2 years from the date of entry into force of this Agreement.
 - **Not accepted yet:** Acceptance from two-thirds of WTO members is needed for the Agreement to come into effect. The agreement is still short of 39 countries (March 2024).
 - ◊ **India is not part of the agreement.**
- ▶ **India’s Demands**
 - Countries that have given large subsidies in past & responsible for fish stock depletion, should bear greater responsibility under ‘polluter pays principle’ (PPP) and ‘common but differentiated responsibilities’ (CBDR-RC)
 - **Moratorium on Distant Water Fishing Nations:** For fishing or related activities beyond their EEZs for a period of at least 25 years.
 - **Exception for Developing countries and small economies** to provide subsidies for the fisheries sector.

Current Affairs Quarterly Revision (March to May 2024)

3.3.4. India’s Grain Storage System



CONTEXT

The Prime Minister inaugurated pilot project of ‘World’s Largest Grain Storage Plan in Cooperative Sector’, for 11 Primary Agricultural Credit Societies (PACS) across 11 States.

ANALYSIS




About World’s Largest Grain Storage Plan in Cooperative Sector

- ▶ **Ministry:** Ministry of Cooperation (MoC).
- ▶ **Purpose:** To establish **decentralized storage facilities at PACS level**, alongside other **agricultural infrastructure**, like, warehouses, custom hiring centers, processing units etc.
- ▶ **Benefits to PACS:** PACS can avail **subsidies and interest subvention** benefits for construction of godowns/storage facilities and setting up of other agri infrastructure.
- ▶ **Convergence of various schemes** (refer to infographics).

Need for better Grain Storage System (GGS)

- ▶ **Food Security:** Imperative to feed India’s rising population and to implement **National Food Security Act, 2013**.
- ▶ **Reduce post-harvest losses:** Post-harvest losses (due to microorganisms, rodent, etc.) **account for 10% of total food grains**.
- ▶ **Price stabilization:** Enables government to undertake **market interventions**.
- ▶ **Doubling farmer’s income:** **Insulates farmers from price volatility** by enabling **delayed selling** and facilitates them to export their surplus.
- ▶ **Promote access to credit:** Through adoption of warehouse receipt financing.



Read From Essential Material

NCERT 9th Chapter 4- Food Security in India

BRIEF BACKGROUND

Grain storage system in India

- ▶ **Storage by small farmers:** Around 60–70% of food grain produced is stored at household level using various indigenous **traditional storage** structures like Morai, Mud Kothi, etc.
- ▶ **Government storage agencies:** **Food Corporation of India (FCI), Central warehousing Corporations (CWC), and State warehousing Corporations.**
- ▶ **Private agencies:** FCI hires storage capacity from **private owners**.
- ▶ **Other stakeholders:** Warehouse Development Regulatory Authority (WDRA), Railways, and civil supply departments of states.

Other initiatives for augmentation of grain storage capacity

- ▶ Warehousing (Development and Regulation) Act, 2007 and establishment of WDRA.
- ▶ WDRA's e-NWRs (Electronic Negotiable Warehouse Receipts).
- ▶ Private Entrepreneur Guarantee (PEG) scheme for Private Participation.
- ▶ National Policy on Handling, Storage and Transportation of Foodgrains, 2000.
- ▶ Grameen Bhandaran Yojana and PM Kisan Sampada Yojana.

Challenges associated with India's grain storage

- ▶ **Unscientific storage:** Around 80% handling and warehousing facilities are not mechanized.
- ▶ **Limited storage capacity:** Total Storage Capacity (145 MMT) does not match foodgrain production (311 MMT).
- ▶ **Surplus buffer stock:** FCI has been carrying buffer stocks way in excess of buffer stocking norms.
- ▶ **Large transportation cost:** Accessing existing warehouses entails high transportation costs, discouraging small farmers.
- ▶ **Lack of private investment in warehousing:** Due to lack of land availability and multiple regulatory licenses.

Way Forward

- ▶ **Recommendations by Shanta Kumar Committee**
 - ▶ **Scientific storage:** Movement of grains needs to be gradually containerized to reduce transit losses.
 - ▶ **Flexibilities to FCI:** To operate in Open Market Sale Scheme (OMSS) and export markets.
 - ▶ **Private Sector Participation:** FCI's old conventional storages can be converted to silos with help of private sector.
- ▶ **Recommendations by Ashok Dalwai Committee**
 - ▶ **Decentralization of storage** based on unique agricultural practices, local to each district, and reducing loss at farmgate by building aggregation units at village level.
 - ▶ **Promote integrated agri-logistics systems** to enable efficient storage and transfer of value.

Schemes Identified for Convergence



Ministry of Agriculture and Farmer Welfare

- ▶ Agriculture Infrastructure Fund (AIF)
- ▶ Agricultural Marketing Infrastructure Scheme (AMI)
- ▶ Mission for Integrated Development of Horticulture (MIDH)
- ▶ Sub Mission on Agricultural Mechanization (SMAM)



Ministry of Food Processing Industries

- ▶ Pradhan Mantri Formalization of Micro Food Processing Enterprises Scheme (PMFME)
- ▶ Pradhan Mantri Kisan Sampada Yojana (PMKSY)



Ministry of Consumer Affairs, food, and public Distribution

- ▶ Allocation of food grains under the National Food Security Act, 2013
- ▶ Procurement operations at Minimum Support Price

3.3.5. Pradhan Mantri Fasal Bima Yojana (PMFBY)

CONTEXT

The enrolment of farmers under the PMFBY has crossed a record **40 million in 2023-24**, an increase of **27% from the 31.5 million enrolled in FY23**.

ANALYSIS

Salient features of PMFBY (launched in 2016)

- ▶ **About Scheme:** Central Sector Scheme to provide comprehensive crop insurance from pre-sowing to post-harvest period
- ▶ **Objectives:**
 - ▶ **To provide insurance coverage** and financial support to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests & diseases.

Key Initiatives under PMFBY



CROPIC (Collection of Real Time Observations and Photo of Crops)

Weather Information Network Data Systems (**WINDS**) portal



ISRO's Geo-platform, Bhuvan, provides data on plantation, pest surveillance and weather

Forecasting Agricultural output using Space, Agro- meteorology and Land based observations (**FASAL**) project

- To stabilise the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- ▶ **Premium to be paid by farmers:**
 - 2% for Kharif crops
 - 1.5% for Rabi crops
 - 5% for commercial horticulture crops
- ▶ **Coverage of Farmers:** All farmers including sharecroppers and tenant farmers can avail it.

Challenges in FMBY



Higher cost of premium subsidy



Premium deducted from non-participating farmers



Delays in settlement



Delay in action against Defaulting Insurance Companies



Difficulties to assess crop damage

Way forward

- ▶ **Ensure timely release of premium subsidy:** To maintain strict financial discipline, subsidy payment should be streamlined through an escrow account jointly administered by the State government and the Centre.
- ▶ **Presence of insurance companies in every tehsil of the district:** It will be crucial for farmers in order to mitigate the problems faced in availing the scheme benefits.
- ▶ **Corporate Social Responsibility (CSR):** Insurance companies can plan to spend a share of their profits towards CSR in the districts from where profits are earned.
- ▶ **Other: Penalties** on defaulting Insurance Companies, **adoption of smart sampling techniques** etc.

3.3.6. Krishi Vigyan Kendras

CONTEXT

The Indian Council of Agricultural Research (ICAR) celebrated the Golden jubilee year of establishment of the Krishi Vigyan Kendra (KVK).

ANALYSIS

Role of KVKs in Agricultural Extension Services (AES)

- ▶ **On-Farm Testing:** KVKs conduct field trials to assess the adaptability of new agricultural technologies.
- ▶ **Frontline Demonstrations:** Demonstrate latest agricultural technologies to farmers and extension workers.
- ▶ **Advisory Services:** Provide necessary information and advisory services on various aspects of agriculture like cropping patterns, pest control, post-harvest technology etc.
- ▶ **Training:** Organize training programs to update the farmers with latest advances in agricultural research.
- ▶ **Production of good quality seeds** and planting material.
- ▶ **Resource and Knowledge Centre:** Supporting public, private, and voluntary sector initiatives in agricultural economy.

BRIEF BACKGROUND

About Krishi Vigyan Kendra (KVK)

- ▶ KVKs aims at assessment of location specific technology modules in agriculture and allied enterprises.
 - KVKs are **only institution at district level** for technological backstopping in agriculture and allied sectors.
 - They are an **integral part of the National Agricultural Research System (NARS)** and functions as **Knowledge and Resource Centre of agricultural technology**.
 - Currently, there are **around 731 KVKs**, established under **eleven** Agricultural Technology Application Research Institute (**ATARI**) zones.
- ▶ **Financing:** 100% financed by the Centre.

Challenges in Agricultural Extension Services

- ▶ **Limited Reach:** Many farmers, especially in remote and marginalized areas, still have limited access to KVKs' services.
- ▶ **Less focus on Small and Marginal Farmers:** Small farmers receive their inputs at last due to lack of established networks.
- ▶ **Inadequate Infrastructure:** Several KVKs lack necessary infrastructure, such as well-equipped laboratories, demonstration farms, and training facilities etc.
- ▶ **Knowledge and Skill Gaps:** Gaps in knowledge and skills of KVK staff, particularly in emerging areas like climate-smart agriculture, precision farming, and digital technologies.

▶ Other information:

- ▶ **Dr. Mohan Singh Mehta committee** mooted the idea of establishment of Farm Science Centre (Krishi Vigyan Kendra).
- ▶ **First KVK** was established in 1974 at **Puducherry** under **Tamil Nadu Agricultural University (TNAU), Coimbatore.**

Conclusion

There is **need to strengthen the resource base** through increased budgetary allocations and dedicated human resource to address the resource constraints faced by the KVKs. Moreover, **upgrading Infrastructure** through inclusion of equipped laboratories, demonstration farms, and training facilities, can improve the KVKs' ability to deliver quality services.

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हिंदी माध्यम में भी उपलब्ध

3.4. INCLUSIVE GROWTH

3.4.1. High Income and Wealth Inequality in India



CONTEXT

Several reports have underscored high income and wealth inequality in India.

ANALYSIS



About Economic Inequality in India

- ▶ **Wealth Inequality:** Top 5% of Indians own more than 60% of country's wealth (Oxfam report).
- ▶ **Income Inequality:** 22.6% of national income went to top 1% (World Inequality database, 2022-23).
 - ▶ **Rural-Urban Divide:** Average Monthly Per Capita Consumption Expenditure is Rs. 3,773 in rural and Rs. 6,459 in urban India (Household Consumption Expenditure Survey 2022-23).
 - ▶ **Gender Pay Gap:** Men earn 82 % whereas women earn 18 % of the labour income. (World Inequality Report 2022).

Measures Undertaken to Reduce Economic Inequality

- ▶ **Inclusive Growth:** Mahatma Gandhi National Rural Employment Guarantee Yojana, Deendayal Antyodaya Yojana-National Rural Livelihood Mission, PM Awas Yojana, etc.
- ▶ **Financial Inclusion:** Pradhan Mantri Mudra Yojana, Stand-Up India Scheme etc.
- ▶ **Social security:** Atal Pension Yojana, PM Suraksha Bima Yojana (Accident Insurance), PM Jeevan Jyoti Yojana (life insurance) etc.
- ▶ **Gender Equality:** Beti Bachao Beti Padhao, One Stop Centre Scheme, SWADHAR Greh, PM Matru Vandana Yojana etc.
- ▶ **Workers welfare:** The Code on Wages passed (2019), recently government sought technical assistance from ILO to create a framework for living wage (Presently, India follows the minimum wage).
 - ▶ **Living wage** refers to wage level necessary to afford a decent standard of living for workers and their families.

BRIEF BACKGROUND

Reasons for Rising Economic Inequality

- ▶ **Uneven Economic Growth:** E.g. Service sector contributes about 60% of GDP & is mainly concentrated in Maharashtra, Karnataka etc.
- ▶ **COVID-19 Pandemic Impact:** Billionaires in India increased from 102 in 2020 to 166 in 2022, while number of hungry people increased from 19 crores to 35 crores.
- ▶ **Tax System:** Government reduced corporate tax slabs from 30% to 22%, while excise duties & GST on goods and services substantially increased.
 - ▶ 64% of the total GST came from bottom 50% of population.
- ▶ **Lack of Education:** It has trapped some people in low-paid jobs and depressed growth of bottom 50% of Indians (world inequality lab).
- ▶ **Liberalization, Privatization and Globalization (LPG):** Telecom and civil aviation benefitted while agriculture and small-scale industries remained neglected.

Impact of Economic Inequality



Social Unrest & Conflict



Reduced Social Mobility



Environmental Degradation



Perpetuation of Poverty & Deprivation



Hinders Human Development



Political Instability



Reduced Economic Growth

Challenges in Countering the Wealth and Income Inequality

- ▶ **India's massive & diverse population** makes it challenging to formulate & implement uniform initiatives effectively.
- ▶ **Persistent Social Inequalities** based on caste, gender, etc. continue to perpetuate economic disparities.
- ▶ **Limited financial resources** constrain government's ability to fund programs targeting economic inequality.

- ▶ Inefficient governance, corruption, and poor implementation of policies and programs.

Way Forward

- ▶ **Inclusive Economic Growth:** Invest in infrastructure, create jobs & support entrepreneurship, in rural areas etc
- ▶ **Strengthening Social Security Measures:** Cash transfers, subsidies, and pension schemes etc.
- ▶ **Taxing India's Wealthiest:** Taxing even 1% is enough to fund major government schemes.
- ▶ **Other:** Ensure access to education and healthcare, addressing Social and Cultural Barriers that perpetuate inequality etc.

3.4.2. Human Development Report (HDR) 2023–2024



CONTEXT

United Nations Development Programme (UNDP) released the Human Development Report (HDR) 2023–2024 titled "Breaking the Gridlock: Reimagining cooperation in a polarized world".

ANALYSIS



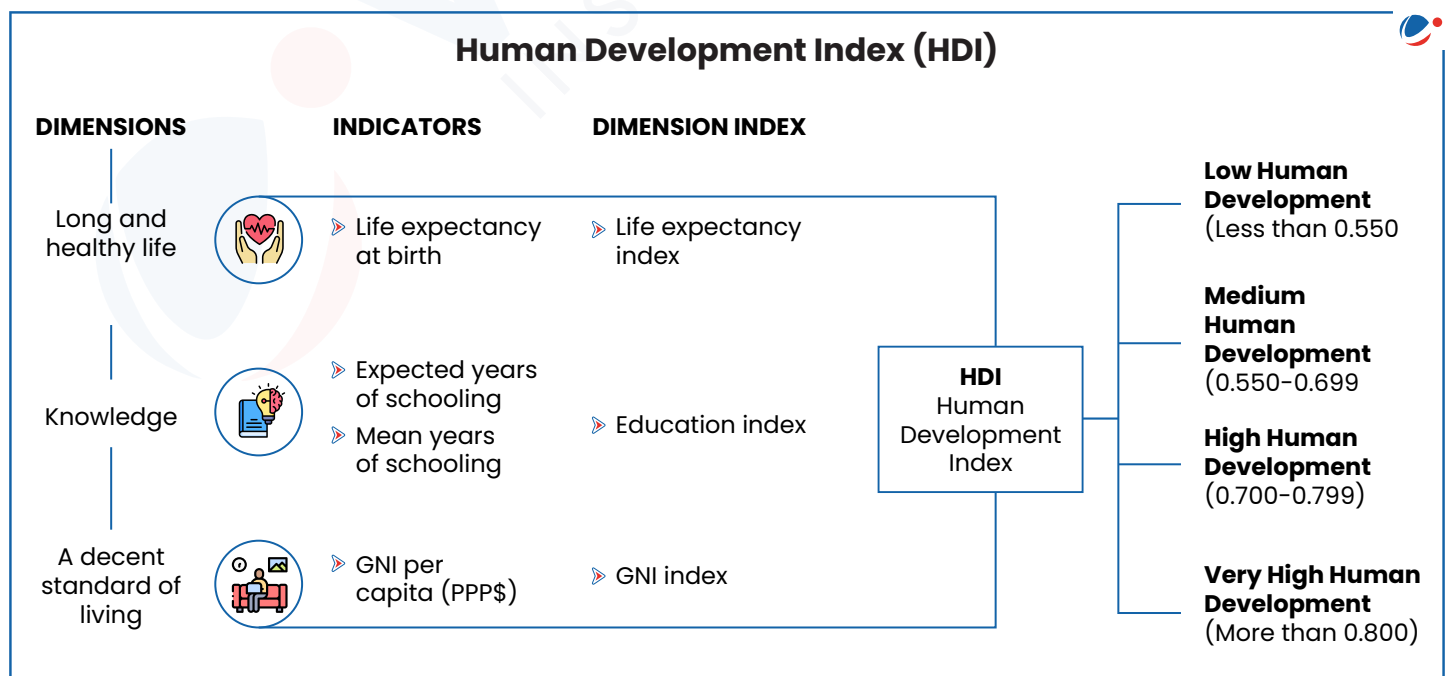
Global Findings

- ▶ **Human Development Index (HDI):**
 - ▶ **Uneven Recovery:** Rich countries are experiencing record levels of human development, while half of the world's poorest countries remain below their pre-crisis level.
 - ▶ **Economic Concentration:** Almost 40 % of global trade in goods is concentrated in three or fewer countries.
- ▶ **Widening Human Development Gap:** The two-decade trend of steadily reducing inequalities between wealthy and poor nations is now in reverse.
- ▶ **Rise in Trend of Democracy Paradox:**
 - ▶ Democracy Paradox means where the population thinks positively about democracy but supports leaders who undermine democracy.
 - ▶ This paradox has fuelled political polarization and inward-looking policy approaches.

BRIEF BACKGROUND

About HDR

- ▶ **Released by:** United Nations Development Programme (UNDP) annually since 1990.
- ▶ **Objective:** Examines major global challenges that affect human development and suggest recommendations.
- ▶ **Human Development Index (HDI):** HDI developed by Pakistani economist Mahbub ul-Haq published since 1990, is the core of the HDR.



Current Affairs Quarterly Revision (March to May 2024)

Key Findings about India

- ▶ **HDI: Rank Improved to 134 in 2022** from 135 in 2021 (and 130 in 2018).
- ▶ **HDI Value:** Increased to 0.644 from 0.633 in 2021.
 - ▶ **Life expectancy at birth:** Improved to 67.7 years (in 2022) from 67.2 (in 2021).
 - ▶ **Expected years of schooling:** Increased to 12.6 years from 11.9 years.
 - ▶ **Mean years of schooling:** Increased to 6.57 years.
 - ▶ **Gross National Income per capita:** Improved to \$6,951 from \$6,542.
- ▶ **Category:** Medium human development category.
- ▶ **Comparison with the Neighborhood:** India ranks below China (75), Sri Lanka (78), Maldives (87), Bhutan (125), and Bangladesh (129). Myanmar (144), Nepal (146), Pakistan (164) and Afghanistan (182) have been ranked lower than India.

Other major indices measuring human development

Index	Measures	India's Performance
Gender Inequality Index (GII)	The GIi measures gender inequalities in 3 key dimensions – reproductive health, empowerment and labour market.	India has jumped 14 places to rank 108 in 2022, from 122 in 2021.
Multidimensional Poverty Index (MPI)	MPI captures the multiple deprivations that people in developing countries face in their health, education and standard of living.	There are more than 230 million people in Multidimensional poverty in 2021 in India.
Gender Development Index (GDI)	GDI measures disparities on the HDI by gender.	India shows low equality in HDI achievements between women and men with absolute deviation from gender parity of more than 10 %.
Inequality-adjusted Human Development Index (IHDI)	IHDI contains two related measures of inequality—the IHDI and the overall loss in HDI due to inequality.	India's rank declined by 6 places to 140th in IDHI.
Planetary pressures-adjusted Human Development Index	It adjusts the HDI for planetary pressures in the Anthropocene to reflect a concern for intergenerational inequality.	With 3% difference from HDI value, India ranks at 127th.



3.4.3. Household Consumption Expenditure Survey (HCES) 2022-23



CONTEXT

National Sample Survey Office (NSSO) released **HCES 2022-23**, after a gap of over 10 years since last survey in 2011-12

ANALYSIS



Key Findings of HCES 2022-23

- ▶ **Overall Trend:** Average Monthly Per Capita Consumption Expenditure (MPCE) has been **increasing** since 1999-2000. It has **increased around 2.6 times in rural areas and 2.5 times in urban areas** since the last survey.
 - **Rural-urban Divide:** Average MPCE has been **Rs. 3,773 in rural India and Rs. 6,459 in urban India.**
 - **Rich-Poor Divide:** Richest 5 % of rural and urban areas spend nearly 8 times and 10 times more than the bottom 5 % respectively.
- ▶ **State-wise Variation:** MPCE is the **highest in Sikkim and lowest in Chhattisgarh.**
- ▶ **MPCE of Agriculture Households:** Consumption expenditure of agricultural households (Rs 3,702) falls below rural average (Rs 3,773) for the first time.
 - **Gap between MPCE of agricultural families & overall average of rural households has been narrowing.**
- ▶ **Consumption Expenditure among Disadvantaged Sections:** In rural areas, **Scheduled Tribes (STs) reported the lowest MPCE**, followed by Scheduled Castes (SCs) both less than the rural average.
 - **In urban areas, SCs reported the lowest MPCE**, followed by STs and OBCs.
- ▶ **Expenditure on Food:** Share of expenditure on food has gradually declined while **share of non-food items has increased** for both urban and rural households, since the 1999-2000 survey.
 - **Further, expenditure has shifted to high-value and nutritious animal and horticulture.**

BRIEF BACKGROUND

About Household Consumption Expenditure Survey (HCES)

- ▶ **Objective:** It is designed to **collect information on the consumption of goods and services by households.**
- ▶ **Conducted by:** NSSO under the **Ministry of Statistics and Programme Implementation (MoSPI)** has been conducting HCES at regular intervals (**roughly every 5 years**).
 - **NSSO is part of NSO and a subordinate office under the control of MoSPI.** National Statistics Office (NSO) consists of the Central Statistics Office (CSO) and NSSO.
 - It conducts **Periodic Labour Force Survey (PLFS), Annual Survey of Industries, and Urban Frame Survey, etc.**
- ▶ **Utility of HCES:** The data is useful for understanding **consumption and expenditure patterns, standard of living and well-being of households.**
 - It can play a key role in **reviewing critical economic indicators, including GDP, poverty levels, and Consumer Price Inflation.**



3.4.4. Start-Ups In Rural India



CONTEXT

Start-ups are emerging as a beacon of hope in Rural India, especially in the realm of agriculture.

ANALYSIS



About Rural Start-ups

- ▶ **Rural Start-ups:** Range from agri-tech and e-commerce platforms to healthcare and education services which are specifically catering demand of rural communities.
- ▶ **Enabling Factors:** Internet Penetration and digital inclusion, Government support, Huge unserved customer base, Rising education level, Financial inclusion etc.

Challenges Faced by the Rural Startups

- ▶ **Connectivity gap with Suppliers in Urban Areas:** Results in delays, increased costs, impacts their overall operational efficiency.
- ▶ **Financial Accessibility:** Reluctance of lending by financial institutions, limited availability of banking services in rural areas.
 - ▶ Urban startups in Bangalore, Delhi & Mumbai have collectively accounted for **92% of startup** funding over past 9 years.
- ▶ **Lack of Support System:** Absence/lack of mentorship, networking opportunities, and incubation centers etc.
- ▶ **Difficulty in Finding Early Adopters in Rural Areas:** Due to lower income, & digital penetration.

Way Forward

- ▶ **Policy Support:** To address challenges faced by rural startups such as infrastructure gaps, access to finance etc.
- ▶ **Institutional Support:** for the transformation of agri-startup intentions into profitable enterprises.
- ▶ **Government and NGO Collaboration:** To align efforts and resources for rural startup development.
- ▶ **Sustainability instead of Scalability:** The rural startups must aim to evolve into sustainable employment generating enterprises, aligning with the broader vision of Vikasit Bharat.

Types of Rural Start-ups



Founders based in urban areas with solutions catering to rural areas:
ex-Jai Kisan



Founders belonging to rural areas with solutions catering to rural areas: ex Miticool



Self-Help Groups: Ex - Anand Milk Union Ltd. (AMUL)



Micro, Small, and Medium Enterprises (MSMEs): More than 50% of total MSMEs in India are in rural areas.

Role of Start-ups in Rural Economy



Job creation & Rural Development. E.g., Meesho, Udaan etc.



Education & Skill Development E.g., Paathshaala, Learning Delight etc.



Financial Inclusion
E.g., Bank Saathi



Women Empowerment E.g., Lijjat Papad, Farm Didi etc.



Agricultural innovation E.g., Irrigation as a Service (IaaS) improves water efficiency and crop yield



Environmental Sustainability E.g., AgriVijay, Earthshastra Ecotech pvt. Ltd.



NewGen Innovation and Entrepreneurship Development Centre



Startup India (2016) & Startup India Seed Fund Scheme

Initiatives Undertaken



Innovation & Agri-Entrepreneurship Programme



Agriculture Accelerator Fund (AAF)

3.5. INFRASTRUCTURE & LOGISTICS

3.5.1. Asset Monetization



CONTEXT

National Highway Authority of India (NHAI) raised its highest-ever monetization value of Rs. 15,624.9 Crore through the Infrastructure Investment Trust (InvIT) mode

ANALYSIS



About Asset Monetization (AM)

- ▶ **Definition:** It is the process of creating new sources of revenue for the government and its entities by unlocking the economic value of unutilised or underutilised public assets such as property, airports, pipelines, etc.
- ▶ **Genesis:** Vijay Kelkar committee recommended for first time in 2012.
 - It was announced in the **Union Budget 2021-22** through the **National Monetisation Pipeline**.
- ▶ **Process of Asset Monetisation**
 - AM involves the **license/lease of a government-owned asset** to a private sector entity for a specific period in exchange for payments.
 - The transfer of rights in exchange for payments is governed by a **concession agreement** that facilitates **balanced risk-sharing** between the **public authority and the private party**.
 - ◊ Concession Agreement (CA) is a contract that grants a company the right to operate a specific business within a government's jurisdiction or on another firm's property, under certain conditions.

Need for Asset Monetisation (AM) in India

- ▶ **Funding National Infrastructure Pipeline (NIP):** Aimed at creating world-class infrastructure NIP envisages an investment of 111 lakh crore over 2020 to 2025.
- ▶ **Reducing Fiscal Burden:** Private investment during AM can alleviate the fiscal burden on the public sector.
- ▶ **Finance to the State for the creation of new infrastructure**
- ▶ **AM will invite private sector efficiencies** and transparency in the management of public assets.
- ▶ **Facilitate economic development:** It could upgrade economic productivity, encourage demand, create jobs etc.

Way Forward





- ▶ **A clear road map and regulatory clarity** can encourage private sector participation.
- ▶ **Capacity building support on asset monetisation processes:** e.g., providing training on asset valuation, revenue projections etc.
- ▶ **Assets Structuring:** Customized product packaging & structuring for diverse investors with varying risk appetites.

BRIEF BACKGROUND

Initiatives taken for Asset Monetization

- ▶ **National Monetisation Pipeline (NMP):** The government has identified **13 sectors to monetise its brownfield infrastructure assets**.
 - **Top 5 sectors capture ~83% of aggregate pipeline:** Roads (27%), Railways (25%), Power (15%), Oil & Gas pipelines (8%), and Telecom (6%).
 - **Monetisation potential of Rs 6.0 lakh crores through core assets** of Central Government from FY 2022 to FY 2025.
- ▶ **Various assets/ asset classes targeted for monetisation:**
 - Railways will monetise **Dedicated Freight Corridor** assets.
 - Airports will be monetised for **operations and management** concession.
- ▶ **National Land Monetization Corporation:** A Special Purpose Vehicle (SPV) for undertaking surplus land monetization of Central Public Sector Enterprises (CPSEs) & other Government agencies.
- ▶ **Asset Monetisation Dashboard:** For tracking progress and for providing visibility to investors.

Challenges Faced in Asset Monetization

 <p>Valuation</p> <p>Fixing valuation of public assets, especially brownfield projects.</p>	 <p>Implementation</p> <p>E.g., Ministry of Railways is unable to monetise assets in comparison to the given targets.</p>
 <p>Transparency</p> <p>Ambiguity about how proceeds from monetization will be accounted and spent.</p>	 <p>Limited participation of bidders</p> <p>due to lack of a clear sector-specific roadmap for monetisation</p>

3.6. MISCELLANEOUS

3.6.1. India-EFTA Trade and Economic Partnership Agreement



CONTEXT

India-European Free Trade Association (EFTA) signed a Trade and Economic Partnership Agreement (TEPA).

ANALYSIS



Key Highlights of TEPA

- ▶ For the first time, India has signed an FTA with Members of EFTA.
- ▶ Aim: To increase FDI by \$100 billion and facilitate the generation of 1 million jobs in India.
- ▶ Legal Commitment: First time in the history of FTAs, a legal commitment is made about promoting target-oriented investment and the creation of jobs.
- ▶ Mutual Recognition Agreements (MRAs): TEPA has provisions for MRAs in Professional Services like nursing, architects, etc.
- ▶ Tariff Reduction: Eliminate tariffs on 92.2 % of its tariff lines, covering 99.6 % of India's exports.
- ▶ Market Access: EFTA's market access offer covers 100% of non-agri products and tariff concession on Processed Agricultural Products (PAP).
- ▶ Intellectual Property Rights (IPR) Commitments: Are aligned with TRIPS standards.

BRIEF BACKGROUND

About EFTA

- ▶ Established in 1960 through the Stockholm Convention.
- ▶ Members: Switzerland, Norway, Iceland, and Liechtenstein (not part of the EU).

India-EFTA Trade Relations

- ▶ Total Merchandise Trade: Exceeded US\$ 22.33 billion (2023).
- ▶ Largest trading partner among EFTA: Switzerland is the largest trading partner followed by Norway.
 - India has a trade deficit with Switzerland due to gold imports.
- ▶ EFTA: 13 million population; More than \$1 trillion combined GDP; 9th largest merchandise trader in the world; 5th largest trader in commercial service.

Significance of TEPA



Economic Growth due to liberalization of Trade & Services



Boost exports



Facilitate access to EU Market



Encourage domestic manufacturing by providing impetus to "Make in India"



Facilitate access to leading technologies

Key issues regarding TEPA

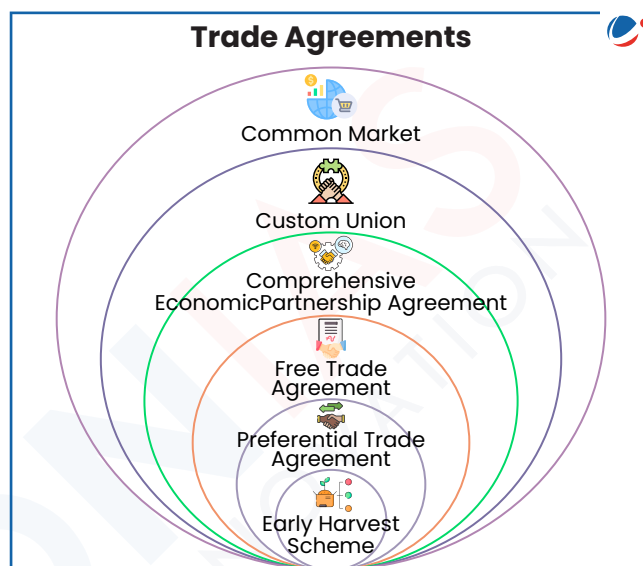
- ▶ **Data Exclusivity:** Insisted by EFTA nations, would prevent domestic generic drug manufacturers from utilising data from preclinical tests and clinical trials.
 - India has already rejected it.
- ▶ **Exclusion from Trade Tariffs:** India has excluded sensitive sectors like agriculture and dairy which is acting as bone of contention in EFTA countries.
- ▶ **Asymmetric Trade Benefits to EFTA:** India agreed to significant tariff reductions on many goods over 10 years, while EFTA countries already have very low tariffs.
- ▶ **Constraint with Investment Obligation:** Under TEPA, India has the option to revoke tariff concessions granted to EFTA nations only after 18 years, if they fail to meet a FDI commitment.

Potential areas of cooperation in future

- ▶ **MSME Integration:** Creating initiatives that allow small and medium-sized businesses (MSMEs) to be a part of trade flows and the global market.
- ▶ **Business Outreach:** Both sides can organise workshops and seminars to educate businesses on the agreement's specifics, tariff reductions, and new market opportunities.
- ▶ **Innovation and Sustainability:** Support cooperation in fields including clean technologies, renewable energy, and sustainable practices.

Types of Trade Agreements

- ▶ **Early Harvest Scheme:** A precursor to an FTA.
- ▶ **Preferential Trade Agreement:** Agree to reduce tariffs on agreed number of tariff lines. E.g., India-MERCOSUR.
- ▶ **FTA:** Reduce or eliminate customs tariff and non-tariff barriers on trade between them. E.g., India Sri Lanka.
- ▶ **Comprehensive Economic Partnership Agreement:** Along with reduction/elimination of tariffs, it also encompasses agreement covering the regulatory issues. E.g., India-Japan CEPA.
- ▶ **Custom Union (CU):** Trade at zero duty among themselves, however maintain common tariffs against rest of the world.
- ▶ **Common Market:** It's a CU to facilitate free movements of labour and capital. E.g., European CU.



3.6.2. Financing for Sustainable Development Report 2024

CONTEXT

Inter-agency Task Force on Financing for Development released Financing for Sustainable Development Report, 2024.

ANALYSIS

Key Highlights of the Report

- ▶ **Progress towards SDGs:** Around half of 140 SDG targets are deviating from the required path
- ▶ **Financing Gaps:** Estimates SDG financing gaps at between USD 2.5 trillion and USD 4 trillion annually.
- ▶ **Finance Divides:** Developing countries are faced with significantly worse terms of access to contingency financing.
- ▶ **Weak enabling environment for SDGs:** Currently, public subsidies & private investment in fossil fuels and brown activities are still very high.

About Financing for Sustainable Development

- ▶ It is centered around supporting the follow-up to the agreements and commitments on Financing for Development:
 - ▶ in Monterrey, Mexico in 2002; in Doha, Qatar in 2008; and in Addis Ababa, Ethiopia in 2015.
- ▶ **Addis Ababa Action Agenda (2015)** provides a new global framework for financing sustainable development.



Read From Essential Material

Chapter 7th of Indian Economic development Class 11 NCERT

BRIEF BACKGROUND

About Inter-Agency Task Force on Financing for Development

- ▶ It comprises over 60 United Nations agencies, programmes and offices, regional economic commissions and other relevant international institutions.
- ▶ UN Department of Economic and Social Affairs (UNDESA) serves as coordinator of the initiative.
- ▶ It was convened by the United Nations (UN) Secretary General to follow up on the seven action areas of the Addis Ababa Action Agenda.

► It identified **seven action areas** for financing sustainable development (see infographic)



Challenges in financing sustainable development

- **Rise in Systemic Risks:** E.g., Covid 19 pandemic increased frequency of disasters etc.
 - **Annual economic disaster damage estimated at \$173 billion** between 2020 and 2023.
- **Sluggish World Economy** has reduced GDP growth prospects in developing countries to just over 4% annually on average from 2021 to 2025.
- **Sovereign Debt burden:** E.g., **Median debt service burden for LDCs rose from 3.1% of revenue in 2010 to 12% in 2023** – highest level since 2000.
- **Rising geopolitical tensions:** Geopolitical tensions, conflict, war etc. leading to **severe fragmentation of global trading system** which could **cost up to 7% of global GDP**.

Actions required for bridging financing gap for sustainable development

- **Enabling Environment:** Countries should align their efforts to attract private investment with the SDGs, using fiscal and tax policies to create favorable conditions.
- **Strengthening Public Development Banks:** They often offer long-term financing that aligns better with social and environmental sustainability goals.
- **Integrated Financing Approaches:** To develop national financing strategies and integrate planning and financing policy functions.
- **Reforms in multilateral system:** E.g., **WTO reform**, with a focus on dispute settlement etc.

3.6.3. India and Global Value Chains (GVCs)

CONTEXT

NITI Aayog CEO highlighted the need for India to get into global value chains (GVCs) to boost exports and secure supply chains.

ANALYSIS

Importance of Global Value Chains (GVCs)

- **Productivity Increase:** Access to cheaper or higher quality imported inputs, increased knowledge sharing, leveraging economies of scale etc.
- **Reduced Poverty:** A 1% increase in GVC participation is estimated to boost **per capita income** levels by more than 1% (about twice as much as conventional trade).
- **Employment Creation:** Catalyzing **structural transformation** or generate **new linkages**.
- **Labour intensive and female-driven:** In GVC sectors like apparel, footwear, and electronics, lower-skilled, young, female workers account for **largest employment share**.
- **Greater scope for Specialisation:** Due to international fragmentation of production, countries can **create targeted industries** for a particular stage of production.

BRIEF BACKGROUND

What are Global Value Chains (GVCs)?

- It refers to a **production sequence** for a final consumer good, with each stage **adding value** (e.g., production, processing, marketing, transportation, distribution) and with at least **two stages taking place in different countries**.
- As per OECD, an estimated **70 % of trade** occurs **through GVC**.
- Countries can participate in GVCs by engaging in either **backward or forward linkages** based on their economic specialisation.
 - **Backward linkages:** when one country **uses inputs** from another country for domestic production.
 - **Forward linkages:** when one country **supplies inputs/intermediate goods** that are used for production in another country.

India's participation in GVC

- ▶ **Low Participation:** India's GVC-related trade (40.3% of gross trade in 2022) is significantly low.
- ▶ **Low export:** Network products like electronics, computers, telecommunication equipment and vehicles, account for only 10% of India's merchandise exports.
- ▶ **Key products driving India's GVC participation:** Coal, petroleum, business services, chemicals, transport equipment etc.
- ▶ **Predominance on forward linkages:** Heavy dependence on exports of raw materials and intermediate products.

Reasons behind India's weak GVC integration

- ▶ **Poor trade infrastructure:** Delays at ports or customs can jeopardize entire production chain, leading to exclusion from the network.
- ▶ **Suboptimal quality standards:** Due to high export standards and timelines, Indian garment firms find it easier to supply to domestic market.
- ▶ **Sector Bias:** Despite having comparative advantages in unskilled labour-intensive manufacturing activities, India's commodity composition of exports is **biased towards capital- and skill-intensive products**.
- ▶ **Domestic policy challenges:** Complex tax policies and procedures, complex labour laws, and uncertainty in trade policy (increase in average tariffs in India to 18.1% (2022) from 13% (2014)) create obstacles in scaling up production.

Measures taken to Integrate India in GVC



Foreign Trade Policy
2023



PLI Scheme for Large
Scale Electronics
Manufacturing



One District One Product
- Districts as Export Hubs
Initiative



Make in India Initiative

Way forward

- ▶ **Improving the Business Environment:** Ensuring clarity on dispute settlement, promoting financial access, early implementation of new labour codes.
- ▶ **Facilitating Trade:** Establishing stable tariff rules, simplifying border procedures, establishing a National Trade Network, and implementing Indian National Strategy on Standardisation.
- ▶ **Stabilizing regulatory environment, targeting High-Value GVC Segments** such as product conceptualization, design, prototype development etc, and promoting labour-intensive sectors.



3.6.4. Insurance Regulatory and Development Authority Of India (IRDAI)



CONTEXT

The Insurance Regulatory and Development Authority of India (IRDAI) celebrated its 25th Anniversary.

ANALYSIS



About IRDAI

- ▶ **Genesis:** Formed based on recommendations of the Malhotra Committee as an autonomous body in 1999.
 - Incorporated as a statutory body in 2000 under IRDAI Act, 1999.
- ▶ **Objectives:** Speedy & orderly growth of the insurance industry, speedy settlement of genuine claims, etc.
- ▶ **Composition:** IRDAI is a **10-member body** (chairman, 5 full-time & 4 part-time members) under **Ministry of Finance**.

Significance of IRDAI in transforming the Insurance sector

- ▶ **Insurance Growth:**
 - **Insurance penetration** (percentage of insurance premium to GDP) at **4.2%** in **2021-22** compared to **2.71%** in **2001-02**.
 - **Insurance Density** (ratio of premium to population) at **\$91** in **2021-22** compared to **\$11.5** in **2001-02**.
- ▶ **'Insurance for All' by 2047:** IRDAI has committed to ensure every citizen has an appropriate life, health and property insurance cover etc by 2047.
- ▶ **Expanded Regulatory Role:** New intermediaries have started operating in market, like **corporate agents, Bancassurance** (selling insurance products through banks), **on-line sales, etc.**

BRIEF BACKGROUND

Domestic Systemically Important Insurers (D-SIIs)

- ▶ D-SIIs refer to **insurers of such size, market importance, and domestic and global inter connectedness**, whose distress or failure would cause a **significant dislocation in the domestic financial system**.
 - D-SIIs are perceived as **'too big or too important to fail'** (TBTF).
 - D-SIIs are **subject to additional regulatory measures**.
- ▶ Insurance Regulatory and Development Authority of India (IRDAI) released **2023-24 – List of D-SIIs**.
 - Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC Re) and New India Assurance Company continue to be identified as D-SIIs.

Role of IRDAI



Issue, renew, modify, withdraw, suspend/cancel certificates of registration for insurance companies.



Protect the interests of policyholders.



Adjudicate disputes between insurers and intermediaries or insurance intermediaries.



Promote & regulate professional organizations connected with the insurance and reinsurance business.

Major Initiatives	Recent Regulatory Governance Reforms
<ul style="list-style-type: none"> ▶ Bima Sugam: An online insurance marketplace, Bima sugam is a part of IRDAI's Bima Trinity - Bima Vistaar, Bima Vahak, and Bima Sugam. ▶ Saral Jeevan Bima: Provides basic protection to individuals in low-income groups. ▶ Bima Bharosa: An Integrated Grievance Management System ▶ Pan India survey: Through National Council of Applied Economic Research (NCAER) for creating insurance awareness. 	<ul style="list-style-type: none"> ▶ IRDAI has replaced 34 regulations with 6 regulations and introduction of 2 new regulations enhancing clarity and coherence in the regulatory landscape. <ul style="list-style-type: none"> ➤ IRDAI (Insurance Products) Regulations, 2024: Merged 6 regulations into a unified framework aimed at enabling insurers to swiftly respond to evolving market demands, enhancing ease of conducting business, & boosting insurance penetration. ➤ IRDAI (Corporate Governance for Insurers) Regulations, 2024 aim to establish a robust governance framework for insurers, defining roles & responsibilities of board and management.

To know more about Insurance Sector in India, refer Article 3.2.5. of the Current Affairs Quarterly Revision Magazine of December 2023 to February 2024.

3.6.5. Digital Monopolies and Regulation of Digital Ecosystem



CONTEXT

Ministry of Electronics & Information Technology flagged concerns regarding **abuse and misuse of dominant position creating digital monopolies** over 'delisting of certain applications from Play Store by Google'.

ANALYSIS



What is Digital Monopoly?

- ▶ **Digital Monopoly** refers to a situation where a **single company/platform holds significant control** over their respective digital ecosystems and markets. E.g. Big tech companies like Google, Amazon, Facebook, Apple, and Microsoft.
- ▶ **Key Characteristics**
 - **Dominance:** Market share, often over 70–80%.
 - **High Barriers to Entry** in the market due to factors like high costs, access to data, etc.
 - **Network Effects:** Platform becomes essential & indispensable due to strong network effects
 - **Exclusive access to large amounts of user data and information.**
 - **Lack of competition:** Monopolistic company dictate terms, prices etc.

Regulation of Digital Ecosystem in India

- ▶ **Competition Act, 2002:** Aims to promote and sustain competition in markets and protect interests of consumers.
 - **Competition (Amendment) Act, 2023:** Implemented new merger & deal value thresholds to address acquisitions of high-value, data-rich firms that could create digital monopolies.
- ▶ **Information Technology Act, 2000:** Primary legislation in India that governs various aspects of the digital ecosystem.
 - However, it was enacted in the inception period of the Internet and may not address contemporary challenges.
- ▶ **Sector-Specific Rules:** E.g., social media (IT Rules), e-commerce (Consumer Protection Rules) etc.

BRIEF BACKGROUND

Threats Posed by Digital Monopolies

- ▶ Digital monopolies can engage in **Anti-Competitive Practices ("the ACPs")**, affecting competition in the market and subsequently overall consumer choice and well-being.
- ▶ **Major anti-competitive practices:**
 - **Anti-steering:** Exclusionary behavior that hinders business users and consumers from switching to third-party service providers. E.g., App stores mandating use of their own payments systems.
 - **Platform neutrality / Self-preferencing:** A digital enterprise according favorable treatment to its own products on its own platform, thus creating a conflict of interest. E.g. Amazon backed seller Cloudfair India
 - **Data usage:** Using personal data for consumer profiling to offer targeted online services and products, thus raising data privacy concerns.
 - **Drip pricing: Pricing technique in which firms advertise only part of a product's price & reveal other charges later as the customer goes through the buying process.**

India's Initiatives to Prevent Digital Monopolies



Proposed Digital India Act (DIA)

Digital Personal Data Protection Act 2023

Competition Commission of India (CCI)

Draft National Data Governance Framework Policy

Need for Reforms in the Regulation of Digital Ecosystem in India

- ▶ **Regulatory Fragmentation:** Multiple regulatory bodies & agencies, hinder effectiveness of overall digital regulation.
- ▶ **Regulatory Bodies Face Constraints:** Such as technical expertise, data analysis capabilities, resources etc.
- ▶ **Balancing Innovation and Regulation:** Overly restrictive regulations can stifle the growth of the digital ecosystem, while lax regulations can lead to the development of monopolies.
- ▶ **Implementation Challenges:** E.g., digital companies often operate across jurisdictions.

Way Forward (Recommendations of the Committee on Digital Competition Law, 2024)

- ▶ **Introduction of a Digital Competition Act with ex-ante measures:** To put in place rules and safeguards before any anti-competitive practices occur.
- ▶ **Identification and designation of Systemically Important Digital Intermediaries' (SIDIs)** that would be subject to ex-ante regulations and obligations.
- ▶ **Merger Control Reforms:** Introducing deal value threshold, considering non-price factors like data in merger assessments.
- ▶ **Other:** Strengthening Competition Commission of India (CCI) to effectively deal with competition issues in digital domain, Better coordination among various regulatory authorities, increased international cooperation etc.

3.6.6. Patents



CONTEXT

Patents (Amendment) Rules, 2024, amending the Patents Rules, 2003, (under the Patents Act, 1970) have been notified by the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.

ANALYSIS



Key Provisions of the Patents (Amendment) Rules, 2024

- ▶ **Certificate of Inventorship:** Introduced to acknowledge the contribution of inventors in the patented invention.
- ▶ **Time limit:** Time limit for filing request for examination reduced from 48 months to 31 months.
- ▶ **Renewal fee:** Reduced by 10% if paid in advance through electronic mode for at least 4 years.
- ▶ **Frequency to file the statements of working of patents:** Reduced from once in a financial year to once in every three financial years.

Issues/Challenges related to Patents in India

- ▶ **Abolition of the Intellectual Property Appellate Board (IPAB):** May lead to creation of a void in handling appeals in IP cases.
- ▶ **Patent Evergreening:** In it, companies make slight changes to the formulation to extend the patent period, guaranteeing their monopoly over the drug.
- ▶ **Compulsory licensing:** In it, the government allows someone else to produce a patented product or process without the consent of the patent owner or plans using the patent-protected invention itself.
 - ▶ **Compulsory licensing** is one of the flexibilities in the TRIPS Agreement.
- ▶ **Lengthy Process:** Average application disposal time in China and US is 20-21 months, 1/3rd of time taken in India.
- ▶ **Low patent filing:** India registered 34.4 patents per million population in comparison to 4,037 by Korea, 2,579 by Japan, and 1,806 by USA.

Key Initiatives to facilitate Patent filing in India

- ▶ **National Intellectual Property Rights (IPR) Policy in 2016.** It includes:
 - ▶ Scheme for Facilitating Start-Ups Intellectual Property Protection (SIPP) and IP Mitra.

BRIEF BACKGROUND

About Patents and their governance

- ▶ **Patent protection** means that the invention cannot be commercially made, used, distributed, imported or sold by others without the patent owner's consent.
- ▶ Patents are **territorial rights**, only applicable in the country or region in which patent has been granted.
- ▶ **Criteria for an invention to be patentable:**
 - ▶ It should be novel.
 - ▶ Must involve an **inventive step**.
 - ▶ Capable of **industrial application**.
 - ▶ It should **not fall under the categories of inventions that are excluded from patentability**.

Regulation of Patents

- ▶ **Global: World Intellectual Property Organization (WIPO)** regulates Patent and other IPR and administers related conventions and treaties including Paris Convention, Patent Cooperation Treaty, Budapest Treaty etc.
 - ▶ **WTO's Trade-Related Aspects of Intellectual Property Rights (TRIPS)**, signed in 1994, is the most comprehensive multilateral agreement on IP.
- ▶ **India:** Regulated by the **Patents Act, 1970**, which complies with the WTO TRIPS Agreement.
 - ▶ 2005 Amendment extended product patent protection to areas of **pharmaceuticals and agricultural chemicals**.
 - ▶ **Patent Period:** 20 years.
 - ▶ **Non-patentable items:** Include plants and animals in whole or any part including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals etc.

- **Expedited Examination and reduction in filing fees** for certain category of applicants, such as Start-ups, small entities, women inventors.
- **National Intellectual Property Awareness Mission (NIPAM)** to impart IP awareness and basic training in educational institutes.
- **Revamped Patent Facilitation Programme** to scout patentable inventions and provide financial, technical and legal support.
- ▶ **Other:** Establishment of Centre of Excellence, modernization of IP offices, and improved management of IP related information.

Conclusion

A patent plays a key role in the economic development of the country. To create robust patent protection system initiatives like re-establishment of the IPAB etc. can be taken. Also, research and development need to be promoted in academies/ Institutes and Industrial sphere so that filing of patents increases in the country.

Related News

International Intellectual Property (IP) Index

- ▶ **US Chamber of Commerce** released **12th edition** of its International IP Index.
 - **Top countries** on the index are **USA, UK and France**.
 - **India's position** remained unchanged at **42 out of 55 economies**.
- ▶ IP Index is different from the **Global Innovation Index (GII)**, which ranks India at **40th position** out of 132 economies.

Trade Secrets and Economic Espionage

- ▶ Law Commission published its 289th Report on Trade Secrets and Economic Espionage.
- ▶ **Trade Secrets (TS):** Encompass **confidential business information** which may be sold or licensed.
- ▶ **Economic espionage (EE):** Act of deliberate acquisition of confidential information from domestic companies and government entities to benefit a foreign State. It can be **economic, industrial, or commercial**.
- ▶ **Need to enact Law on TS and EE**
 - To enable **transfer of technology** and cooperation among industries across borders.
 - To protect **creative resources and intellectual capital** of MSMEs and Startups.
 - To protect **critical technologies and sectors** such as defence, nuclear, telecom, etc. from EE.
 - To **consolidate existing fragmented legal framework** to ensure certainty and better compliance.
- ▶ **Key Recommendations**
 - Enact separate laws for trade secrets and economic espionage.
 - ◊ **Commercial espionage**, however, will fall **within the purview of proposed Trade Secrets Act**.
 - Provide **broad definition of TS** to allow room for judicial interpretation so that emerging aspects and industries may also fit within legal framework.
 - Provide exceptions for Whistle Blowers, Compulsory Licensing and Government use, etc.

Existing Legal Framework on TS and EE

 In India, **there is no singular law** addressing issue of misappropriation of TS.

 **Indian Contract Act, 1872** and **Specific Relief Act, 1963** apply to contractual matters.

 **Relevant provisions of Bhartiya Nyaya Sanhita, 2023**

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3.6.7. Uttar Poorva Transformative Industrialization Scheme, 2024 (UNNATI 2024)



CONTEXT

Union Cabinet approved the Uttar Poorva Transformative Industrialization Scheme, 2024 (UNNATI – 2024).

ANALYSIS



About UNNATI – 2024

- ▶ **Ministry:** Central Sector Scheme under Ministry of Commerce and Industry.
- ▶ **Objective:** Development of Industries and generation of employment in North East states.
- ▶ **Financial Outlay:** More than Rs.10,000 crore for 10 years. (Additional 8 years for committed liabilities).
- ▶ **Nodal Agency:** North-Eastern Development Financial Corporation Limited (NEDFi).
- ▶ **Parts:** It is divided into two parts:
 - **Part A: Incentives to the eligible units (97% of the total outlay) and has three components-**
 - ◊ Capital Investment Incentive (CII),
 - ◊ Central Interest Subvention (CIS), and
 - ◊ Manufacturing & Services Linked Incentive (MSLI).
 - **Part B: Implementation and institutional arrangements** for the scheme. (3% of total outlay).
- ▶ **Features:**
 - **Eligibility:** All new Industrial units and Expanding units.
 - ◊ All eligible Industrial Units to commence their production or operation within 4 years from the grant of registration.
 - **Districts are categorized in two zones:** Zone A (Industrially Advanced Districts) & Zone B (Industrially Backward Districts).
 - **Fund Allocation:** 60% of the outlay of Part A has been earmarked to 8 Northeastern states and 40% on a First-In-First-Out (FIFO) basis.
- ▶ **Coverage:** Negative list for manufacturing sector (non-eligible industries) and positive list for services sector (eligible industries).

BRIEF BACKGROUND

Status of Industrialization in Northeast India

- ▶ **Special Economic Zones (SEZs):** There are 5 formally approved SEZs in the NER, out of which 4 are notified. However, **none of the SEZs is operational.**
- ▶ **Specialized industries:**
 - **Handloom and handicraft industries:** One of the largest unorganized economic activities in the NER that provides employment for rural and semi-rural population.
 - **Bamboo industry:** Nearly two-fifths of bamboo stock in India is concentrated in NER.
 - **Rubber industry:** Tripura is declared the 'second rubber capital of India' after Kerala.
- ▶ **MSMEs:** Number of MSMEs in NER are only 2.98% of total MSMEs in India.
- ▶ **Connectivity:**
 - **Road Connectivity:** Total length of national highway has increased to 16,125 Kms in the region.
 - **Inland waterways: National Waterway (NW) 2** from Bangladesh border to Sadiya on Brahmaputra is fully developed and 20 waterways of NER have been declared as National Waterways
 - ◊ However, feasibility study for 18 waterways have not been yet completed.
- ▶ **International infrastructure projects:**
 - **India- Myanmar-Thailand Trilateral Highway**
 - **Kaladan Multimodal Transit Transport Project**
 - **India-Bangladesh Protocol Route**
 - **Bangladesh-Bhutan-India-Nepal Motor Vehicles Agreement (BBIN-MVA)**

Other initiatives to promote industrialization in the Northeastern Region

- ▶ **Prime Minister's Development Initiative for North Eastern Region (PM-DevINE):** It envisages funding infrastructure, supporting social development projects, and generating livelihood opportunities for youth and women.
- ▶ **North East Special Infrastructure Development Scheme (NESIDS):** A central sector scheme, approved during 2017-18 and extended till 2026.
- ▶ **Schemes of North Eastern Council (NEC):** A central sector scheme for focused development of deprived areas; deprived/neglected sections of society and emerging priority sectors in the North eastern States.
- ▶ **Digital North East Vision 2022:** It identifies eight digital thrust areas including Digital Infrastructure, Digital services, Digital empowerment, Promotion of Electronics Manufacturing, etc.
- ▶ **Special Accelerated Road Development programme for North East (SARDP-NE)** under Bharatmala Pariyojana Phase I.

Conclusion

By providing financial incentives for businesses, creating jobs, increasing backward and forward linkages and promoting domestic manufacturing and services, UNNATI fosters a more robust and self-sufficient Indian economy.

3.6.8. Electric Mobility Promotion Scheme- 2024



CONTEXT

The Ministry of Heavy Industries (MHI) has introduced the Electric Mobility Promotion Scheme 2024 (EMPS 2024) to accelerate the adoption of Electric Vehicles in India.

ANALYSIS



About EMPS 2024

- ▶ **Funding and Tenure:** Fund-limited scheme with outlay of Rs. 500 crores for 4 months (1st April 2024 till 31st July 2024).
- ▶ **Objective:** Faster adoption of electric two-wheeler (e-2W) and three-wheeler (e-3W) and development of the electric vehicle (EV) manufacturing ecosystem.
 - ▶ To encourage advanced technologies, incentive benefits will be extended to only those vehicles which are fitted with advanced batteries.
- ▶ **Components:**
 - ▶ **Subsidies (upfront reduced purchase price):** Demand incentives for e-2W & e-3W.
 - ▶ **Administration of Scheme** including IEC (Information, Education and Communication) activities and fee for Project Management Agency (PMA).

Government initiatives for promotion of EV manufacturing ecosystem:

- ▶ **PLI Schemes:** Production Linked Incentive (PLI) Scheme for Automobile and Auto Components Industry in India to boost domestic manufacturing of **Advanced Automotive Technology products**.
 - ▶ **PLI Scheme for manufacturing of Advanced chemistry cell (ACC)** to bring down prices of battery.
- ▶ **FAME India:** Under FAME India Scheme **Phase-II, Phased Manufacturing Programme (PMP)** has been introduced for **domestic manufacturing of electrical vehicles**, its assemblies/ sub-assemblies and parts/sub-parts thereby **increasing the domestic value addition**.
- ▶ **Rationalization of Goods and Services Tax (GST):**
 - ▶ on electric vehicles from 12% to 5%;
 - ▶ on chargers/charging stations for electric vehicles from 18% to 5%.
- ▶ **'Technology Platform for Electric Mobility (TPEM)'** formed by Ministry of Science and Technology to play a key role in forming an electric mobility standardization roadmap for India.



3.7. TEST YOUR LEARNING

MCQs

1. Which of the following statement is incorrect about Asset Reconstruction Companies (ARCs)?

- a) They are financial institutions that buy Non-Performing Assets from banks and financial institutions
- b) They were first proposed by the Narasimham Committee - I in 1991
- c) ARCs are required to resolve assets within 8 years of acquisition
- d) The SARFAESI Act of 2002 envisaged the registration and regulation of ARCs

2. Consider the following statements regarding the National Monetisation Pipeline (NMP):

- 1. The idea of Asset Monetization (AM) was first suggested by a committee led by economist Vijay Kelkar in 2012.
- 2. It aims to monetize brownfield infrastructure assets of the Central Government
- 3. Roads and Railways are the sector with the highest share in the NMP

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

3. The Basel III norms, recently in news, are primarily concerned with:

- a) International trade regulations
- b) Climate change mitigation
- c) Banking sector regulations
- d) Intellectual property rights

4. Consider the following statements about Advanced pricing agreements (APAs):

- 1. APA helps determine arm's length price (ALP) of international transactions.
- 2. It provides certainty to taxpayers in domain of transfer pricing
- 3. APA process is compulsory for foreign entities.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

5. With reference to 'Pradhan Mantri Fasal Bima Yojana', consider the following statements:

1. It is a centrally sponsored scheme.
2. The scheme is not available for sharecroppers and tenant farmers.

Which of the statements given above is/are correct?

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) Neither 1 nor 2

Questions

1. Highlight the reasons behind increasing income and wealth inequality in India. What measures have been taken to reduce the inequalities? Critically analyse the role of inheritance tax help in reducing in the wealth inequality? (250 words)
2. Agriculture Export Policy (AEP) 2018 aims to increase farmer income. Discuss the various strategies of the government in this regard and the need for new Agriculture export policy. (150 words)



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4.1. INDIA'S DEFENCE EXPORTS



CONTEXT

India delivered first batch of BrahMos to Philippines.

- Recent years have witnessed a steady increase in India's defence exports to countries such as Seychelles, the Maldives, Mauritius and Ecuador.

ANALYSIS



Reasons for rise in India's Defence exports

- Mobilising finance:** 74% FDI under automatic route and 100% through government approval.
- Budget Support to Indigenous Defence Industry:** 75% of defence capital procurement budget earmarked for domestic industry in FY 2023-24
- Ease of Doing Business:** by simplified defence industrial licensing, end-to-end online portal for receiving and processing export authorisation
- Reduced dependence on foreign equipment manufacturer:** E.g. Recently, 5th Positive Indigenisation List was announced.
- Infrastructure:** E.g. Establishment of Defence Industrial Corridor in Uttar Pradesh and Tamil Nadu
- Role of MEA:** E.g. Lines of Credit for African countries to import defence products from India.

Challenges in India's Defence Export

- Inadequate R&D spending:** India's spending is <1% in R&D as a part of total defence budget expenditure, whereas China and USA spend around 20% and 12% respectively.
- Limited budget:** The defense allocation for FY 24-25 is just about 1.9% of the GDP.
- Credibility issues:** As per SIPRI, India has been the world's highest arms importer from 2019 to 2023.
- Over-reliance on DPSUs:** leads to supply monopolies, creates hurdles in integrating private sector into defence innovation and industrial ecosystem.

Benefits of Rising Defence Exports








- Defence Export as a Strategic Tool:** Increases diplomatic leverage and scope of strategic partnership
- High Value Nature of defence exports:** leads to earnings of forex reserves, creation of high-skilled job opportunities,
- Other benefits:** Enhances R&D base in defence through involvement of private players, strengthens national security, helps in self-reliance through Indigenization.

BRIEF BACKGROUND

About BrahMos

- It has been developed by **BrahMos Aerospace** - a joint venture between DRDO and Russia's NPO Mashinostroyeniya.
- BrahMos represents **Brahmaputra (India) and Moskva (Russia) rivers**.
- Two-stage missile:**
 - First stage:** Solid propellant booster engine which brings it to supersonic speed and then gets separated.
 - Second stage:** Liquid ramjet takes the missile closer to 3 Mach speed in cruise phase.
- Flight range:** upto 290 kilometres at supersonic speed.
- Missile is capable of being launched from land, sea, sub-sea, and air.

Special Features of Brahmos

 Universal for multiple platforms	 "Fire and Forget" principle of operation
 High supersonic speed all through the flight	 Long flight range with varieties of flight trajectories
 Low radar signature	 Pinpoint accuracy with high lethal power aided by large kinetic energy on impact
 Shorter flight times leading to lower target dispersion and quicker engagement	

Way Forward

- ▶ **Establishment of a single point agency** responsible for coordination between all stakeholders, executing plans, and meeting the targets for defence exports.
- ▶ **Quality Assurance and Standardization** by adhering to international standards and obtaining certifications thereby enhancing global credibility of Indian defence products.
- ▶ **Investment in international marketing and branding** to change perceptions about the quality and reliability of its defence products.
- ▶ **Promote Public-Private Partnerships** by greater involvement of the private sector through incentives, facilitation of technology transfer, and promoting joint ventures.
- ▶ **Securing export deals of high value weapons** (e.g Pinaka, AKash, Dhruva) by offering of incentives through lines of credit, government-to-government route.

Status of India's Defence Export

- ▶ India ranks among the **top 25 arms exporters** (Economic Survey 2023-24).
- ▶ **Share of Private Sector:** Private sector accounted for **60%** and 40% is from public sector firms.
- ▶ Defence exports reached **~US\$ 2.63 billion** in FY 2023-24 and India aims for **US\$ 5 billion** in defence exports by 2024-25.



4.2. TECHNOLOGY ABSORPTION IN DEFENCE



CONTEXT

The Indian Army is observing the year 2024 as the year of Technology Absorption.

ANALYSIS



Need of Technology Absorption in Defence for India

- ▶ **Emergence of hybrid warfare:** It is leading to the emergence of new threats such as:- (see infographics)
- ▶ **Military Superiority:** Integrate disruptive technologies to compete with USA and China.
- ▶ **Regional Security:** Project India as a 'Net Security Provider.'
- ▶ **Operational Efficiency:** Free soldiers for strategic tasks through enhanced operational efficiency.
- ▶ **Defence Production Targets:** Achieve Rs 3 lakh crore in defence production and Rs 50,000 crore in exports by 2028-29.

Challenges related to technology adoption in defence

- ▶ **Low Defence R&D Expenditure:** Rs. 18,669.66 crore spent in 2021-22 against Rs. 20,757.44 crore budgets. (Parliamentary standing committee on defence).
- ▶ **Defence Budget Strain:** High initial costs for procurement and development.
- ▶ **Import dependency:** India largely dependent on foreign technology for advanced weapons.
- ▶ **Technology Integration:** Obsolescence, long service life, and compatibility issues.
- ▶ **Administrative Issues:** Need for restructuring, HR management, and civil-military fusion.
- ▶ **Cyber Security vulnerability:** Inadequate domestic manufacturing capabilities for cyber and communication equipment resulting in over-reliance on import of communication equipment.

Measures taken by India for tech-Absorption

- ▶ **Acing Development of Innovative Technologies with iDEX (ADITI) scheme (2024)** to promote innovations in critical and strategic defence technologies.
- ▶ **2022 Amendment to Defence Acquisition Procedure (DAP) 2020:** Mandates all modernisation requirements to be indigenously sourced.
- ▶ **Technology focused Organisational framework:** Achieved by synchronising the efforts of DRDO, ISRO etc.
- ▶ **Signals Technology Evaluation and Adaptation Group (STEAG):** For researching futuristic technologies like 6G, AI.
- ▶ **Indian Naval Indigenisation Plan (2015-2030):** Identifies domains and technologies to accomplish self-reliance in cutting-edge defence technologies.
- ▶ **Project Akashteer:** It is an automated air defence control and reporting system inducted by the Indian Army.

BRIEF BACKGROUND

Technology absorption in Defence

- ▶ It means **acquisition, adaptation and integration of technologies** into existing structures (also known as legacy systems).
- ▶ Presently, it has become synonymous with integration of disruptive technologies such as AI, hypersonic weapons, biotechnology, quantum technology etc.

Various Types of Emerging Warfare

- ▶ **Information warfare:** Management and use of information to gain an advantage. E.g. **Deep fake Technology, Narratives Warfare**
- ▶ **Electronic Warfare:** Capability to disrupt enemy's defences and protect our own with use of electromagnetic spectrum E.g. **Directed Energy Systems**
- ▶ **Weaponisation of Space:** Placing of space based devices in orbit having destructive capabilities E.g. **Development of Anti Satellite Weapons**
- ▶ **Cyber Warfare:** Use of internet to attack information system destabilising financial systems, energy grid etc.

Applications of Technology in Defence

- ▶ **Autonomous technologies, such as robots and drones:** Undertake dangerous tasks like strikes or repetitive tasks
- ▶ **Block Chain, Cloud Computing:** To make communication and data transfer seamless, secure and fast
- ▶ **AI and Big Data Analytics:** For surveillance, reconnaissance, and Strengthening situational awareness
- ▶ **Nano-Technology:** To create self-healing and adaptive camouflage materials, smart skin etc.
- ▶ **New weapons technology:** Directed energy weapons (High Power Lasers and High-Power Microwaves): Use focused energy to destroy, degrade or neutralize a target
 - ▶ **Loiter Munitions (E.g Kamikaze drones):** Loiters around an area, locate the target and then crash into it.

Way Forward

- ▶ **Implementation of Recommendations of Prof K Vijay Raghavan Committee:**
 - ▶ Creation of “Department of Defence Science, Technology, and Innovation”.
 - ▶ Establishment of “Defence Technology Council” chaired by Prime Minister.
 - ▶ Setting up national-level laboratory facilities instead of DRDO labs.
- ▶ **Streamlining Regulatory and Procurement Processes** by simplifying documentation requirements.
- ▶ **Prioritizing technology over cost** to encourage selection of advanced and niche technologies.
- ▶ **Promoting private sector participation** in manufacturing by creating a level playing field, and providing access to technology.
- ▶ **Creation of specialist officers and specialised cadres** such as cyber experts by providing specific training



4.3. SUBMARINES AND ANTI-SUBMARINE WARFARE



CONTEXT

Defence Research and Development Organisation (DRDO) conducted a successful flight-test of Supersonic Missile-Assisted Release of Torpedo (SMART) system.

ANALYSIS



Submarines

- ▶ A submarine is a vessel, or ship, that can go underwater. Unlike a ship, a **submarine can control its buoyancy**, thus allowing it to sink and surface at will.

Significance of Submarines

- ▶ **National defence:** Capable of operating for months from the deep, these are quieter and harder to detect, thus enabling critical defence and attack capabilities.
- ▶ **Lethal capabilities:** They can deploy a variety of lethal weapons such as mine laying on ports, shipping channels, targeting surface ships with torpedoes.
- ▶ **Strategical advantage:** It can also conduct reconnaissance, act as a barrier and provide advance warning of enemy movements.
- ▶ **Nuclear Deterrence:** In case of nuclear first strike on land and air-based assets, **submarines guarantee a second-strike capability.**

India's Submarine Strength

- ▶ **Diesel-Electric Submarines:** includes Kalvari Class, Sindhughosh Class, Shishumar Class
- ▶ **Air Independent Propulsion (AIP) Submarines:** AIP systems can allow submarines to operate underwater for longer periods of time. **INS Kalvari** in the process of getting Fuel Cell-based AIP system of DRDO's Naval Materials Research Laboratory (NMRL).
- ▶ **Nuclear Powered Submarines:** It includes INS Arihant (operational), INS Arighat (in advanced sea trials) and Akula Class (agreement signed with Russia).

Challenges to India's submarine capabilities

- ▶ **China challenge:** China is increasing its naval presence in the Indian Ocean and has a large fleet of 78 submarines to support its expansion. China is also helping Pakistan acquire diesel-electric submarines.
- ▶ **Resource constraints:** Presently, India has only 16 submarines and **resource allocation and prioritization** of requirement remains the limiting factor.
- ▶ **Age-old systems:** Various submarines, airborne assets and corvettes need critical upgrade. Moreover, there is emergence of **new-age technologies** for ASW such as **Non-Acoustic ASW** (detection of submarines via satellites).
 - ▶ Non-acoustic submarine detection technologies are those that **do not rely on the collection of soundwaves emitted or reflected** by a submerged vehicle for location

Way Forward

- ▶ **New investments:** Navy should continue to invest in niche underwater warfare domains like imaging, sensing & navigation, etc.
- ▶ **Indigenous development:** DRDO and other research organizations should continue developing indigenous weapon systems in collaboration with Indian defence industry.
- ▶ **Collaborations:** Indian Navy needs to continue its collaboration with other Indian Ocean littoral countries to augment its ASW capabilities and strengthen its presence.

BRIEF BACKGROUND

SMART System

- ▶ **SMART** is a next-generation missile-based light-weight torpedo delivery system to enhance the Anti-Submarine Warfare (ASW) capability of the Indian Navy.
- ▶ It carries advanced light-weight torpedo as payload along with parachute-based release system
 - ▶ Torpedoes are self-propelled weapons that travel underwater to hit the target.
- ▶ **Designed and developed by: DRDO.**

India's ASW capabilities

- ▶ **Kamorta Class Ships:** India has four Kamorta-class corvettes (Project 28) namely, INS Kamorta, INS Kadmatt, INS Kiltan and INS Kavaratti.
- ▶ **Integrated ASW Defence Suites (IADS):** can detect enemy submarines and torpedoes as well as divert incoming torpedoes.
- ▶ **Maritime patrol and reconnaissance aircraft:** India operates 12 Boeing P-8I (Poseidon), which it bought from US to sharpen ASW capabilities.
- ▶ **ASW helicopters:** Indian Navy commissioned first squadron of newly inducted MH-60R Seahawk multi-role helicopters

4.4. WEAPONISATION OF SPACE



CONTEXT

Russia vetoed a United Nations Security Council (UNSC) draft resolution on a weapon-free outer space jointly proposed by the United States and Japan.

- ▶ Russia vetoed resolution as it focused solely on weapons of mass destruction (including nuclear arms), but made no mention of other weapons in space.

ANALYSIS



- ▶ The vetoed resolution would have affirmed that **countries which ratified the 1967 Outer Space Treaty** must comply with their obligations not to put in orbit around the Earth “any objects” with **weapons of mass destruction**, or install them “on celestial bodies, or station such weapons in outer space.”

Weaponisation of Space

- ▶ It includes **placing weapons in outer space** as well as creating weapons that will destroy targets in space.
- ▶ It is **different from the militarization of space** that assists armies on the conventional battlefield.

Emerging Challenges with Weaponisation of Space

- ▶ **Arms Race and Deterrence:** Major powers (US, Russia, China) have military units specialized in space operations making space a new war-fighting domain.
- ▶ **Debris and Congestion:** Space conflict would result in undesired proliferation of space debris with irreversible impact on the space environment.
- ▶ **Dual-Use Technologies:** Many space technologies (space launch vehicles, small satellites, GPS trackers) have both civilian and military applications, **blurring the line** between peaceful and military uses of space.
- ▶ **Outdated Outer Space Treaty (OST):** Constructed under different geopolitical and technological circumstances, they are not well-suited for addressing contemporary challenges.

Important Global Initiatives for Peace in Space

- ▶ **Committee on the Peaceful Uses of Outer Space (COPUOS, 1959):** Governs exploration and use of space for benefit of humanity.
- ▶ **Outer Space Treaty (1967):** Prohibits nuclear weapons or any other weapons of mass destruction in outer space.
- ▶ **Rescue Agreement (1968):** Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.
- ▶ **Space Liability Convention (1972):** Launching state is liable for damage caused by its space objects.
- ▶ **Launch Registration Convention of (1975):** Launching State shall register the space object in an appropriate registry and inform the same to Secretary-General of UN.
- ▶ **Moon Agreement (1979):** The agreement forbids the establishment of military bases, installations and fortifications on the Moon and, the testing of any type of weapons on the Moon.

Note - India is a party to Outer Space Treaty, the Rescue Agreement, the Liability Convention and the Registration Convention. India has also signed the Moon Treaty but not ratified. India also actively participates in COPUOS.

Steps taken by India to enhance space capabilities

- ▶ **Defence Space Agency (DSA):** established in 2018 to enhance coordination among military space activities
- ▶ **Mission Shakti:** India's first ever Anti-Satellite (ASAT) Missile Test successfully conducted in 2019 to defend its assets in outer space

BRIEF BACKGROUND

Veto Power and UNSC

Recently, UNGA debated rising veto power use in the UNSC. Since the UN's inception, vetoes have been used more than 300 times.

Reason for growing use of Veto power

- ▶ **National interest:** Permanent members use the veto to defend their national interests or to uphold a tenet of their foreign policy.
- ▶ **Increase in global conflict and crises:** E.g. Russia Ukraine Conflict, Israel-Palestine War.
- ▶ **Political polarization:** for e.g., United States use its veto power to protect Israel.

Impact of Overuse of Veto power

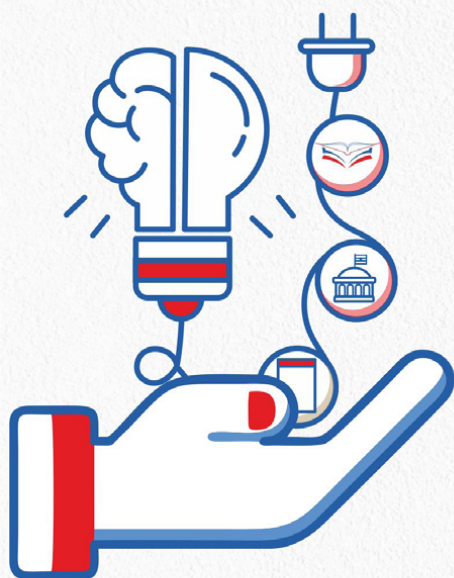
- ▶ **Affected Humanitarian efforts:** Delays in the deployment of peacekeeping forces, the provision of humanitarian aid
- ▶ **Deadlocks and inaction:** creates diplomatic paralysis, even when the majority of member states support a proposed resolution
- ▶ **Undermines credibility of UNSC and leads to erosion of Multilateralism**

- ▶ **IndSpaceEx:** first simulated space warfare exercise in 2019 to assess potential threats and formulate a joint space warfare doctrine.

Way forward

- ▶ **International cooperation:** Start negotiations for a **legally-binding treaty to prohibit** space weaponisation.
- ▶ **Space-domain awareness:** Need Investment in space-domain awareness and diplomatic agreements, such as the 'Combined Space Operations Initiative' (CSpO) between the 'five-eyes' states plus Germany and France, that facilitate **information sharing on space activities.**
- ▶ **Mitigating space debris:** Enhance **Space Situational Awareness (SSA)** to keep track of **everything in space** including space debris, rogue satellite behaviour, anti-collision mechanisms and possible signs of weaponisation by others.
- ▶ **Enforceable space law:** For e.g., **Proposed Prevention of an Arms Race in Outer Space (PAROS)**, it is a UN resolution seeking a ban on the weaponization of space.

OPTIONAL SUBJECT CLASSES



- » Geography » Sociology
- » Political Science and International Relations

ADMISSION OPEN

- » Public Administration
- » Anthropology » Hindi Literature

STARTING SOON

4.5. LEFT WING EXTREMISM



CONTEXT

Recently, the Union Ministry of Home Affairs (MHA) released a booklet titled 'Decisive Battle with Left Extremism'

ANALYSIS



Factors responsible for the emergence of LWE

- ▶ **Jal, Jungle, Jameen (Water, Forest and Land):** Expropriation of resources by outsiders, evasion of land ceiling laws (auction purchase of land in fraudulent rent sales), etc.
- ▶ **Socio-Economic Inequalities:**
 - **Lack of employment:** Jharkhand's Youth Unemployment Rate (15-29 years) was 4.7% (PLFS-2022-23).
 - **Absence of healthcare amenities:** No blood banks in nine district hospitals in Bihar (CAG report 2021)
- ▶ **Inadequate implementation of government policies:**
 - **Jharkhand is yet to implement PESA.**
 - In 2024, SC issues notice to authorities in Bihar over non-implementation of RTE Act, 2009 and poor conditions of school.

Reasons for the decline in LWE in India

- ▶ **Strategic**
 - **SAMADHAN:** The new doctrine was enunciated by MHA in 2017.
 - **Special Taskforce:** CRPF special unit 'Bastariya Battalion' includes local representation in Naxal area of Bastar district, Chhattisgarh.
 - **Offensive strategy:** Operation Octopus, Operation Double Bull, and Operation Chakrabandha.
- ▶ **Developmental**
 - **Funding:** capacity building of states under **Security related expenditure scheme, and Special Infrastructure Scheme.**
 - **Rehabilitation:** Industrial Training Institutes and Skill Development Centres established in LWE-affected districts.
 - **Improved Development:** construction of roads, **Mobile Tower Project** to improve **mobile connectivity**, creation of Eklavya Model Residential Schools

Challenges in handling LWE

- ▶ **Geographical Location:** Dense forests of Jharkhand, Chhattisgarh etc. provide maoists/naxals space for training, hiding, and guerrilla warfare.
- ▶ **Security Challenges:** Unhindered inflow of arms and ammunition through illicit manufacturers. **E.g. Munger district (Bihar).**
- ▶ **Ideological Appeal:** LWE groups' narrative (like rights to land, preserving tribal culture, identity etc.) attracts tribal communities.
- ▶ **Misuse of technology:** E.g. use of dark web by non-state actors to create fake news, recruitment of members, **virtual currencies** for money laundering, drug trafficking etc. **E.g. Wannacry ransomware attack in 2017.**

Way ahead

- ▶ **Bridging trust deficit:** E.g. Peace March in 2021 where tribals from Chhattisgarh, Odisha and Telangana participated under slogan of '**Bastar maange hinsa se azadi**'.
- ▶ **Technology use:** GIS and GPS can help in **identifying camp locations** and planning attacks to eradicate threats by security forces.
- ▶ **Centre-state coordination:** Both should make synchronised efforts in **eliminating radicalization and clear delineation of roles and responsibilities** to tackle LWE.
- ▶ **Learning from best practices and success stories:** E.g. Greyhounds in Andhra Pradesh.

BRIEF BACKGROUND

Left-Wing Extremism (LWE) in India

- ▶ LWEs are individuals or groups who espouse radical leftist ideologies and seek to overthrow established systems of power through violent means.
- ▶ They are **commonly referred to as Maoists globally and as Naxalites within India.**
- ▶ Naxal insurgency in India **originated in the 1967 uprising in Naxalbari, West Bengal.**
- ▶ **India's Red Corridor:** Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh, and Kerala in varying degrees.

Present Status

- ▶ > 45 (in 2022) LWE affected districts compared to 96 (in 2010).
- ▶ > 76% reduced incidents of violence between 2010 and 2022.
- ▶ > 4903 post office with banking services have become operational in the last 7 years.

4.6. ARMED FORCES (SPECIAL POWERS) ACT (AFSPA)



CONTEXT

The Armed Forces (Special Powers) Act, 1958 (AFSPA) has been extended to parts of Nagaland and Arunachal Pradesh.

ANALYSIS



Arguments in favour of Repealing AFSPA

- ▶ **Colonial-era law:** AFSPA is compared to the Rowlatt Act, allowing arrests based on suspicion without due process.
- ▶ **Violations of fundamental right:** It violates citizens' fundamental rights under Articles 14, 19, 21, 22, and 25.
- ▶ **Violates International Law:** AFSPA violates the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR) etc.
- ▶ **Lack of Accountability:** AFSPA grants sweeping powers to armed forces and immunity from prosecution without central government approval.
- ▶ **Militarization of Governance:** Critics argue that AFSPA contributes to the military ruling, undermining democratic principles and civilian authority in conflict-affected areas.
- ▶ **Centre-State conflicts:** Law and order is a state subject. AFSPA erodes states' autonomy even during peaceful times.

Arguments against Repealing AFSPA

- ▶ **Constitutionality Valid:** SC upheld the Act in the *Naga People's Movement of Human Rights v Union of India (1997) Case*, with guidelines to prevent abuse.
- ▶ **Effective counter-insurgency:** AFSPA is essential for combating insurgent groups, particularly in Kashmir and the northeast.
- ▶ **National Security Imperative:** AFSPA ensures a coordinated response to insurgency and terrorism, which individual states may lack.
- ▶ **Measures to curb misuse:** In the *Extra Judicial Execution Victim Families vs Union of India & Anr (2016) Case*, SC ruled that AFSPA does not provide invincible immunity to armed forces from prosecution.

Way Forward

- ▶ **Building trust and confidence:** Implement a bottom-up governance model to empower grassroots communities and bridge gaps between people and government.
- ▶ **Prioritizing Peace Accords:** To remove AFSPA, first, the government must push for formalising a concrete peace accord with such insurgent groups and this can be done by providing proper rehabilitation.
- ▶ **Enhanced Connectivity:** It will directly impact the security scenario of India's North East and in the long run, will contribute to the complete removal of AFSPA.
- ▶ **Adherence to human rights norms** which strengthens the counterinsurgency operations.

BRIEF BACKGROUND

Armed Forces (Special Powers) Act (AFSPA)

- ▶ AFSPA grants special powers to armed forces to bring back order in "disturbed areas". They can open fire against any person in contravention to law, arrest and search premises without warrant, etc.
- ▶ AFSPA is in effect in parts of Nagaland, Assam, Manipur, and Arunachal Pradesh.
- ▶ AFSPA remains in force in Jammu and Kashmir through the Armed Forces (Jammu and Kashmir) Special Powers Act, 1990.

Key Provisions

- ▶ **Disturbed areas:** A part or whole state/UT is declared disturbed area when use of armed forces in aid of civil power is necessary to restore order.
 - Declaration is made by Governor of state, administrator of UT or by Centre.
- ▶ **Immunity to Armed forces personnel:** Prohibition legal proceeding against them except with the previous sanction of the Central Government.
 - In 2016, Supreme Court ruled that the armed forces could not be immune from investigation for excesses committed during the discharge of their duties even in disturbed areas.
- ▶ **Treatment of arrested person:** Army authority is duty bound to handover the arrested person to the officer-in-charge of the nearest police station with least possible delay.
- ▶ **Applicability:** Parts of Assam, Manipur, Nagaland, and Arunachal Pradesh.

Committees Related To AFSPA

- ▶ **Justice B P Jeevan Reddy committee (2004):** Recommends the incorporation of AFSPA in the Unlawful Activities (Prevention) Act, 1967
- ▶ **2nd ARC 5th Report (2007):** Recommended the repeal of AFSPA since it would remove the feeling of discrimination and alienation.
- ▶ **Santosh Hegde committee (2013):** Act must be properly reviewed every six months to see if its implementation is necessary
- ▶ **Justice Verma Committee (2013):** Recommended that any sexual violence against women by members of the armed forces must be brought within the purview of the ordinary criminal law.

4.7. THREAT OF ONLINE RADICALISATION



CONTEXT

At the 19th Interpol Conference of Heads of National Central Bureau (NCB), India highlighted the threat of the online radicalisation.

ANALYSIS



Major Challenges in Curbing Online Radicalisation

- ▶ **Lack of standard definition** for radicalisation, terrorism, etc. due to absence of universal consensus
- ▶ **Technological advancement:** Rising internet penetration and Encrypted messaging apps, Dark Web, etc. provides anonymity and hinder tracing of source.
- ▶ **Foreign Funding:** Radicalisation is fueled by the cross-border foreign funding and nexus between State and Non-state actors.
- ▶ **Political Narrative:** Hate speech and communal tension which are often used in public speeches and elections are uploaded on online platform and widely circulated to create environment of hatred.

Key Initiatives to curb Online Radicalisation

Global

- ▶ **UN Global Counter-Terrorism Strategy:** enhances capacity of the nations to tackle online radicalisation.
- ▶ **European Union's Digital Services Act:** to prevent illegal activities online and the spread of disinformation.
- ▶ **Global Internet Forum to Counter Terrorism (GIFCT):** An NGO, founded by Meta, Microsoft, YouTube and X, in 2017, the Forum was established to foster technical collaboration among member companies, advance relevant research, and share knowledge.
- ▶ **Tech Against Terrorism:** A partnership between technology companies, governments, and **United Nations Counter-Terrorism Committee Executive Directorate (CTED).**
- ▶ **Christchurch Call:** A community of over 130 governments, online service providers, and civil society organisations acting together to eliminate terrorist and violent extremist content online.

India

- ▶ **Legal: Unlawful Activities (Prevention) Act (UAPA) 1967** has been enacted. Organisation like 'Students Islamic Movement of India (SIMI)' has been declared as an 'Unlawful Association' under it.
- ▶ **Administrative/Institutional: Counter-Terrorism and Counter-Radicalisation Division (CT-CR)** has been established under the MHA to help state governments, security agencies and communities in preventing the youth from embracing extremism.
- ▶ **Cyber-related:** Enactment of the Information Technology Act of 2000, Indian Cybercrime Coordination Centre (I4C), established by MHA etc.
- ▶ **State-led Initiative: De-radicalisation programme of Maharashtra Police, counselling sessions for youth under Operation Pigeon (Kerala)**
- ▶ **Initiatives by Indian Army: E.g. Sahi Raasta programme** to bring back the radicalised or vulnerable youth of Jammu & Kashmir into the mainstream.

Conclusion

India must develop a comprehensive policy that focuses both on de-radicalisation and counter-radicalisation and works in tandem with the peculiarities of each state.

BRIEF BACKGROUND

Radicalisation

- ▶ **Radicalisation:** Although, there is no universal definition of radicalization, it can be seen as a phenomenon of people embracing views which could lead to development of extremist ideas.
- ▶ These views can be social, political or religious.



Factors Responsible for Radicalisation



Push Factors

- **Economic Factor:** lack of employment for youth
- **Socio-religious Factor:** Ethnic or religious marginalization, feelings of alienation.
- **Political Factor:** Loss of trust in institutions. E.g in judiciary



Pull Factors

- **Economic incentive** provided by the extremist group.
- **Propaganda** by distorting religious philosophies
- **Capitalising crises** like Israel-Gaza conflict

4.8. CYBER THREATS AND FINANCIAL SECTORS

CONTEXT



Global Financial Stability Report 2024 released by International Monetary Fund (IMF) warns cyber risks as a growing threat to macro financial stability.

ANALYSIS



Reasons Behind rise in cyber attacks

- ▶ **Rapid Digital Transformation and Technological Innovations:**
 - Covid-19 led to surge in remote work, delivery applications, and contactless payments. **Number of cyber-attacks has doubled since COVID-19 pandemic.**
 - Evolution of fin-tech companies exposes financial systems to cyber threats due to digitalized operations and inters connectedness. E.g. nearly **one-fifth of all cyber risks** affect financial firms.
- ▶ **Heightened global geopolitical tensions:** E.g. surge in cyber-attacks after Russia's invasion of Ukraine
- ▶ **Lack of strong internal controls:** As per PwC's Global Economic Crime and Fraud Survey 2022 **four out of every ten platform frauds in India** were conducted by internal perpetrators.
- ▶ **Lack of Swift Action and Detection:** It discourages individuals to report these crimes.

BRIEF BACKGROUND

Virtual Assets and Virtual Asset Service Providers (VASPs)

- ▶ Virtual assets refer to any digital representation of value that can be digitally traded, transferred or used for payment.
 - E.g. Bitcoin, Litecoin, Ethereum or Dogecoin. It does not include digital representation of fiat currencies (government-issued currency).
- ▶ **VASPs** refers to any natural or legal person conducting one or more of the following transactions on behalf of another natural or legal person as a business:
 - Providing exchanges between virtual assets or fiat currencies.
 - Transferring between virtual assets.
- ▶ VASPs encompass entities such as cryptocurrency exchanges, ATM operators, wallet custodians, and hedge funds.

Different modes of Financial Cyber Crimes



Phishing

Tricks individuals into **divulging sensitive information**



Identity Theft

Stealing of personal information. E.g. Aadhaar, PAN



ATM Skimming

Devices **capturing card information and PIN of ATMs**



Ransomware Attacks:

use of malicious software to encrypt data and demanding **hefty ransoms** for decryption



Unauthorised Digital lending applications etc.

Impact of Cyber risks on Financial Systems

- ▶ **Impact on macro-financial stability:**
 - **Loss of confidence** in the viability of the targeted institution
 - **Lack of substitutes** for a key institution or financial market infrastructure would lead to disruption in the financial system. E.g. A ransomware attack on payment systems could halt trading and lead to asset price volatility
 - **Potential of systemic shock** due to the interconnected nature of institutions
- ▶ **Affects government functioning** as it disrupts the management of government debt and may give rise to sovereign risks etc.
- ▶ **Credit and market losses** due to loss of businesses, remittances, reputational damage, and increased investments in cyber security. **Economic losses to the tune of 1 to 10% of the global GDP are caused by these frauds (IMF).**

Initiatives taken to curb Cyber Threats to Financial Systems

- ▶ **Citizen Financial Cyber Frauds Reporting and Management System:** Developed as a part of “National Cybercrime Reporting Portal.
- ▶ **Financial Intelligence Unit–India (FIU–IND):** It is responsible for receiving, processing, analyzing, and disseminating information related to suspicious financial transactions.
- ▶ **Computer Emergency Response Team – India (CERT–In):** Collects analyse and disseminates information on cyber incidents, and also issues alerts
- ▶ **Chakshu:** An initiative to empower citizens to proactively report suspected fraud communication

Challenges in dealing with Cyber Threats to Financial Systems

- ▶ **Lack of regulatory and supervisory frameworks and cyber–security workforce:** Only 47% of the surveyed countries had formulated a national and financial sector–focused cyber–security strategy.
- ▶ **Technological innovations:** Artificial Intelligence, quantum computing could further amplify cyber risks.
- ▶ **Complex regulatory environment** caused due to lack of seamless cooperation between regulators such as Reserve Bank India (RBI), Securities and Exchange Board of India (SEBI) etc.
- ▶ **Challenges related to legal framework:** For instance, India lacks a dedicated legal framework or a dedicated court to deal with online financial frauds.
- ▶ **Nature of Crime hindering investigation:** Cybercrimes are conducted **remotely and are Multi–state and Trans–border** in nature, making police investigations costly.

Way Forward

- ▶ **Cyber legislation at the national level** and better cyber–related governance arrangements at firms. E.g. **central bank business continuity contingency plans** covering cyber risk and provision of liquidity in case of crisis.
- ▶ **Insurance by firms to protect against financial losses** of cyber incidents
- ▶ **Periodical assessment of the cyber–security landscape** and identification of potential systemic risks from interconnectedness and concentrations, including from third–party service providers.
- ▶ **Encouraging cyber “maturity” among financial sector firms**, including board–level access to cyber–security expertise leading to better cyber–related governance may reduce cyber risk.
- ▶ **Improving cyber hygiene of firm by enhancing** online security and overall system health (such as antimalware and multifactor authentication).
- ▶ **Capable cybersecurity workforce**, and domestic and international information–sharing arrangements
- ▶ **Prioritization of data reporting and collection of cyber incidents**, and sharing information among financial sector participants to enhance collective preparedness.

Conclusion

Financial sector must develop capacity to deliver critical services during times of disruption and develop response and recovery mechanisms for crisis management.



4.9. VIRTUAL ASSETS AND TERROR FINANCING

CONTEXT



The Financial Action Task Force (FATF) has recognized deficiencies in enforcing its standards regarding virtual assets (VAs) and virtual asset service providers (VASPs).

ANALYSIS



- ▶ FATF closely monitors developments in the cryptosphere and has issued global, binding standards to prevent the misuse of virtual assets for money laundering and terrorist financing.
- ▶ FATF had in February 2023 agreed on a **road map to strengthen the implementation of its standards on virtual assets and VASPs.**

Reasons for use of Virtual Assets Used in Terror Financing

- ▶ **Anonymity:** Virtual Assets are at high risk due to anonymity and decentralization of peer-to-peer online transactions, use of VPNs.
- ▶ **Absence of global standard regulations:** Different Anti-Money Laundering and Combating Financing of Terrorism (AML/CFT) obligations and oversight as highlighted by IMF.
- ▶ **Crowdfunding with VAs:** Terrorist groups leverage crowdfunding platforms and social media to solicit funds

How do the FATF Standards apply to virtual assets?

Countries need to:	Virtual Assets service providers need to:
<ul style="list-style-type: none"> ▶ Understand the money laundering and terrorist financing risks of the sector ▶ Licence or register virtual asset service providers ▶ Supervise the sector, in the same way it supervises other financial institutions 	<ul style="list-style-type: none"> ▶ Implement preventive measures as that of financial institutions, E.g. customer due diligence, record keeping, reporting of suspicious transactions ▶ Obtain, hold and transmit originator and beneficiary information while making transfers

Way Forward

- ▶ **Effective global implementation of FATF standards:** to prevent criminals from exploiting weakly supervised jurisdictions.
- ▶ **Strengthening Financial Intelligence** to reveal the structure of terrorist groups and individual terrorists.
- ▶ **International Cooperation** between law enforcement authorities and financial sector to combat cross-border challenges.
- ▶ **Technological upgradation like big data and artificial intelligence are required.**



4.10. EXERCISES IN NEWS

Exercise	Context
Exercise 'Gagan Shakti'	Indian Air Force conducted 'Gagan Shakti' at the Pokhran Field Firing Range in Jaisalmer district (Rajasthan)
Exercise Poorvi Lehar or XPOL	Indian Navy conducted Exercise Poorvi Lehar on East Coast under the Operational Control of Eastern Naval Command.
Tiger Triumph 2024	It is a Bilateral Tri-Service Humanitarian Assistance and Disaster Relief (HADR) Amphibious Exercise between India and the US.
Tarkash	Indo-U.S. joint counter-terrorism exercise 'Tarkash' was recently held in Kolkata. It was held between the India's National Security Guard (NSG) and U.S. Special Operations Forces (SOF).
Shakti	It is a joint military exercise between India and France, started in Meghalaya.
Dharma Guardian	It is a Joint Military Exercise between the Indian Army and Japan. It is an annual exercise and conducted alternatively in India and Japan.
Exercise Cutlass Express	Indian navy participated in U.S. Naval Forces led multinational maritime Exercise Cutlass Express in Seychelles.
Exercise Samudra Laksamana	It is a bilateral Naval Exercise between India and Malasiya.
Sea Defenders-2024	It is a maritime security exercise between the Indian Coast Guard (ICG) & United States Coast Guard (USCG)
Bharat Shakti	Tri-Services Firing and Manoeuvre Exercise
IMT TRILAT- 2024	It is a Tri Lateral (TRILAT) maritime exercise between India Mozambique Tanzania (IMT).
Exercise Lamitiye 2024	It is a Joint Military Exercise between Indian Army and Seychelles Defence Forces.



4.11. TEST YOUR LEARNING

MCQs

Q. 1. Consider the following Statements with reference to SMART system

1. SMART is a next-generation missile-based torpedo delivery system to enhance the Anti-Submarine warfare capability.
2. It is designed and developed by DRDO.
3. It carries advanced heavy-weight torpedo as payload along with parachute-based release system.

Select the correct answer from the codes given below:

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

Q. 2. Consider the following:

1. Rescue Agreement (1968)
2. Liability Convention (1972)
3. Outer Space Treaty (1967)
4. Moon Treaty (1979)

How many of the above treaties has been signed and ratified by India as of today?

- (a) only 1
- (b) only 2
- (c) only 3
- (d) All Four

Q. 3. Consider the following pairs:

Military exercise	Bilateral exercise between India and
1. Tiger Triumph	Japan
2. Exercise Lamitiye	Seychelles
3. Samudra Laksamana	Singapore

How many of the above pairs is/are correctly matched?

- (a) only one
- (b) only two
- (c) All three
- (d) None

Q. 4. With reference to BrahMos missile, consider the following statements:

1. It has a flight range of up to 800 km.
2. It is a three stage ramjet supersonic cruise missile.

Select correct answer from the codes given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q. 5. What is Project Akashteer in the context of Indian defense?

- (a) An automated air defence control and reporting system inducted by the Indian Army
- (b) A satellite-based surveillance system for monitoring maritime boundaries
- (c) A missile defense program developed to counter ballistic missile threats
- (d) A cyber defense initiative aimed at protecting critical infrastructure from cyber-attacks

Questions

1. Examine the challenges posed by the weaponization of space and evaluate the effectiveness of existing international initiatives in addressing these concerns. (250 words)
2. "The emergence of hybrid warfare necessitates a paradigm shift in India's approach to technology absorption in defence." In light of this statement, critically examine the challenges India faces in integrating disruptive technologies into its defence sector and suggest measures to overcome them. (250 words)

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ENVIRONMENT



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Vision Publication

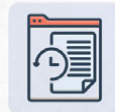
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5.1. BIODIVERSITY

5.1.1. International Big Cat Alliance (IBCA)



CONTEXT

The Union Cabinet recently approved the establishment of the International Big Cat Alliance (IBCA) with headquarters in India.

ANALYSIS



About International Big Cat Alliance (IBCA)

- ▶ **Multi-country & multi-agency coalition.**
- ▶ **Comprises of 96 big cat range countries,** conservation partners, scientific organizations, and business groups.
- ▶ **Aim: Conserve 7 big cats** namely Lion, Tiger, Snow Leopard, Leopard, Cheetah, Jaguar, and Puma.
- ▶ Recognizes the importance of integrating biodiversity policies with SDGs.

Membership:

- ▶ **16 countries,** including Brazil, Nepal, Bangladesh, and Malaysia, have officially joined the IBCA led by India.
- ▶ **9 international organizations,** including the International Union for Conservation of Nature (IUCN) and the World Wildlife Fund (WWF) International, have given consent to join the IBCA.
- ▶ The framework is modelled after the International Solar Alliance (ISA).



Read From Essential Material

Chapter 2: Forest and Wildlife resources
(Geography Class X)

BRIEF BACKGROUND

Background of IBCA

- ▶ In 2019 the Indian PM proposed an Alliance of Global Leaders.
- ▶ Officially launched in 2023 on the 50th anniversary of Project Tiger.

Big Cats and their Conservation Status

TIGER



- ▶ **IUCN Status:** Endangered
- ▶ **CITES Listing:** Appendix 1
- ▶ **WPA Listing:** Schedule 1

LION



- ▶ **IUCN Status:** Vulnerable
- ▶ **CITES Listing:** Appendix 1 (Only Indian population, Rest in Appendix 2)
- ▶ **WPA Listing:** Schedule 1

JAGUAR



- ▶ **IUCN Status:** Near Threatened
- ▶ **CITES Listing:** Appendix 1
- ▶ **WPA Listing:** Not Applicable

CHEETAH



- ▶ **IUCN Status:** Vulnerable
- ▶ **CITES Listing:** Appendix 1
- ▶ **WPA Listing:** Schedule 1

PUMA



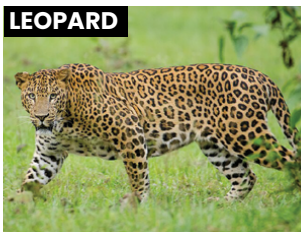
- ▶ **IUCN Status:** Least concern
- ▶ **CITES Listing:** Appendix 1
- ▶ **WPA Listing:** Not Applicable

SNOW LEOPARD



- ▶ **IUCN Status:** Vulnerable
- ▶ **CITES Listing:** Appendix 1
- ▶ **WPA Listing:** Schedule 1

LEOPARD



- ▶ **IUCN Status:** Vulnerable
- ▶ **CITES Listing:** Appendix 1
- ▶ **WPA Listing:** Schedule 1

Note: All CITES listed species are also part of WPA schedule IV

5.1.2. Ganga River Dolphin

CONTEXT

India's first National Dolphin Research Centre (NDRC) inaugurated in Patna, Bihar.

ANALYSIS

About NDRC

- ▶ Facilitates in-depth studies conducted by scientists and researchers regarding the dolphin species.
- ▶ Offers training to fishermen on effective dolphin conservation methods.

Major Threats to Ganga river dolphin

- ▶ Unintentional killing, overexploitation of prey due to fishing gear entanglement, poaching for dolphin oil.
- ▶ Habitat destruction and fragmentation of population, pollution etc.

Initiatives for Dolphin Protection

- ▶ Vikramshila Gangetic Dolphin Wildlife Sanctuary, Bihar: India's sole dolphin sanctuary.
- ▶ Project Dolphin: Modelled after Project Tiger,
 - To conserve both the marine and riverine dolphins as well as associated Cetaceans.
 - Funded by the Ministry of Environment, Forests and Climate Change, India
- ▶ Declared as National Aquatic Animal on 5th October 2009, which is celebrated as National Ganga River Dolphin Day.



Read From Essential Material

Chapter 2: Forest and Wildlife resources
(Geography Class X)

BRIEF BACKGROUND

Key features of Ganga River Dolphin

- ▶ It is commonly known as Susu is endemic to the Indian sub-continent and are "Umbrella Species"
 - known as the Tiger of the Ganga.
- ▶ Long thin snout, rounded belly, stocky body, and large flippers.
- ▶ Females are larger than males.
- ▶ Restricted to freshwater, use ultrasonic waves for hunting and navigating.
- ▶ Unique swimming behaviour aids in finding food, and they emit the 'Susu' sound while surfacing to breathe.

PROTECTION STATUS OF GANGA RIVER DOLPHIN



WPA, 1972
Schedule I

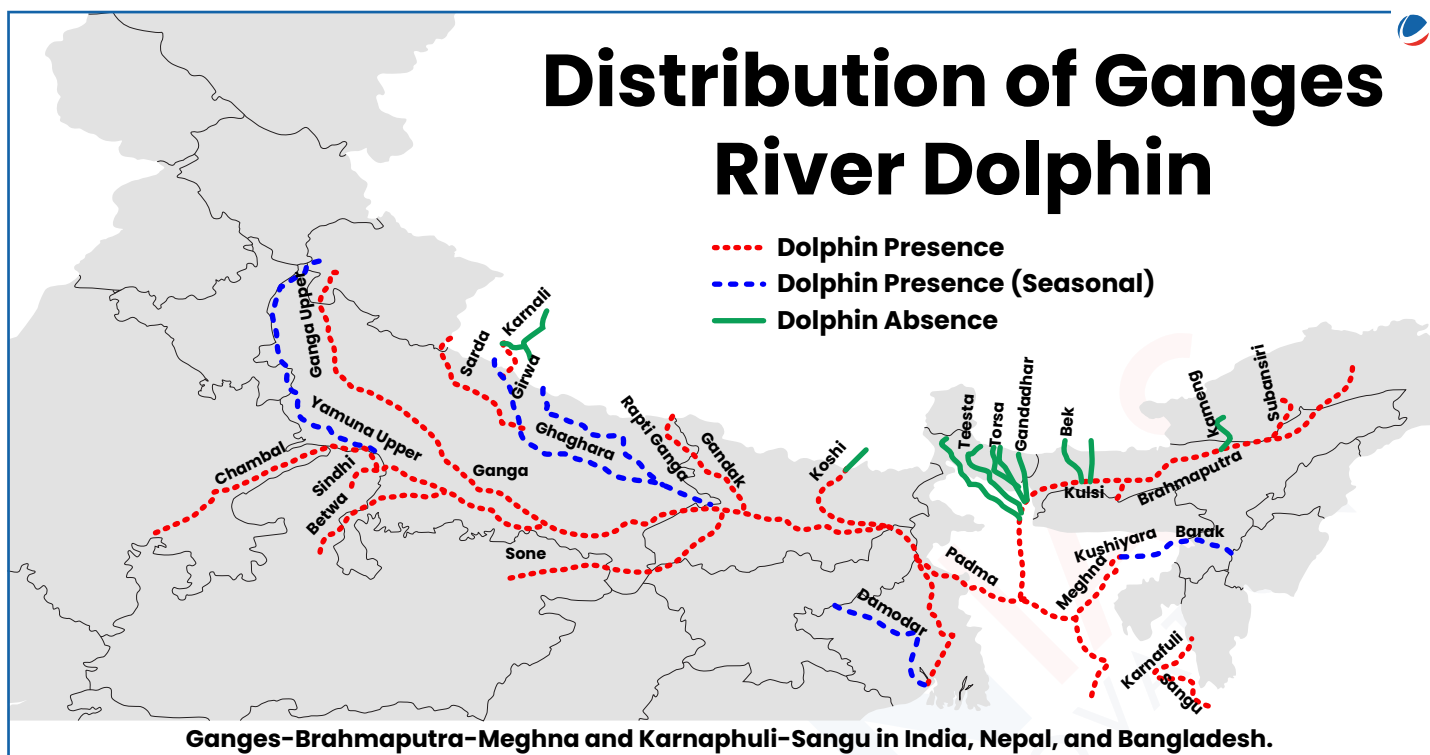


In list of 22 species covered under Species Recovery Programme?



CMS

Under Convention on Migratory Species



5.1.3. Living Animal Species (Reporting and Registration) Rules, 2024



CONTEXT

Union Ministry of Environment, Forest and Climate Change notified Living Animal Species (Reporting and Registration) Rules, 2024 under Section 63 of Wild Life (Protection) Act (WPA), 1972

ANALYSIS



- ▶ The rules were introduced for the purpose of Section 49M of the WPA, 1972, which provides for
 - Registration of possession, transfer, and birth and reporting of death of living scheduled animal species which are listed in Appendices of CITES or Schedule IV of WPA, 1972.
 - Section 49M was added through Wild Life (Protection) Amendment Act, 2022.

BRIEF BACKGROUND
Wild Life (Protection) Amendment Act, 2022 and CITES

- ▶ 2022 Amendment sought to implement CITES.
 - Schedule IV of the WPA includes specimen of Flora and Fauna listed under CITES.
- ▶ It also provides for management authority to grants export or import permits for trade of species.

Key highlights of Rules

- ▶ **Application for registration of possession:** Mandatory electronic registration for any possession of any animal species within 6 months.
- ▶ **Reporting and registration of birth:** Report birth of an offspring of animal species and apply for registration within a period of 7 days.
- ▶ **Reporting and registration of transfer** within 15 days.
- ▶ **Maintenance of stock for people involved in captive breeding** through regular health check-up of animals, inform any escape of the animal species, etc.

Current Affairs Quarterly Revision (March to May 2024)

5.1.4. Protection of Great Indian Bustard (GIB)

CONTEXT

Supreme Court reversed its earlier order providing a blanket direction for laying underground high voltage and low voltage power lines in the regions endemic to GIB habitats.

ANALYSIS

Key points on the Judgement

- ▶ Formation of an **expert committee** to assess the **feasibility of overhead and underground electric lines** in priority areas.
- ▶ Reviewing **international conservation practices** for similar species like Houbara Bustard in the Middle East.

Reasons for the reversal of judgement

- ▶ **Diverse factors accountable for reduction in GIB population** like low fecundity, habitat loss, etc.
- ▶ **Issues in underground cables:** safety risks to farmers having land on that area, higher transmission loss; etc.
- ▶ **Existing Dilemma on Safeguarding Biodiversity and Mitigating Climate Change**
 - ▶ **Meeting renewable energy commitments:** India's NDC targets require **50% cumulative electric power installed capacity from non-fossil fuel-based energy resources** by 2030.
 - ◊ **Threat to GIB:** Solar or wind plants in Rajasthan and Gujarat (primary GIB habitats) can harm the GIBs.

Way forward

- ▶ **Holistic conservation approach** incorporating environmental conservation, social equity, etc.
- ▶ **Adopting a balanced approach by government and court.**
- ▶ **Holistic understanding of sustainable development** for national goals.



Read From Essential Material

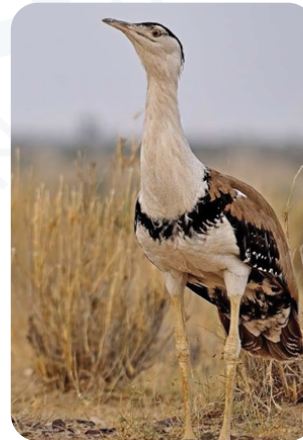
Chapter 9: Natural vegetation and Wildlife (Geography Class IX)

BRIEF BACKGROUND

About Great Indian Bustard

- ▶ An **agro-grassland, omnivore bird** endemic to the **Indian Subcontinent** mainly Rajasthan (Thar desert), Gujarat and tracts of Andhra Pradesh.
- ▶ **Males have larger black crown and breast.**

Protection status of Great Indian Bustard



Among 22 species covered under **Species Recovery Programme?** ✓



5.1.5. Mangroves Conservation

CONTEXT

Recently, the IUCN Red List of Mangroves Ecosystems indicated that about 50% of the ecosystems examined were classified as vulnerable, endangered, or critically endangered.

ANALYSIS

IUCN Red List of Mangroves Ecosystems

- ▶ Assessed 36 regions across 44 countries with experts from **Global Mangrove Alliance**.
- ▶ **Mangrove ecosystems of south India, Sri Lanka, the Maldives and Northwest Atlantic** were identified as **critically endangered**.
- ▶ Nearly 20% of the assessed mangroves are at high risk and have been marked as **endangered or critically endangered**, indicating a **severe risk of collapse**.
- ▶ Nearly 33 per cent of the mangrove systems on the planet are **threatened** by the impacts of **climate change**.

Threats to Mangroves: Climate Change, Development-related Activities, Pollution, Unsustainable Fishing, etc.

Initiatives for Mangrove Conservation:

- ▶ **India State of Forest Report (ISFR) 2023** by the Forest Survey of India (FSI): 17 sq km (0.34%) is the increase in Mangrove cover.
- ▶ **MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes)**: to provides financial assistance to local communities.
- ▶ **Sustainable Aquaculture in Mangrove Ecosystem (SAIME)** initiative use IMA (integrated mangrove aquaculture).
- ▶ **Magical Mangroves campaign** by World Wide Fund for Nature India.
- ▶ National Coastal Mission Programme on '**Conservation and Management of Mangroves and Coral Reefs**'
- ▶ **Mangrove Breakthrough**: Launched at CoP 27 of UNFCCC (Sharm El-Sheikh, Egypt), provides for securing the future of 15 million hectares of mangroves globally by 2030.

Way Forward

- ▶ Strengthening of **existing laws** like the Indian Forest Act, 1927, **Environmental Impact Assessment (EIA),1986** and **Forest Conservation Act,1980**.
- ▶ **Mangrove restoration** by establishing **green belts and buffer zones** and **connecting mangrove forests with terrestrial forests**. E.g., **Sundarban mangroves** connected to Sundarban National Park.
- ▶ **Research and development** at **national, sub-national or other lower scales** for localized custom solutions.
- ▶ Important mangrove patches can be declared as '**Mangrove Germplasm Preservation Centres**'
- ▶ **International cooperation**: In line with the **UN Decade for Ecosystem Restoration 2021-2030**.



Read From Essential Material

Chapter 2: Land, Soil, Water, Natural vegetation and wildlife resources (Geography Class VIII)

BRIEF BACKGROUND

About Mangroves: Cover an area of 150,000 sq km, primarily on **tropical, subtropical, and warm temperate coasts**, covering approximately 15 per cent of the world's **coastlines**.

Ecosystem services provided by Mangroves

- ▶ **Carbon sequestration:** approximately 11 billion tonnes of carbon, (i.e., three times stored by tropical forests).
- ▶ **Protection from coastal calamities**, combating sea level rise.
- ▶ **Biodiversity conservation:** 15% of the over 1,500 species dependent on mangroves are threatened with extinction.

5.1.6. International Arrangement on Forests (IAF)



CONTEXT

19th Session of the United Nations Forum on Forests (UNFF) under the International Arrangement on Forests (IAF) adopted the declaration on forest protection with a focus on People, Science, Technology and Finance.

ANALYSIS



Key takeaways of the UNFF19 meeting

- ▶ World is off track to achieve the Global Forest Goals by 2030.
- ▶ Members reaffirmed the UN Strategic Plan for Forests 2017–2030 (UNSPF).
- ▶ Focus on forest-based solutions to tackle the ‘triple planetary crises’ (Climate Change, Biodiversity and Pollution).
- ▶ Initiatives by other countries: Forest Environment Tax by Japan, the Model Forest Act Initiative (MoFAI) by UNEP and Asian Development Bank (ADB) and the Congo Basin Forest Partnership among others.
- ▶ India witnessed increase in forest cover in the past 10 years through Sustainable Forest Management (SFM).
 - Total forest and tree cover increased by 2261 sq km., i.e., 24.62% of the total geographic area. (ISFR 2019–2021 assessment)
 - 17 states have more than 33% of area under forest cover.

UN Strategic Plan for Forests under UNFF (2017–2030): Forged at special session of UN Forum on Forests held in 2017.

- ▶ Includes 6 Global Forest Goals and 26 associated targets to be reached by 2030, which are voluntary and universal.
- ▶ Aims to increase forest area by 3% worldwide by 2030, signifying increase of 120 million hectares.
- ▶ All members of UN are members of UNFF (including India).
- ▶ Global Forest Goals Report 2021 is the flagship publication of the UN on progress towards six Global Forest Goals (GFGs).

BRIEF BACKGROUND

International Arrangement on Forests (IAF)

Established in 2000 as a successor to the Intergovernmental Panel on Forests (1995–97) and the Intergovernmental Forum on Forests (1997–2000).

Five components of the IAF

- **United Nations Forum on Forests (UNFF):** Established in 2000 as a functional commission of the UN Economic and Social Council (ECOSOC).
- **Collaborative Partnership on Forests (CPF):** Innovative voluntary interagency partnership on forests, established in 2001, comprising 16 international organisations.
- **The Global Forest Financing Facilitation Network (GFFFN)**
- **UN Trust Fund:** contributions are voluntary in nature.
- **UNFF Secretariat:** Responsible for logistics preparation.



United Nations Strategic Plan for Forests 2017–2030 GLOBAL FOREST GOALS



GFG 1- Reverse Forest Cover Loss



GFG 2- Improve Forest Benefits and Livelihoods



GFG 3- Protect Forests and Use Sustainable Forest Products



GFG 4- Mobilize Resources



GFG 5- Promote Inclusive Forest Governance



GFG 6- Cooperate and Work Across Sectors



5.1.7. Sustainable Finance for Tiger Landscapes Conference (SFTLC)



CONTEXT

Recently, SFTLC was hosted by the **Bhutan government** and supported by the **Tiger Conservation Coalition**.

ANALYSIS



As per Global Tiger Forum (GTF), 2020 estimate

- ▶ Additional **US\$ 138 million annually** needed to secure the last remaining tiger landscapes in **Asia**.
- ▶ Tigers inhabit **fewer than 8% of the area they originally occupied** in Asia, despite increase in population from 3,200 in 2010 to 4,500 in 12 years.
- ▶ **Tiger Landscape** includes large blocks of **ecologically connected areas** impacted by infrastructure development.
 - **Example**, development of 8 lane (Greenfield highway) roads passing through Mukundara Hills Tiger Reserve (Rajasthan).

New initiatives announced in conference:

- ▶ Utilizes **new financial strategies** and **global partnerships** as stated in the **Paro statement**.
 - Aims to mobilize **US\$1 billion** by 2034.
- ▶ **Tiger Landscapes Investment Fund**: Introduced by United Nation Development Programme, is a **new financial mechanism** to promote nature-positive businesses that positively impact tigers, biodiversity, and people.
- ▶ The **Asian Development Bank** plans to introduce **Tiger Bonds** to attract private sector investors and promote nature-based solutions.

Need for conservation of Tiger landscapes

- ▶ Tigers are **Umbrella specie**.
 - As apex predators, they regulate prey populations and influence food chain behavior.
- ▶ **Deeply rooted in Asian cultural identity**, considered symbols of power, strength, and good luck.
- ▶ Protecting forests can **help mitigate climate change effects** and **control zoonotic diseases** like Ebola.

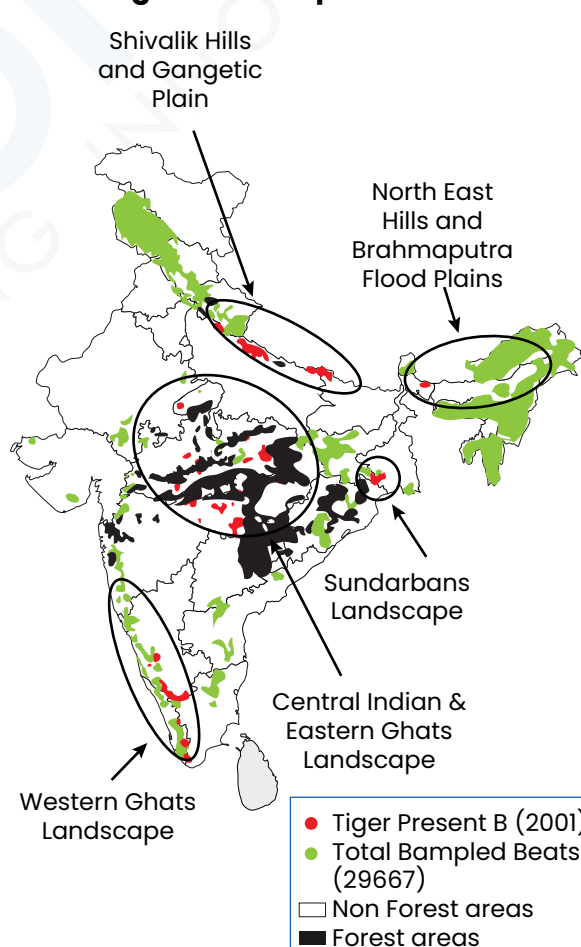


BRIEF BACKGROUND

Tiger Conservation Coalition

- ▶ **Independent group of organizations** working towards tiger conservation.
- ▶ **Collaborates with leading biologists and experts** in wildlife crime and human-wildlife coexistence.
- ▶ **Tiger Range Countries**: Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Russia, Thailand, and Vietnam.

Tiger Landscape in India



5.1.8. Coral Bleaching

CONTEXT

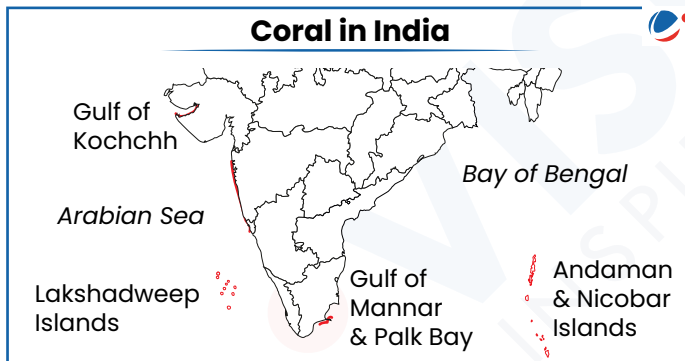
Widespread coral bleaching witnessed along the Indian coast affecting Lakshadweep, Gulf of Mannar, Palk Bay and Andaman and Nicobar Islands.

- ▶ NOAA's Coral Reef Watch (CRW) and International Coral Reef Initiative (ICRI) confirm 4th global mass coral bleaching.

ANALYSIS

More on the instances of bleaching

- ▶ **Lakshadweep Islands**
 - Seen across almost all species like *Acropora muricata* and *Porites cylindrica* in the Kavaratti Islands.
 - More **stress-tolerant species**, like *Porites lutea* and *Pavona varians* have also begun to bleach.
- ▶ **Gulf of Mannar**: Live coral cover decreased from 37% to 27.3% between 2005 and 2021.
- ▶ **Palk Bay**: Average coral cover was at 30.8% in 2007, dropped to 18.7% by 2019.
- ▶ **Goa**: Coral bleaching limited to one species, *Goniopora*.
- ▶ **Overall**, it is estimated that 30% of the world's coral reefs are severely damaged, with remaining 60% to be lost by 2030.



Initiatives taken to protect corals

- ▶ **India**
 - **Coastal Regulation Zone (CRZ) Notification** of 1991 issued under the broad Environment Protection Act, 1986
 - **Eco-development activities** by Gulf of Mannar Biosphere Reserve Trust empowering the local fishing communities.
 - **Coral Reef Recovery Project-Mithapur** (Gulf of Kachchh and Gujarat's Marine National Park) by Wildlife Trust of India (WTI) and Gujarat Forest Department.
- ▶ **Global Initiatives**: Global Fund for Coral Reefs, Coral Triangle Initiative, etc.



Read From Essential Material

Chapter 4: Animal Kingdom (Biology Class XI)

BRIEF BACKGROUND

About Coral Bleaching

Sea Surface Temperature increase causes **zooxanthellae to leave their hosts** leading to bleaching.

- ▶ **Global mass coral bleaching** events have occurred in 1998, 2010, 2014–2017, and 2023–2024, with 2023–2024 being the fourth.

Corals		
<p>Keystone marine species formed due to symbiotic relationship between polyps & photosynthetic algae, zooxanthellae.</p>	<p>Require warm temperature (23°–29° Celsius), very saline water ranging from 32–42 parts per thousand, clear and shallow waters with abundant sunlight to survive.</p>	<p>Are pivotal habitats, offering sustenance and shelter to numerous aquatic species, provide protection to the coasts from severe storm events like cyclones - thus called 'Rainforests of the Sea'</p>

Reasons for Coral Bleaching

- ▶ **Primary**
 - **Increasing Sea Surface Temperature (SSTs)**: Risen by around 1°C over the past 100 years in tropical regions.
 - **Others**: Marine heatwaves, stress due to El Nino, Shifting ocean currents, ocean acidification, bottom trawling, etc.
- ▶ **Other Reasons**:
 - **Biological Invasion** (Crown-of-thorns starfish outbreaks, invasive Exotic Alga *Kappaphycus alvarezii*)
 - **Xenobiotics**: Exposure to chemical contaminants
 - **Epizootics**: Pathogen-induced bleaching

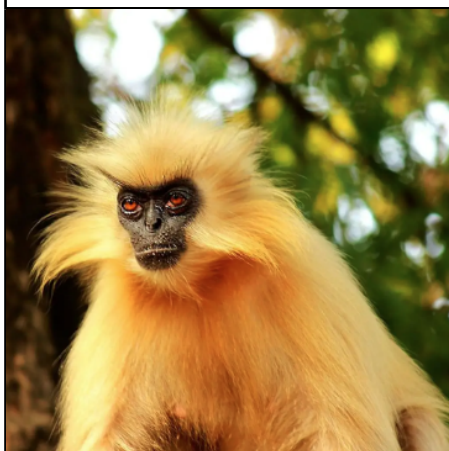
Way forward: Countering coral bleaching

- ▶ **Multilateral cooperation in policymaking** like International Coral Reef Initiative (ICRI) [India is a member], World Coral Conservatory Project.
- ▶ **Biorock technology, mineral accretion technology** to produce natural building materials in the sea. **Super corals:** Ex-situ breeding of high temperature-resistant corals known as 'human-assisted evolution'.
- ▶ **Long-term structural efforts: Incorporating sustainability** by reducing carbon footprint and marine pollution and building resilient coastal communities.

5.1.9. Species in News

Golden Langur

- ▶ **Context:** According to latest survey, there are around 7,396 Golden langurs in India.



- ▶ **Protection Status:**
 - ▶ IUCN: Endangered
 - ▶ CITES: Appendix I
 - ▶ **Wildlife Protection Act:** Schedule-I and IV.
- ▶ **Characteristics:**
 - ▶ Belong to a large **group of Old World monkeys** called the **colobines** (leaf-eating primates having a ruminant-like multi-chambered stomach).
 - ▶ **Coat colour varies seasonally** becoming cream colored in summer and dark golden in winter.
 - ▶ They are **diurnal** and **arboreal** in nature and live in troops (3-15).
- ▶ **Habitat:** Endemic to subtropical and temperate broadleaf forests in **Assam (Brahmaputra River Valley)** and **Bhutan**.

Melanochlamys droupadi (M. droupadi)

- ▶ **Context:** Named after President of India, by Zoological Survey of India M. droupadi is a new **marine species of head-shield sea slug** discovered from **West Bengal and Odisha coast**



- ▶ Shares habitat with **Melanochlamys bengalensis** which was discovered in 2022, but differs morphologically.
- ▶ M. droupadi is **smaller and has mottled brown to black colouration** with a **ruby red spot on the posterior shield**.
- ▶ The **sea slugs are rapid hunters** and feed upon mobile prey.

Vasuki Indicus

- ▶ **Context:** Paleontologists unearthed a giant predator snake in Gujarat's **Panandhro Lignite Mine in Kutch** named **Vasuki indicus**.



- ▶ **Characteristics:**
 - ▶ **Length range:** 36-49 feet.
 - ▶ Member of the **Madtsiidae snake family** that appeared roughly **90 million years ago** but went **extinct about 12,000 years ago**.
 - ▶ Likely lived **47 million years ago** during Middle Eocene period.
- ▶ **Habitat:** Spread from **India** through **southern Eurasia** and into **north Africa** after the **Indian subcontinent** collided with **Eurasia around 50 million years ago**.

Butterfly Cicada

► **Context:** A new species of cicada discovered in Meghalaya increasing the total number of known Becquartine species to 7.



- **Characteristics:** Belongs to **genus Becquartina** and marks the **first-ever record of this genus in the country** called "Butterfly cicadas" because of their **colourful wings**.
- **Habitat:** Present discovery extends the distributional range of the genus *Becquartina* from **Southeast Asia into Northeast India**.

Arogyapacha (*Trichopus zeylanicus*)

► **Context:** Drug named 'Jeevani' has been developed using "Arogya Pacha" with three more ingredients by Tropical Botanic Garden and Research Institute (TBGRI), Thiruvananthapuram, Kerala.



- **Characteristics:** Term arogyapacha literally mean 'the green that gives strength'.
 - Small medicinal plant with **slender stems and thick leaves**.
 - Grows in **shade near the banks of streams and rivulets**.
 - Only tender fruits of this plant are edible.
 - **Medicinal properties:** Anti-oxidant, anti-microbial, anti-inflammatory, anti-tumour, anti-diabetic, etc.
 - Used by local '**kani**' tribe as a health food for getting instant stamina, ever green health and vitality.
- **Habitat:** Subspecies found in India is called **Trichopus zeylanicus travancoricus**. Though the main species, *Trichopus zeylanicus*, is found in **Sri Lanka and Thailand**, only the Indian variety is proved to have medicinal qualities.

Baobab Tree

► **Context:** Global Society for Preservation of Baobabs and Mangroves has initiated a mission to rejuvenate baobab trees.



- **Characteristics:** **Long-lived deciduous**, small to large trees from **20 to 100 ft tall** with **broad trunks and compact tops**.
 - Known as **upside-down tree**, because in dry season they are devoid of leaves, and their bare grey and gnarled branches resemble roots.
 - Fiber from bark is **used to make rope, cloth, musical instrument strings etc.**
- **Habitat:** Grows in **Africa, Madagascar and Australia**.
 - Also found in **Mandu, in Dhar district of Madhya Pradesh**.

Sea Anemone

► **Context:** Scientists have found mass sea anemone bleaching off Agatti island, Lakshadweep.



- **Ocean-dwelling members of the phylum Cnidaria.** **Predatory animals** with most species found in **coastal tropical waters**.
- Like corals, they establish **symbiotic relationships with green algae**.
- **Sea surface temperature rise** disrupts this relationship.
- Also have a **symbiotic relation with clownfish**.
 - Clownfish are protected by the **stinging tentacles** of anemone and anemone gets food from Clownfish's meals.
- Play key **biogeochemical roles in benthic ecosystems**.

5.2. CLIMATE CHANGE

5.2.1. Green Credit Program

CONTEXT

Ministry of Environment, Forests and Climate Change (MoEFCC) notified methodology for Calculation of Green Credits (GC) for Tree Plantation Activity".

- ▶ Green Credit Program (GCP) 2023 rules under Green Credit Program (GCP).

ANALYSIS

Green credit: Singular unit of an incentive provided for a specified activity, delivering a positive impact on the environment.

About Green Credit Program (GCP)

- ▶ Innovative market-based mechanism to incentivise environment positive actions by different stakeholders such as Industries/institutions, State governments, philanthropies.

- ▶ The participation to it is voluntary.

- ▶ Aim:

- ▶ Aligned with the 'LiFE'--'Lifestyle for Environment' initiative.
- ▶ Encourage industries, companies, and other entities to meet their existing obligations or other obligations (voluntary).

- ▶ Established under: "The Environment (Protection) Act, 1986" with Ministry of Environment, Forest and Climate Change as Nodal Agency.

- ▶ Governance Structure

- ▶ The GCP's governance framework is supported by an inter-ministerial Steering Committee.
- ▶ The Indian Council of Forestry Research and Education (ICFRE) serves as the GCP Administrator.
- ▶ Has a user-friendly digital platform to streamline Project Registration, Verification and Issuance of Green Credit.

- ▶ Focus Areas of GCP: Tree Plantation, Water, Sustainable Agriculture, Waste Management, Air pollution reduction, Ecomark etc.

BRIEF BACKGROUND

About Green Credit Rules

- ▶ Forest Departments of states identify degraded land parcels for green cover enhancement.
- ▶ Land parcels must be free from obstructions and at least 5 hectares.
- ▶ ICFRE mandates tree plantation within two years.
- ▶ Green Credits awarded for each grown tree, subject to minimum density of 1100 trees per hectare.

Difference between Green and Carbon Credit

Green Credit	Carbon Credit
Under Green Credit program of Environment (Protection) act, 1986	Under the Carbon Credit Trading Scheme of The Energy Conservation Act, 2001
Advantage to Individuals and Communities	Advantage to Industries and companies

Green credit activities may qualify for carbon credits, leading to climate co-benefits like carbon emissions reduction, but not vice versa



5.2.2. UN Environment Assembly



CONTEXT

UN Environment Assembly Session 6 (UNEA-6) Concluded at UNEP Headquarters at Nairobi, Kenya with theme “Effective, inclusive, sustainable multilateral actions to tackle climate change, biodiversity loss, and pollution”.

ANALYSIS



- ▶ **Re-affirmed commitment to tackle triple planetary crisis through the adopted Ministerial Declaration**
 - **Triple planetary Crisis** refers to the three interlinked issues threatening humanity which include **Climate Change, Pollution and Biodiversity loss.**
- ▶ **The first Multilateral Environmental Agreements Day (28th Feb 2024)** dedicated to the international agreements on major environmental issues was observed.
- ▶ Draft resolution's on **Combating sand and dust storms, management of chemicals and waste, Cooperation on air pollution, Promotion of Sustainable lifestyle etc.** were passed.

Other reports released and Awards announced in UNEA 6

- ▶ **Global Resource Outlook 2024**
 - It warns that **without concerted action** to reduce global consumption, **the extraction of natural resources could rise by 60%** from 2020 levels.
 - It would also **increase the climate damage and risks to biodiversity and human health.**
- ▶ **Global Waste Management Outlook 2024**
 - **Municipal solid waste generation is predicted to grow from 2.3 bn tonnes (2023) to 3.8 billion tonnes by 2050.**
 - **Direct cost of waste management would almost double by 2050 from an estimated \$ 252 bn in 2020.**
- ▶ **Used Heavy-Duty Vehicles and the Environment report**
 - **Highlighted the rise of emissions from the heavy polluters, and their negative climate and health impacts.**
- ▶ **Young Champions of the Earth Award**
 - **Introduced in 2017, flagship youth engagement initiative** of the UNEP.
 - **Young people (Aged between 18-30 years) are selected from every region** of the globe and be named UNEP Young Champions of the Earth.

BRIEF BACKGROUND

About United Nations Environment Assembly (UNEA)

- ▶ **Established in 2012, at the United Nations Conference on Sustainable Development.**
- ▶ **Roles and Functions**
 - **The United Nations Environment Assembly (UNEA) of the UNEP is the world's highest-level decision-making body on the environment**
 - **Sets the global environmental agenda; provide overarching policy guidance and define policy responses.**
- ▶ **Organizational Structure:** President and 8 Vice Presidents (forming the UNEA Bureau)
- ▶ **Membership:** All 193 Members of the UN.



5.2.3. Constitutionalization of Environmental Issues



CONTEXT

Supreme Court (SC) stated that **Articles 14 and 21** should recognize the right to be free from the adverse effects of climate change.

ANALYSIS



Constitutional Mandate to Judiciary on Environment:

- ▶ Supreme Court (Article 32) and High Court (Article 226) can issue directions, orders or writs to protect fundamental rights and prohibit the State from making any law which abridges them (Article 13(2)).
- ▶ SC can pass such decree or make such order as is necessary for doing complete justice (Article 142).

Challenges in implementation:

- ▶ Judicial delays due to overburdened judiciary
- ▶ Difficulty in identifying polluters.
- ▶ Development and environment conflict.
- ▶ Weak monitoring and Lack of public awareness.

Way forward

- ▶ Establish separate machinery like National Green Tribunal to reduce implementation delays.
- ▶ Legislate on climate change and strengthen institutional capacity by allocating financial resources
- ▶ Investing in capacity building of environmental agencies.
- ▶ Increase rights awareness through citizen lawsuits against Government, as supported by the European Court of Human Rights.

BRIEF BACKGROUND

Earlier SC judgements regarding constitutionalization of environment issues

- ▶ **M.K. Ranjitsinh and Others v. Union of India:** Power to broaden Fundamental Rights to address environmental issues.
- ▶ **Rural Litigation and Entitlement Kendra vs. State of UP (1988), M.C. Mehta vs. Union of India (1987), and Virender Gaur vs. State of Haryana (1995):** Recognized right to live in a healthy, pollution-free environment as part of Article 21.
- ▶ **T.N. Godavarman Thirumulpad vs Union Of India & Ors (1996):** Expanded 'forest' to preserve green expanses.
- ▶ **Vellore Citizens Welfare Forum vs. Union of India (1996):** Observed "Precautionary Principle" and "Polluter Pays Principle" as essential features of "Sustainable Development."

Constitutional provision regarding Environment

- ▶ **Article 48A:** State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country.
- ▶ **Clause (g) of Article 51A:** Makes it the duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.



5.2.4. Climate Change and Monetary Policy Transmission

CONTEXT

As per RBI, climate change can weaken monetary policy transmission.

ANALYSIS

Impact of Climate change on monetary policy

- ▶ Impacts inflation through adverse weather events affecting agricultural production and global supply chains.
- ▶ Impact the Natural Rate of Interest (NRI) undermining productivity and lowering potential output.
 - NRI is a real short-term interest rate consistent with output at its potential and a stable rate of inflation.
 - It is one element which helps to define the monetary policy stance (accommodative, neutral or restrictive).
 - Impact the financial health of banks and other financial institutions, etc.

Way forward

- ▶ Adopting green taxonomy, to assess the sustainability credentials and possible ranking of economic activity.
- ▶ Need to incorporate climate risk into their modeling frameworks.

BRIEF BACKGROUND

About Monetary Policy: Adjustment of the supply of money in the economy by the Reserve Bank of India (RBI) to achieve a combination of inflation and output stabilization.

Steps taken for transition to Green Economy

- ▶ **Sovereign Green Bonds:** Announced in the Union Budget 2022-23
- ▶ **Foreign Institutional Investors (FIIs)** allowed participation in future green government securities.
- ▶ **Foreign Direct Investment (FDI)** up to 100% under the automatic route for solar energy projects allowed.
- ▶ **Green Climate Fund,** Financial support to shift towards climate- resilient development path.

5.2.5. New Collective Quantified Goal on Climate Finance

CONTEXT

Parties to the UNFCCC have made new submissions for the NCQG under Paris Agreement.

ANALYSIS

About NCQG

- ▶ Proposed in COP21 for setting post-2025 climate finance goal (new goal).
 - In 2009 parties to UNFCCC decided to mobilise \$100 billion annually by 2020 subsequently extended to 2025.
 - This target is yet to be achieved reflecting significant shortfalls in it.
 - It is proposed to raise the floor on climate finance above the current \$100 billion annual target while addressing key shortcomings in the current climate financing mechanism by:
 - ◇ Setting both qualified and quantified targets
 - ◇ Agreeing suitable modalities for financing mitigation, adaptation and loss and damage.
 - ◇ Building deeper levels of accountability and transparency.

BRIEF BACKGROUND

Paris Agreement (2015) on Climate Financing

- ▶ Article 9 stipulates that developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation along with existing obligations under the Convention.

Issues with the target of mobilising \$100 billion annually

- ▶ **Distributional imbalance:** Between 2011-2020, 80% of global climate finance was focused in OECD countries and the East Asia Pacific region.
- ▶ **Overemphasis on mitigation:** Adaptation forming only ~8% of the total climate financing in (2019-2020)
- ▶ **Nature of Climate Finance:** ~94% of existing climate investment is either through debt or equity (return seeking).

5.3. POLLUTION

5.3.1. Plastic Waste Management

CONTEXT

- ▶ **Public Accounts Committee (PAC)** presented “Pollution caused by Plastic” report following which the government notified the **Plastic Waste Management (Amendment) Rules, 2024 (PMW Rules 2024)**.
- ▶ PMW Rules 2024 amended 2016 Rules to address PAC’s challenges exercising its powers under Environment (Protection) Act 1986.

ANALYSIS

Key Provisions of PWM Rules, 2024

- ▶ **Annual Plastic Waste Assessment:** Mandates local bodies to conduct annual assessments of plastic waste.
- ▶ **Centralised Registration Portal:** Offers an online platform for stakeholder registration.
- ▶ **Elimination of Single Use Plastics (SUP):** Requires local bodies to prevent usage of prohibited SUP items and submit annual reports.
- ▶ **Expansion of Extended Producers Responsibility (EPR) Scope:** Highlights the need for a uniform EPR framework for waste collection and processing.
- ▶ **Online Report Submission:** Mandates quarterly reports from manufacturers, importers, recycling or processing individuals, and those selling plastic raw materials. (See Infographic)
- ▶ **Monitoring:** Provides an institutional mechanism for effective monitoring and accountability.

Other provisions of PWM Rules, 2024 that could be helpful in effective plastic waste management

- ▶ **Changes in Definitions of stakeholders:** Now includes **Importer, Seller, Producer** and also broadens definition of manufacturer.
- ▶ Precise definition of **Biodegradable plastics**.
- ▶ **Certificate from FSSAI** in addition to the CPCB.
- ▶ **Precise direction for labeling** for different types of plastics.



Read From Essential Material

Chapter 16: Environmental issues
(Biology–Class XII)

BRIEF BACKGROUND

About Plastic Waste Management

According to the CPCB’s annual report in 2020–21

- ▶ India generated around **4,200,000 Tonnes Per Annum** plastic.
- ▶ **Per capita plastic waste generation** doubled over the last five years.

PWM Rules, 2016 (as amended till 2024) were notified for **effective and scientific management** of Plastic waste in India.

- ▶ Rules apply to every **Waste Generator, Local Body, Gram Panchayat, Manufacturer, Importer, Producer and Brand Owner**.
- ▶ **Increase minimum thickness of plastic carry bags** from **50 to 75 microns** from 30th September, 2021 and to **120 microns** with effect from 31st December, 2022.
- ▶ **Prohibits identified Single Use Plastic (SUP) items**, which have low utility and high littering potential.
- ▶ Introduced ‘**Extended Producers Responsibility (EPR)**’ system.

Online reporting mechanism under PWM, 2024



Report by local bodies

- ▶ Local bodies are required to **annually submit reports online** to both the **Urban (or Rural) Development Department** and the SPCB and PCC.
- ▶ SPCB and PCC shall audit these reports and publish the annual **report on their websites**.



Reports by SPCB and PCC

- ▶ **SPCB and PCC shall submit online an annual report to the Central Pollution Control Board (CPCB)** on the implementation of these rules.



Report by CPCB

- ▶ **CPCB shall prepare a consolidated annual report** on the implementation of these rules and **submit to the Central Government along with its recommendations**.

5.3.2. Battery Waste Management (Amendment) Rules, 2024



CONTEXT

The Ministry of Environment, Forest, and Climate Change (MoEFCC) has recently made revisions to the **Battery Waste Management Rules, 2022**.

ANALYSIS



Key changes introduced by the New Rules

- ▶ **Provision of Certificate for Waste Battery**
 - ▶ The **Central Pollution Control Board (CPCB)** shall fix the highest and the lowest price for **Extended Producer Responsibility (EPR)** certificates (Earlier CPCB was generating the certificate online through a separate portal).
 - ▶ The exchange price of **EPR certificate** between **registered entities** through the portal shall be between the highest and the lowest prices (Earlier the EPR certificates can sold to Producers in exchange of waste batteries)
- ▶ **Action on violations and imposition of Environmental Compensation**
 - ▶ The **CPCB** will prepare and recommend the **guidelines for compensation** through consultation of the Committee for Implementation for the same (Earlier the committee for implementation appointed by CPCB was preparing and implementing the guidelines)
 - ▶ The guidelines shall be **submitted to the MoEFCC**.

BRIEF BACKGROUND

Current Governance framework of Battery Waste in India

The MoEFCC, published the **Battery Waste Management Rules, 2022** (also amended in 2023 and 2024), to ensure management of waste batteries under the **Environment (Protection) Act 1986**.

- ▶ **Key Provisions of 2022 rules.**
 - ▶ **Extended Producer Responsibility (EPR):** Where the producers (including importers) of batteries are responsible for collection and recycling/refurbishment of waste batteries.
 - ▶ **Centralized online portal:** for exchange of EPR certificates between producers and recyclers/refurbishes.
 - ▶ **Mandatory recovery:** the minimum percentage of recovery of materials from waste batteries.
 - ▶ **Polluter Pays Principle:** Environmental compensation will be imposed for non-fulfilment of EPR target.

Way Forward to further strengthen battery waste management

- ▶ **Policy Support** like **separate license for handling lithium-ion batteries** from electronic waste, making disposal of batteries in landfills illegal (as recommended by NITI Aayog)
- ▶ **Incentivizing manufacturers** to meet recycling regulations, such as **green taxes**.
- ▶ **Incentivizing Customers** through a **deposit Refund System** to return batteries.
- ▶ **Improving collection system** through establishment of **separate collection agencies**.
- ▶ **Financing for R&D** to make recycling a commercially viable processes with high recovery rates.



5.3.3. E-waste

CONTEXT

Recently, the Global E-Waste Monitor 2024 was released.

ANALYSIS

The report, funded and prepared in partnership by:

- ▶ **United Nations Institute for Training and Research's Sustainable Cycles (SCYCLE) Programme** (To promote sustainable societies, and sustainable production, consumption and disposal for electrical and electronic equipment) **International Telecommunication Union (ITU)** [specialised agency of UN], **Fondation Carnignac**.
- ▶ **Key Highlights of the report**
 - **62 billion kg of e-waste was generated globally**, with 22.3% formally collected and recycled (2022)
 - Only **1% of rare earth element demand** is met by e-waste recycling.
 - **USD 91 billion** is the estimated economic value of e-waste.
 - **81 countries** have adopted e-waste policies, including India.
 - **India ranked 3rd largest e-waste generator**, following **China and the USA**.

Status of E-Waste in India

- ▶ **>16.01 lakh tonnes** total e-waste generated (2021-22)
- ▶ **>~33% of total e-waste** generated was collected and processed
- ▶ **Haryana followed by Uttarakhand** collected and processed highest e-waste.
- ▶ **567 e-waste processing facilities** with a capacity of ~17.23 lakh tonnes annually.

Need for e-waste management: Environmental Risks; Health hazards; Economic benefits of recovering valuable materials; landfill space, etc.

Challenges associated with E-waste Management:

- ▶ **Informal recycling** (around 85% is managed by unorganized sector)
- ▶ **Inadequate e-waste management infrastructure**
- ▶ **E-waste imports** (80% of e-waste from developed countries sent to developing countries for recycling)
- ▶ **Other issues:** Technological advancement; limited repair options, etc.

Way Forward for management of E-waste in India

- ▶ **Recycling and Disposal:** E.g., **Co-locating E-Waste Management Industrial Cluster** with Manufacturing Clusters.
- ▶ **Others:** Corporate responsibility; Informal sector; Technological development; stringent monitoring and enforcement.

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Read From Essential Material

Chapter 16: Environmental issues
(Biology-Class XII)

BRIEF BACKGROUND

About E-Waste

- ▶ Includes **electrical and electronic equipment, including solar photo-voltaic**, discarded without reuse intent, and rejects from manufacturing, refurbishment, and repair processes.

E-waste Management in India

- ▶ **Hazardous waste (Management and Handling) amendment rules, 2003:** covered Hazardous materials.
- ▶ **E-waste (Management and Handling) Rules, 2011:** Introduced **Extended Producer Responsibility (EPR)**.
 - Product responsibility extended to the post-consumer stage of a product's life cycle.
- ▶ **E-Waste (Management) Rules, 2016:** Introduced concept of **Producer responsibility Organization**.
- ▶ **E-Waste (Management) Rules, 2022** promotion of circular economy through EPR regime.
- ▶ **E-Waste (Management) Second Amendment Rules, 2023** provides more clarity to the **exemption of reduction of harmful substances**.
- ▶ **E-Waste (Management) Amendment Rules, 2024** provides for exchange price of EPR certificate to be between the **highest and lowest prices fixed by central pollution control board**.

5.3.4. Direct Air Capture and Storage (DAC+S) plant



CONTEXT

World's largest DAC+S plant, Mammoth, started operation in Iceland.

ANALYSIS



About the new plant: **Second commercial DAC+S facility of Swiss Company Climeworks** much larger than its predecessor Orca.

Other CDR technologies

- ▶ **Afforestation/Reforestation and Soil Carbon Sequestration**
- ▶ **Enhanced Weathering**, Mining of rocks containing minerals that naturally absorb CO₂.
- ▶ **Ocean-based CDR**: Ocean fertilisation (adding nutrients to upper layers), **ocean alkalinity enhancement** (transformation of CO₂ as bicarbonate/carbonate), **coastal blue carbon management** etc.
- ▶ **Bioenergy with Carbon Capture and Storage (BECCS)**: Using biomass as energy for CDR and storing biogenic carbon geologically.

Challenges in CDR: Higher energy needs and costs, Air Pollution (through Mining), significant land and water demand, ocean acidification etc.

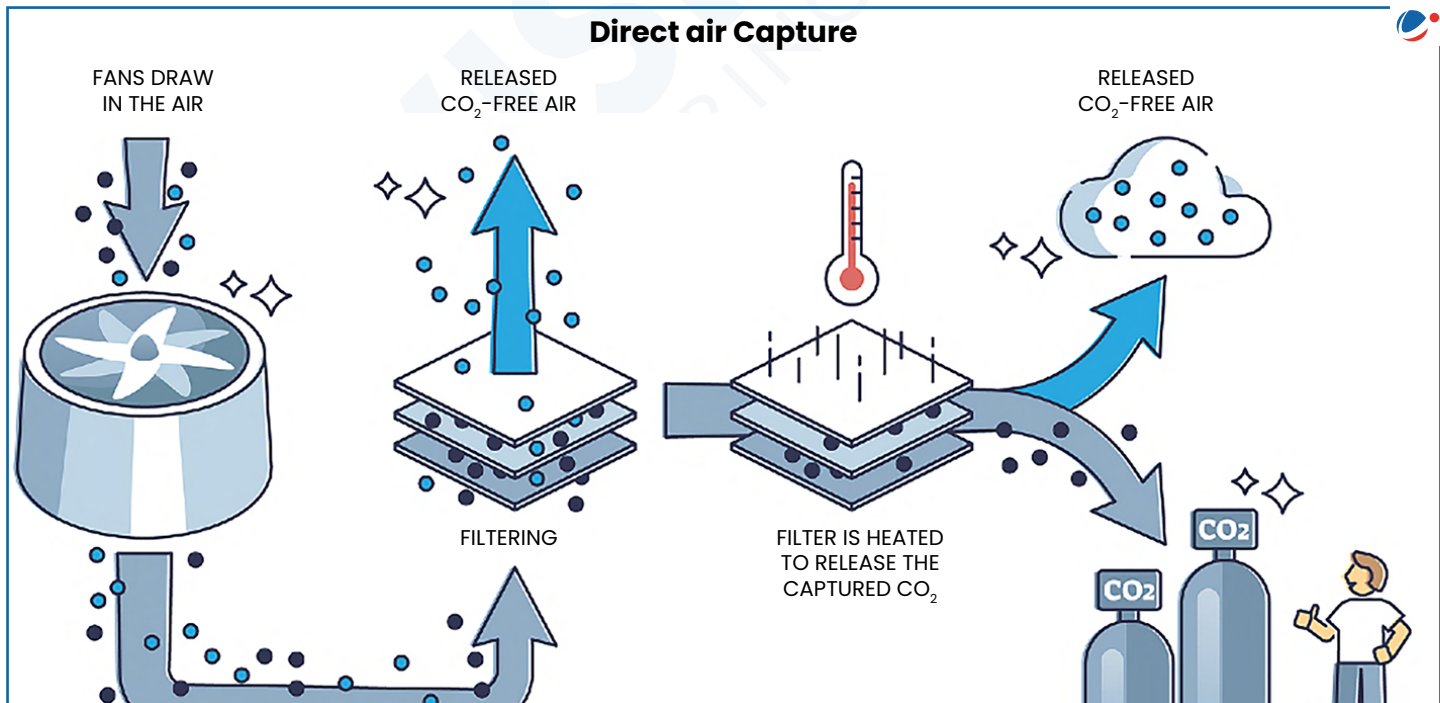
BRIEF BACKGROUND

About DAC+S Technology

- ▶ **Carbon Dioxide Removal (CDR) technology** which capture CO₂ directly from atmosphere at any location.
 - ▶ Distinct from carbon capture generally carried out at point of emissions.
- ▶ CO₂ can be **permanently stored in deep geological formations** or used for various applications.

About CDR

- ▶ **Anthropogenic activities that remove CO₂ from atmosphere and store it durably** in geological, terrestrial, or ocean reservoirs.
- ▶ According to IPCC 6th Assessment Report, CDR is **necessary element to achieve net-zero CO₂ and GHG emissions**



5.3.5. Urban Water Crisis



CONTEXT

Bengaluru is facing one of the worst water crises in recent years due to poor rainfall.

ANALYSIS



Reasons behind the Urban Water Crisis

- ▶ **Unplanned urbanization:** with more citizens moving towards urban areas.
- ▶ **Pollution of water bodies:** Industrial effluents and untreated sewage.
- ▶ **Over-extraction of groundwater:** 48% of urban water supply comes from ground water.
- ▶ **Poor water supply infrastructure:** leading to leakage and resulting in "non-revenue water" (i.e., water "lost" before it reaches the customer).
- ▶ **Climate change:** Erratic monsoons and a rise in the frequency and intensity of floods and droughts.
- ▶ **Aquifer system:** in the event of prolonged dry spells the Groundwater resources in South India not able to sustain due to their rocky nature.

Way Forward

- ▶ **Nature-Based Solutions:** Green-blue infrastructure and restoration of wetlands.
- ▶ **Community based solutions:** through efficient management of water.
- ▶ **Regulatory measures:** Ensure the adoption of sustainable urban water management practices e.g., Rainwater harvesting (Compulsory in TN for new buildings), Grey-water recycling etc.
- ▶ **Use of Technology:** for leakages detection, water quality monitoring, targeted remediation actions.
- ▶ **City to city learning in water governance:** and building learning alliances with other cities.
- ▶ **Leveraging the private sector:** For example, Tata Steel had commissioned the creation of the Dimna Lake in Jamshedpur.



Read From Essential Material

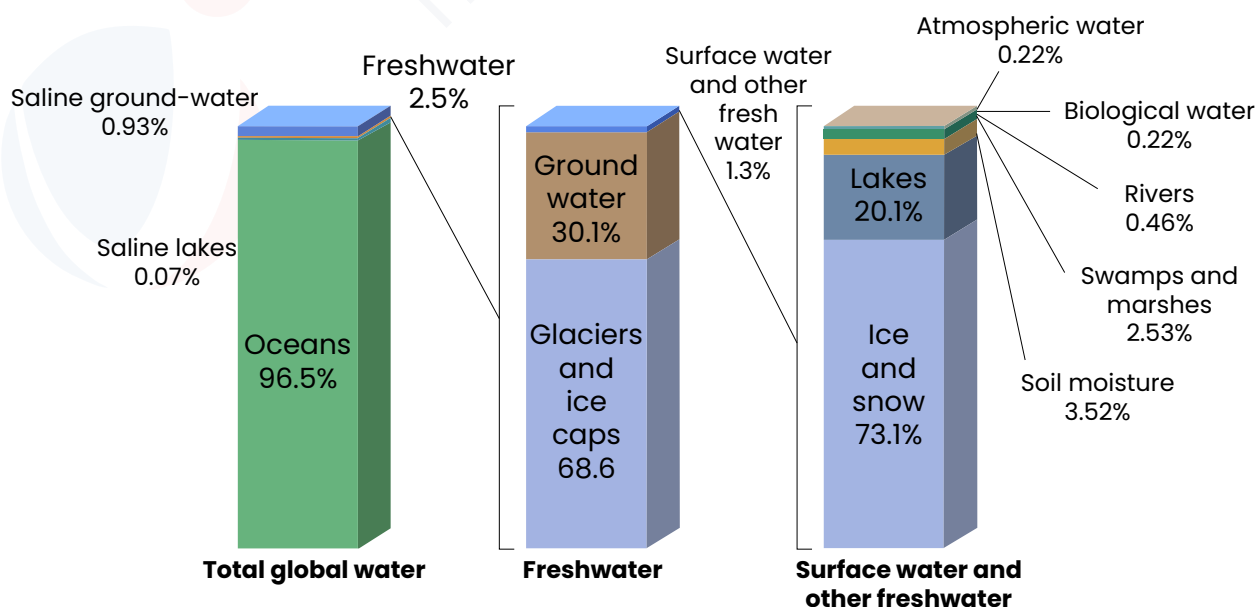
Chapter 16: Environmental issues
(Biology-Class XII)

BRIEF BACKGROUND

About Urban Water Crisis

- ▶ Situation where there is **inadequate access to clean and safe water** for various needs due to factors like pollution, overuse, and poor management.
- ▶ **Water resources becoming scarce** because of **drought** conditions as **aggravated by climate change** has been referred to as 'Day Zero' (which refers to critically low level water in reservoirs)
- ▶ Key hindrance in **achieving sustainable Development Goals (SDGs)** particularly SDG6

Distribution of Earth's Water



5.4. SUSTAINABLE DEVELOPMENT

5.4.1. Traditional Knowledge in India



CONTEXT

Recently, the World Intellectual Property Organization (WIPO) adopted the Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge.

ANALYSIS



About the treaty

- ▶ Negotiations began at WIPO in 2001, initiated in 1999 on Colombia's proposal.
- ▶ Adopted by over 150 countries (including India).
- ▶ First treaty to address the interface between intellectual property (IP), genetic resources (GRs) and traditional knowledge (TK).
- ▶ Acknowledges the United Nations Declaration on the Rights of Indigenous Peoples.
 - Adopted by United Nation General Assembly in 2007, is a legally non-binding resolution. (Supported by India).

Key provisions of the Treaty

- ▶ **Mandatory Patent Disclosure Requirements (PDRs):** Including the country of origin and Indigenous people.
- ▶ **Mandatory legal, administrative, and/or policy Framework at national level.**
- ▶ **Establishment of information systems.**
- ▶ **Assembly:** One delegate for each contracting Party.
- ▶ **Other provisions:**
 - **Financial assistance to developing countries or countries in transition**
 - **Not applicable to patents filed prior to this treaty.**
 - **International Bureau of WIPO to perform administrative tasks.**

Significance of the Treaty

- ▶ **Increase transparency compared to the current IPR regimes like TRIPS.**
- ▶ **Formal recognition** of the connection between local communities and their GRs and TK.
- ▶ **Added protection by way of mandatory disclosure obligations.**
- ▶ **Curbing Biopiracy:** Eg US patent on turmeric for wound healing and Neem oil to prevent fungus were revoked after India proved its long-standing traditional use.
- ▶ **Encourage ethical innovation**

BRIEF BACKGROUND

- ▶ **Genetic Resources (GRs):** Found in medicinal plants, crops, and animals and cannot be directly protected as intellectual property.
- ▶ **Traditional Knowledge (TK):** Knowledge system held by indigenous communities. Aids in biodiversity conservation with around 80% of world's population relying on them.

Key Characteristics of TK



Preserved and transmitted from generation to generation



Not static, rather evolve as communities repond to new challenges



Collective/individual in nature

Challenges in India's TKzs and GRs

- ▶ **Biopiracy** by foreign entities without benefit-sharing of indigenous communities.
- ▶ **Farmers without effective rights** on patented varieties by multinational companies.
- ▶ **Lack of documentation** enhancing risk of loss.
- ▶ **Inadequate Global Legal Framework** to prevent misappropriation and recognize indigenous rights.
- ▶ **Insufficient biodiversity conservation** due to environmental degradation and climate change.

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5.4.2. Clean Energy Transition



CONTEXT

World Economic Forum released “Fostering Effective Energy Transition 2024” report.

ANALYSIS



About the Report

- ▶ Based on the Energy Transition Index (ETI) that evaluates **120 countries** on their **energy system performance and readiness for secure, sustainable, and inclusive energy systems.**
- ▶ ETI 2024 framework offers a comprehensive assessment of countries’ energy systems.
- ▶ **Key Findings**
 - **India’s rank:** 63rd (up from 67 in 2023)
 - **Clean energy infrastructure investments:** Reached **\$1.8 trillion** in 2023, with nearly **90% of the growth** since 2021 occurring in **advanced economies and China.**
 - **Top 5 performers:** Sweden, Denmark, Finland, Switzerland and France.
 - **8 countries reached net-zero emissions in 2022:** Bhutan, Comoros, Gabon, Guyana, Madagascar, Niue, Panama, and Suriname
 - **Generative AI can enable energy companies to save over \$500 billion annually.**

BRIEF BACKGROUND

About Energy Transition

- ▶ **Shifting energy production away from sources that release a lot of greenhouse gases,** such as fossil fuels, to those that release little to no greenhouse gases.
- ▶ Requires **long-term strategies from the global energy sector** to create cleaner, sustainable options
- ▶ **Significance of Energy Transition for India:** Energy security; Job Creation; Achieve climate target like to reach net zero emissions by 2070; etc.

India’s Status of Clean Energy Transition

- ▶ **4th** globally in Renewable Energy Installed capacity.
- ▶ **4th** in wind power and 5th in solar power capacity.
- ▶ **Installed RE capacity: increased** from 76.37 GW (2014) to 193.58 GW (including hydro) (2024).

Challenges in Energy Transition: Technological Barriers, Investment Disparities, Uncertainties in Subsidies and Supply Chains, Geopolitical Tensions and Trade Protectionism, Clean energy projects are capital-intensive, etc.

Way Forward

- ▶ **Bridge investment gap:** From advanced nations to emerging and developing nations.
- ▶ **Implement regulations** for decarbonization: Need for Political commitment
- ▶ **Deliver energy equity for vulnerable households** Social safety nets, cash transfers, basic income, etc.
- ▶ **Drive R&D and adoption of new technologies:** New battery technologies, offshore wind, green ammonia-based hydrogen for shipping and steel production.
- ▶ **Make renewable energy technology a global public good**
- ▶ **Level the playing field for RE technologies:** Urgent reform of domestic policy frameworks.

Initiatives to Facilitate Energy Transition

Global	India
<ul style="list-style-type: none"> ▶ International Solar Alliance (2015). ▶ Clean Energy Transitions Programme flagship programme of International Energy Agency. ▶ Panel on Critical Energy Transition Minerals: India is its member. ▶ Just Energy Transition Partnerships: by the International Energy Agency & WEF in 2022 ▶ Carbon Border Adjustment Mechanism (CBAM) by the EU in 2023. ▶ Global Renewables and Energy Efficiency Pledge: Signed by 133 countries at COP 28 (UAE), for tripling the rate of renewables capacity by 2030. 	<ul style="list-style-type: none"> ▶ National Solar Mission (2010) ▶ National Electric Mobility Mission Plan (2013) ▶ Green Energy Corridor Project: Supported by the World Bank. ▶ National Biofuel Policy (2018) ▶ Renewable Purchase Obligation (RPO) certain percentage of electricity purchased by distribution companies must come from renewable sources. ▶ National Green Hydrogen Mission (2023).

5.4.3. Environmental Movements in India



CONTEXT

2023 marked the 50th anniversary of the Chipko movement known for its collective mobilization of women promoting Eco-feminism.

ANALYSIS



About Eco-Feminism

- ▶ It is a philosophical and political movement that challenges the capitalist patriarchal system, arguing that women are interconnected with environmental degradation and subjugation.
- ▶ It emphasizes the importance of traditional knowledge and women's direct relationships with the environment.
- ▶ Its contemporary relevance includes critique of capitalist exploitation and environmental justice.

Impacts of Environmental Movements in India

- ▶ Leadership to Women: E.g., Medha Patkar, Gaura Devi, etc.
- ▶ Influenced Environmental Policy and Legislations like Forest Right Act, 2006.
- ▶ Continued legacy of nonviolent protests: Based on Gandhian concepts of nonviolence.
- ▶ Advocated for sustainable development.
- ▶ Stressed cultural identity, highlighting Indigenous and local communities' role.
- ▶ Advocated for 'environmentalism of the poor', criticizing modern developmentalism.

Challenges faced by Environmental Movements

- ▶ Lack of sufficient technical information and data.
- ▶ Weak decision making power with local self-governments.
- ▶ Sometimes reactive in nature and does not propose alternate development plan.
- ▶ Lack of dialogue and cooperation
- ▶ Disappearance of traditional belief system.

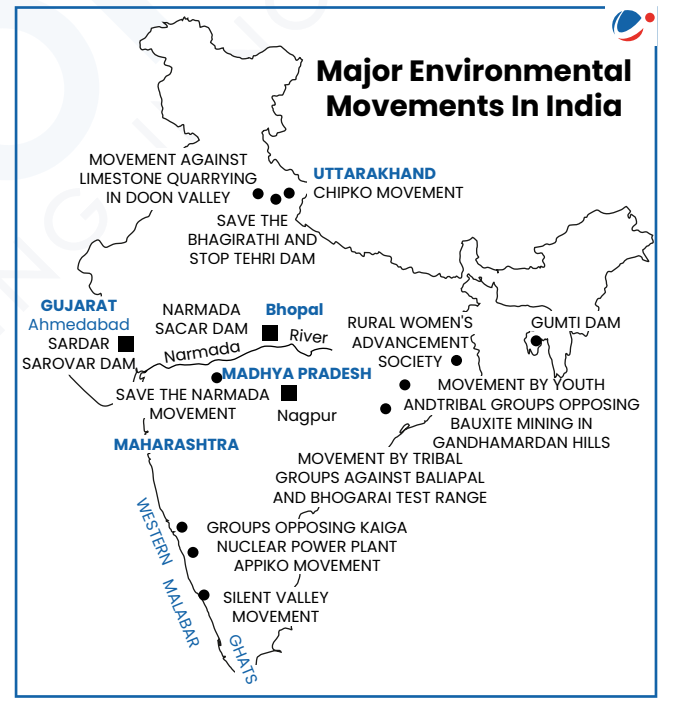
Way forward

- ▶ People-friendly development plans
- ▶ Increase public participation in development.
- ▶ Environmental impact assessments by impacted populations.
- ▶ Including technical and data-related knowledge.
- ▶ Link local and global environmental issues.
- ▶ Promote individual action alongside movements, like LiFESStyle 'Pro-Planet People', etc.

BRIEF BACKGROUND

About Chipko Movement

- ▶ It was a nonviolent resistance against forest cutting that began in the Reni village in Uttarakhand's Chamoli district.
- ▶ Major leaders: Sunderlal Bahuguna, Chandi Prasad Bhatt, Gaura Devi, etc.
- ▶ Originated in 18th-century Rajasthan, was started by Rajasthan's Bishnoi community
 - ▶ Led by Amrita Devi, and resulted in a royal decree banning tree cutting in all Bishnoi villages.



5.4.4. Financing Agrochemical Reduction and Management (FARM) Programme



CONTEXT

Global Environment Facility (GEF)-funded Financing Agrochemical Reduction and Management (FARM) Programme launched.

ANALYSIS



Key highlights of FARM

- ▶ **About:** One of the first initiative (\$379 million) that will realign financial incentives to:
 - ▶ Prevent the use of harmful inputs in food production.
 - ▶ Encourage the adoption of low and non-chemical alternatives.
 - ▶ Tenure: 5 Years
 - ▶ It will support:
 - Government regulation to phase out Persistent Organic Pollutants (POPs) -containing agrochemicals and agri-plastics.
 - Strengthening banking, insurance and investment criteria to improve the availability of effective pest control, production alternatives and trade in sustainable produce.
 - ▶ **Members:** India, Ecuador, Kenya, Lao PDR, the Philippines, Uruguay and Vietnam.
 - ▶ **Implementing Agencies:** Led by United Nation Environment Programme (UNEP) and implemented by the ADB, UNDP, and UNIDO with execution carried out in-country by Food and Agriculture Organization (FAO).

Significance of FARM Initiative:

- ▶ Nearly 4 billion tons of pesticides and 12 billion kg of agricultural plastics are used every year.
- ▶ Highly hazardous cheap pesticides and mismanaged agricultural plastics release toxic POPs (chemicals which do not break down in the environment and contaminate air, water, and food).



Read From Essential Material

Chapter 4: Agriculture (Class X-Geography)

BRIEF BACKGROUND

About Global Environment Facility (GEF)

- ▶ **Genesis:** In 1992 (Rio Earth Summit)
- ▶ **About:** It is a unique partnership of 18 agencies working with member countries to address environmental challenges.
- ▶ **Members:** More than 180 Members (Including India)
- ▶ **Role:** To serve as financing mechanism for five international environmental conventions.
 - Minamata Convention on Mercury.
 - Stockholm Convention on PoP's
 - UN Convention on Biological Diversity
 - UN Convention to Combat Desertification (UNCCD)
 - UN Framework and Convention for Climate Change (UNFCCC)
- ▶ **Trustee:** World Bank



5.4.5. Zero Budget Natural Farming (ZBNF)

CONTEXT

A research paper by the National Bank for Agriculture and Rural Development (NABARD) and the Indian Council for Research on International Economic Relations (ICRIER) cautioned regarding "a complete switch" to natural farming and called for longer experimentation.

ANALYSIS

Significance of ZBNF

- ▶ Improved farm yield and farmers' income
- ▶ Minimised cost of production and exclusion of chemical inputs
- ▶ Environmental conservation and rejuvenated soil health
- ▶ Promotes livestock sustainability and increases employment

Issues in ZBNF

- ▶ Labour intensive form of agriculture and requires significant work in maintenance.
- ▶ Debatable concept of Zero cost input.
- ▶ Yield variations as the natural factors decide the actual output.
- ▶ Indigenous cow breeds incur high maintenance cost with low milk yield to the farmer.

Comparison with other types of farming

- ▶ ZBNF Advocates zero external intervention, Organic and Inorganic farming advocates minimal and maximum interventions respectively.
- ▶ Natural laws are applied for ZBNF, Organic and inorganic farming uses accepted principles and modifications of activities for outputs respectively.
- ▶ ZBNF calls for no usage of external fertilisers, Organic and Inorganic farming uses Organic and chemical fertilisers respectively.
- ▶ ZBNF calls for usage of local variety of seeds, Organic and inorganic farming advocates for certified organic seeds and hybrid seeds respectively.

Conclusion

There is need to emphasis on scientific studies, across the country to find efficacy and efficiency of the farming technique across various landscapes and ecosystems. Also, impetus to the indigenous cow breeds (like Punganur Cow, Red Sindhi etc.) can also be done through various government and cooperative initiatives thereby increasing their numbers.

BRIEF BACKGROUND

About Zero Budget Natural Farming (ZBNF)

- ▶ Formulated by: Subhash Palekar in India (First practiced by Masanobu Fukuoka in Japan)
- ▶ Other major principles: Intercropping, Contour bunds, Use of indigenous cow dungs etc.
- ▶ ZBNF was renamed as **Bhartiya Prakritik Krishi Padhati (BPKP)** as a sub-scheme under **Paramparagat Krishi Vikas Yojana (PKVY)**, aims at promoting Organic farming and soil health.
 - ▶ BPKP is a Centrally Sponsored Scheme, initiated for a period of six years (2019-25).
- ▶ Currently eleven states practice ZBNF in over 6.5 Lakh hectares

Pillars of ZBNF



Bijamrit (Seed Treatment using cow dung and cow urine)



Jiwamrita (applying Inoculation made of local cow dung and cow urine)



Mulching (activities to ensure favourable microclimate in the soil)



Waaphasa (soil aeration)



5.4.6. Millets

CONTEXT

Recently, the Closing ceremony of the **International Year of Millets 2023** took place at the Food and Agriculture Organization (FAO) headquarters in Rome, Italy.

ANALYSIS

Significance of Millets

- ▶ **Farmers:**
 - ▶ Requires less water than staple crops like Rice and Wheat. (1kg rice requires 5000 litres, while millet requires 250-300 litres).
 - ▶ **Short-duration crops** (90-180 days) suitable for any cropping season.
 - ▶ Serve as **fodder for livestock needs**.
- ▶ **Health**
 - ▶ **Gluten-Free, Low-Glycemic Foods**, Ideal for diabetics.
 - ▶ **Improved micronutrient composition** than Rice and Wheat.
 - ▶ **Effective against malnutrition**.
- ▶ **Environment**
 - ▶ They are **C4 category crops** having high efficiency in absorbing and utilizing CO₂.
 - ▶ **Resilience to climate variability**.
 - ▶ **Promotes sustainable agriculture**, improving soil health and reducing erosion.

Challenges: Limited public awareness, Multiple processing requirements, Poor shelf life due to lipase enzyme, Inconsistent supply/demand, Low crop productivity due to lack of high-yielding seeds.

Initiatives for the promotion of millets in the country

- ▶ **Shree Anna Scheme** launched in 2023,
 - ▶ **Indian Millets Research Center Hyderabad** promoted as a Center of excellence under it.
- ▶ **Production Linked Incentive Scheme** for Food Processing Industry for Millet-based products during 2022-27.
- ▶ **Millets rebranded as "Nutri-Cereals"** and 2018 was declared as **"National Year of Millets"**
- ▶ **Other efforts:**
 - ▶ **Millets included in POSHAN Mission Abhiyaan;** Sub-Mission on Millets under National Food Security Mission, 2018.

BRIEF BACKGROUND

About Millets

- ▶ **Small-grained, annual, warm-weather cereals** from grass family.
- ▶ **Staple crops of semi-arid tropical region**.
- ▶ One of the **oldest known human foods**. Divided into **major** (sorghum, pearl millet, finger millet) and **minor** (little millet, foxtail millet, etc.).

Millets in India

- ▶ **World's largest producer (~41%)** of millets, followed by Niger (~12%) and China (~8%).
- ▶ Total Production stands at **16 Mn tonnes**.
- ▶ 6 states, Rajasthan, Uttar Pradesh, Haryana, Karnataka, Maharashtra, and Gujarat, account for **over 83%** of millet production.

MAJOR MILLETS GROWN IN INDIA



Jowar (Sorghum)

- ▶ Referred as **"King of Millets"**
- ▶ **Rainfall:** 250-300 mm
- ▶ **Soil:** Clayey deep regur and alluvium
- ▶ Used mainly as a **fodder crop** in the **Kharif season in Northern States**



Bajra (Pearl Millet)

- ▶ It is a short-duration crop and can be grown in both rain fed and irrigated conditions.
- ▶ **Rainfall:** 400-500 mm
- ▶ **Soil:** Loamy soil with proper drainage



Ragi (Finger Millet)

- ▶ **Mostly grown in South India (Karnataka Largest producer)**
- ▶ **Rainfall:** 600-750 mm
- ▶ **Soil:** Loamy soil and black soil with



5.4.7. Carbon Removals and Carbon Farming (CRCF)



CONTEXT

European Parliament and the European Council reached a **provisional agreement** on a regulation to establish the first EU-level Carbon Removal Certification Framework.

ANALYSIS



About EU-level Carbon Removal Certification Framework

- ▶ Boost innovative carbon removal technologies and carbon farming.
- ▶ Establishes quality criteria standards, outlines monitoring and reporting processes to prevent greenwashing.

Potential Benefits of carbon farming

- ▶ **Carbon Sequestration:** Agricultural soils can absorb 3-8 billion tonnes of CO₂-equivalent every year (Study).
- ▶ **Promoting Farmers Income:** Carbon credit systems can provide additional income through environmental services.

Challenges: Inadequate policy support, lack of resources to invest in sustainable land management practices by small land holding farmers etc.

Initiatives facilitating Carbon Farming

- ▶ **Global**
 - 4 per 1000 Initiative launched during UNFCCC CoP21 (Paris, 2015) for highly resilient agriculture.
 - World Bank- supported initiatives, eg, Kenya's Agricultural Carbon Project.
- ▶ **Indian**
 - Carbon Credit Trading Scheme (CCTS) by Power Ministry.
 - National Mission on Sustainable Agriculture

BRIEF BACKGROUND

About Carbon Farming

- ▶ It uses **regenerative practices** to improve agriculture, restore ecosystems, and combat climate change by storing carbon and reducing emissions.
- ▶ **Common Methods:** Agroforestry, conservation farming (minimising soil disturbance), integrated nutrient management, Renewable Energy Production Grasslands Conservation, etc.



5.5. DISASTER MANAGEMENT

5.5.1. Dam Safety



CONTEXT

National Dam Safety Authority (NDSA) has constituted an expert committee to examine the dam safety of the Kaleshwaram Lift Irrigation Project (KLIP).

- ▶ The KLIP is the world's largest multi-stage lift irrigation project constructed on Godavari River in Telangana.

ANALYSIS



Concerns associated with the safety of dams

- ▶ **Ageing dams:** may become unsafe or uneconomic.
 - ▶ 80% of the dams are over 25 years and 227 dams are over 100 years.
- ▶ **Seismic vulnerability:** as many dams are built in seismically active areas such as Himalayas.
- ▶ **Flood:** Flash floods can wash away the existing dams example **Chungthang Dam disaster (2023)** Sikkim.
- ▶ **Overtopping:** Overtopping (gully erosion) failures result from the erosive action of water on the embankment.
- ▶ **Sedimentation:** reduces the storage capacity and damage hydroelectric turbines.
- ▶ **Irregular maintenance and upkeep** of other parts of the power plant.

Initiatives for Dam safety

- ▶ **National Register of Large Dams (NRLD)** maintained by CWC
- ▶ **Dam Rehabilitation and Improvement Project (DRIP)**
- ▶ **National Centre for Earthquake Safety of Dams (Jaipur)**
- ▶ **India Water Resource Information System (WRIS)**
- ▶ **Dam Health and Rehabilitation Monitoring Application (DHARMA)**

Way Forward

- ▶ **Decommissioning of ageing dams**
- ▶ **Planning, design and construction with the current state-of-the-art technology**
- ▶ **Subsurface dams** alternative to surface dams (as in Japan and China).
 - ▶ Sub-surface dams capture ground waters flowing fairly near the surface of the ground.



Read From Essential Material

Chapter 3: Water resources
(Class X- Geography)

BRIEF BACKGROUND

About Dam Safety Act, 2021

- ▶ **Purpose:** Proper surveillance, operation and maintenance of the specified dams to prevent dam failure.
- ▶ **Outlines responsibility of stakeholders:** Owned, operated and maintained by State Governments or Departments/Boards/ CPSUs/Private Agencies, etc.
- ▶ **4-Tiered Institutional Mechanism**
 - ▶ National Committee on Dam Safety (NCDS)
 - ▶ National Dam Safety Authority (NDSA)
 - ▶ State Committee on Dam Safety
 - ▶ State Dam Safety Organisation

Major dam failures

- ▶ 1975: Banqiao dam failure (China)
- ▶ 1979: Machchu Dam failure (Gujarat)
- ▶ 2023: Derna dam collapse (Libya)



5.5.2. Heatwave



CONTEXT

Recently, over 37 cities in the northern and central regions experienced temperatures exceeding 45°C, posing severe risks to millions of vulnerable people.

ANALYSIS



Effects of Heat Waves

- ▶ **Human Health** Heat Cramps, Edema and Syncope, Heat Exhaustion, and Heat Stroke.
 - ▶ Over 10,000 people lost their lives to heat waves between 2000 and 2020.
- ▶ **Increased Energy Demand** from cooling appliances.
- ▶ **Wildfires and Droughts**
- ▶ **Rapid soil moisture evaporation** causes soil moisture depletion.
- ▶ **Loss in productivity**, India expected to lose 5.8% of daily working hours due to rising temperatures by 2030.
- ▶ **Impact on Crop Productivity and Livestock** affecting food security.

Initiatives taken

- ▶ **National Guidelines on Heat Wave Management by National Disaster Management Authority (NDMA)**
- ▶ **Action taken by IMD-**
 - ▶ **Early Warning System and inter agency co-ordination.**
 - ▶ **Issuing color codes** for Heat wave warnings like Green, Yellow, Orange, Red.
- ▶ **Heat Action Plans by IMD in collaboration with NDMA and local health departments** in around 23 states.

Way forward: Mitigation measures that can be taken

- ▶ **Public cooling centres** during extreme heat.
- ▶ **Improving built environment**, enhancing insulation and ventilation systems, planting trees, etc.
- ▶ **Utilizing indigenous knowledge** and protective methods.
- ▶ **Regulative provisions**, passive ventilation and cool roof technologies in building bylaws.
- ▶ **Building capacity** for local healthcare professionals, recognizing and responding to heat-related illnesses.

BRIEF BACKGROUND

- ▶ **About Heatwaves:** Unusually high temperatures in a region, influenced by meteorological, climatic, and human-induced factors like rapid urbanization and global warming, varying in severity across different regions.
- ▶ **Favourable conditions for heatwaves:** Anti-cyclone, absence of moisture in the upper atmosphere, cloudless sky, prevalence of hot dry air over a region.

Declaration of Heatwaves by IMD:

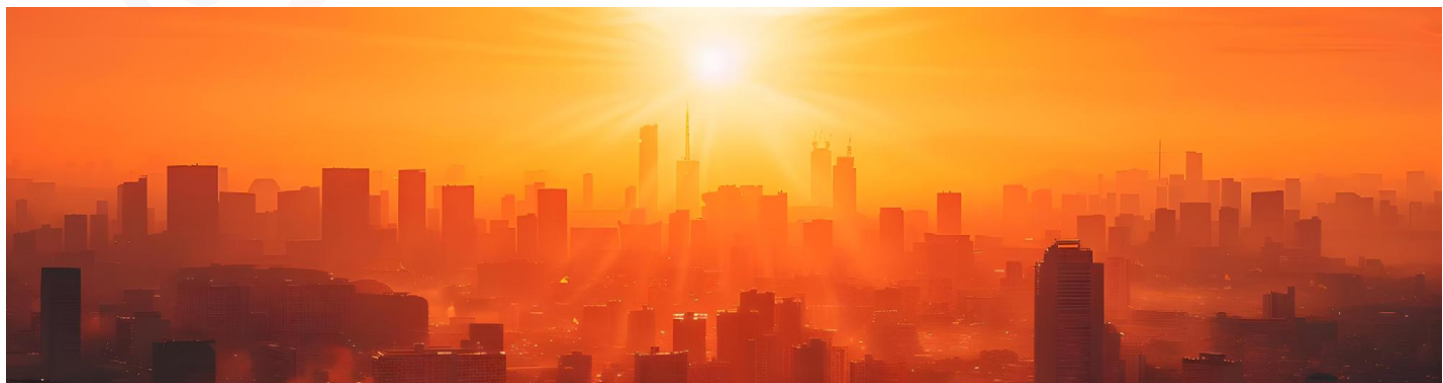
Indian Meteorological Department (IMD) criteria for Heatwaves

Heat wave Scenario	40°C	30°C
Maximum Temperature	Plains	Hills

Heat wave conditions prevail when:		Severe heat wave conditions prevail when:	
Normal maximum temperature	Deviation from normal	Normal maximum temperature	Deviation from normal
▲ Above 40°C	4-5°C or more	▲ Above 40°C	6°C or more
▼ At or below 40°C	5-6°C or more	▼ At or below 40°C	7°C or more

When should a heat wave be DECLARED?
Recorded maximum temperature

At or above **45°C** for all locations At or below **40°C** for coastal locations



5.5.3. Fire Safety Regulations in India

CONTEXT

Recent fire accidents were reported in a gaming zone in Rajkot (Gujarat), a firecracker factory in Harda (Madhya Pradesh) and a private hospital in Delhi.

ANALYSIS

Casualties on Fire accidents:

- ▶ **7,435 people were killed** in over 7,500 fire accidents in India in 2022 (NCRB).
 - ▶ ~800 factory fires were recorded in the last two years in Delhi alone.
- ▶ **Key reasons:** violation of fire-safety norms, human negligence, electrical malfunctions, Industrial Accidents, etc.

Challenges in maintaining Fire Safety Standards

- ▶ **Absence of uniform safety legislation across states,** Major states like Rajasthan, Madhya Pradesh, and Jharkhand have not enacted fire safety legislation.
- ▶ **Fire safety guidelines are not enforced properly** due to poor inspections, corruption, and failure of local bodies.
- ▶ **Shortage of staff and firefighting equipment,** In 2019, there was a shortage of 5,191 fire stations and 5,03,365 personnel.
- ▶ **Poor urban planning:** Congested urban layout delays rescue operations. E.g., Kamala Mills fire in Mumbai, 2017.

Way forward

- ▶ **Mandatory annual fire safety audits** by third-party nationwide.
- ▶ **Hazard Identification & Risk Assessment (HIRA)**
- ▶ **Implementation of 13th Finance Commission Recommendations** for Municipal Corporations.
- ▶ **Stricter enforcement** of fire safety standards and severe punishment for violations.
- ▶ **Implementation of National Disaster Management Authority (NDMA) Guidelines** on Fire Services Scaling and Training.

BRIEF BACKGROUND

Existing Fire Safety Standards and regulations in India

- ▶ Fire service is a **State subject**.
- ▶ **The National Building Code (NBC)** by BIS published in 1970 and updated in 2016.
 - ▶ **State governments** required to incorporate NBC recommendations into their local bylaws.
- ▶ **Model Building bye laws** by Ministry of Housing and Urban Affairs in 2016.
- ▶ **Model Bill to Provide for the Maintenance of Fire and Emergency Service for the State, 2019.**
- ▶ **Fire and Life Safety guidelines** were circulated in 2020 by Ministry of Health.
- ▶ **Scheme for Expansion and Modernization of Fire Services in the States in 2023** for upto 2025-26.

NDMA Guidelines

- ▶ **State-level Fire Act** with mandatory clearance for certain buildings and premises.
- ▶ **Comprehensive plan** for revamping the state's Fire Service.
- ▶ **Basic infrastructure,** fire stations, water reserves, and training centers.
- ▶ **Improvement of fire services** outreach, from sub-divisional to block and Gram Panchayat levels.



5.6. GEOGRAPHY

5.6.1. Subduction Zone

CONTEXT



Portuguese scientists have predicted that the subduction zone beneath the Gibraltar Strait may lead to the Atlantic Ocean's closure in **20 million years**, reshaping the planet's geological landscape.

- ▶ The **Atlantic Ocean** already has two subduction zones, the **Lesser Antilles and the Scotia arcs**.
 - The third zone, **Gibraltar Arc**, is another place where a subduction zone is invading the Atlantic, although its activity is debated.

ANALYSIS



Key-Findings of the Study

- ▶ The **Gibraltar subduction** is still active and it will propagate further into the Atlantic after a period of inactivity.
- ▶ Despite the slow movement of the subduction zone beneath the strait, experts believe it could grow and extend into other parts of the ocean, a phenomenon known as 'subduction invasion'.
- ▶ The study indicates that the subduction zone will progress westwards through the Gibraltar Strait, forming a new Atlantic subduction system referred to as the 'Ring of Fire'.
 - Similar to the Pacific Ocean's Ring of Fire, involves the gradual pulling of the ocean floor beneath the continents, leading to the closure of the ocean basin.
 - This is a cornerstone of the **Wilson cycle** (repetitive opening and closing of ocean basins due to the seafloor spreading and subduction respectively).

About Wilson Cycle

- ▶ Model that describes the opening and closing of ocean basins and the subduction and divergence of tectonic plates
- ▶ It consists of six stages: embryonic, juvenile, mature, declining, terminal, and suturing.

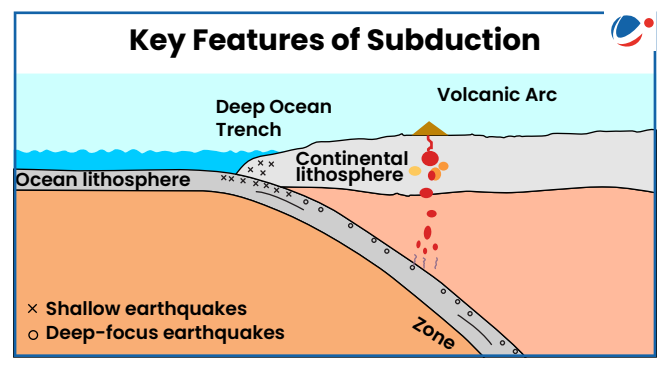
BRIEF BACKGROUND

About Plate Tectonics theory

- ▶ According to the **Plate Tectonics theory**, the Earth is made up of number of lithospheric plates (~100 km thick) those float on the hot and ductile asthenosphere.
 - These plates are classified into
 - ◊ **Convergent Boundary** (towards each other)
 - ◊ **Divergent Boundary** (away from each other)
 - ◊ **Transform Boundary** (slide past each other)

About Subduction Zone

- ▶ When two plates **converge** towards each other, one plate which is heavier in density **subducts** below the lighter plate and is **consumed** in the mantle.
 - The zone where subduction occurs is called as **Benioff Zone**.



5.6.2. Baseflow



CONTEXT

Recent study highlighted that Baseflow has contributed significantly to the flooding of rivers in peninsular India.

ANALYSIS



Key Highlights of the Report

- ▶ 6 major river basins of peninsular India namely **Narmada, Tapi, Mahanadi, Godavari, Krishna and Cauvery** were examined using discharge data from river basins to improve the understanding of process-based factors on riverine floods.
- ▶ Revealed that catchments with higher baseflows are more susceptible to rapid runoff from incoming rainfall events in shorter time lags.

Environmental Significance of Baseflow:

- ▶ Baseflow recharges river runoff, reduces silt accumulation, and improves water quality by reducing groundwater filtration and replenishing water demand during dry seasons.

Potential Impacts of Change in Baseflow

- ▶ Increases flood risk due to wet conditions in catchments, leading to rapid runoff during heavy rainfall.
- ▶ Causes Baseflow droughts occur when groundwater recharge decreases.
- ▶ Affects riverine ecosystems and dissolved oxygen levels.
- ▶ Reduced baseflow increases water temperature,
- ▶ Alters downstream flow, and increases silt accumulation.

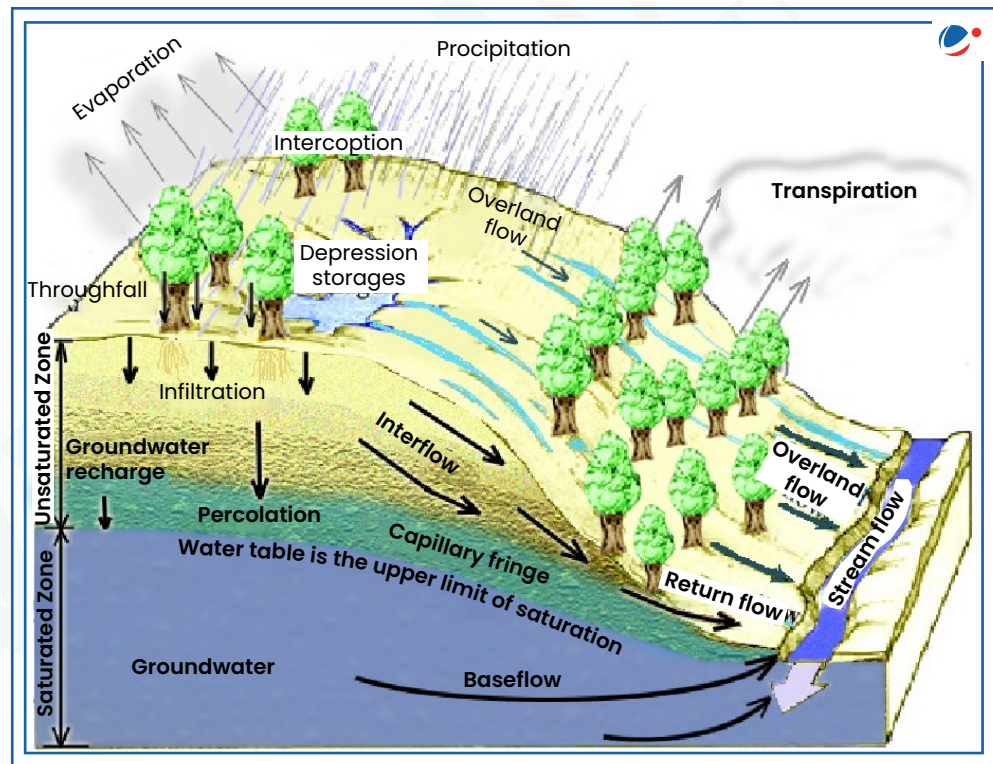
Conclusion

Effective management of Baseflows through **integrated water management approaches** like optimal land use policies, recharging groundwater, continuous monitoring and assessment of the river basins, etc.

BRIEF BACKGROUND

What is Baseflow?

- ▶ Refers to the **portion of stream flow originating from groundwater discharge** seeping into the stream or river over an extended period.
- ▶ **Factors influencing Baseflow:** Topography of the land, Nature of the Soil, Land use pattern, Climate Change.



CONTEXT

Scientists discover the reason behind the cleanest air in the Southern Ocean region.

ANALYSIS



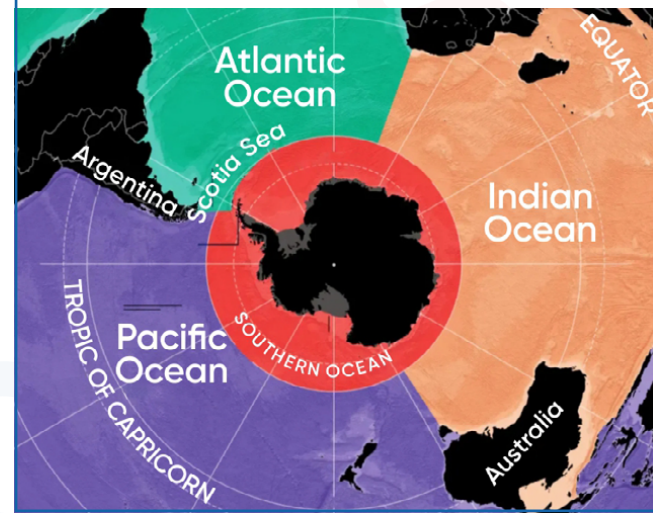
- ▶ **About Clean air**
 - It refers to the **low levels of aerosols in the atmosphere.**
 - Aerosol is the **suspension of fine solid particles or liquid droplets** in air.
- ▶ **Reasons for the low level of aerosols in Southern Ocean region**
 - **Reduced Human activity** causing minimal emissions and fossil fuel usage.
 - **Fewer Phytoplanktons** (source of sulfur) in winters causing fewer sulfate particles.
 - **Open Honey-combed structured clouds** (more common in winters): which allow sunlight to pass, tend to produce more intense, sporadic rainfall washing the aerosol out.

BRIEF BACKGROUND

About Southern Ocean (Antarctic Ocean)

- ▶ **Geologically the youngest** of the world's oceans.
- ▶ Dominated by the clockwise circulating **Antarctic Circumpolar Current.**
- ▶ Known for its **strong winds, intense storms, dramatic seasonal changes,** and cold temperatures.

Southern Sea (Antarctic Ocean)



5.6.4. Nor 'westers

CONTEXT



India is working to develop its **first research testbed to study Nor 'westers.**

ANALYSIS



More about the testbed

- ▶ **Aim:** Study **thunderstorms** from the formation, growth, and propagation stage over eastern parts of the country covering a large area adjoining **West Bengal, Odisha, and Jharkhand.**
- ▶ **Control centre:** **Chandbali** in Odisha's Bhadrak district (near Bhubaneswar).
- ▶ **Agencies involved:** India Meteorological Department (IMD), Indian Institute of Tropical Meteorology (IITM), Pune, and the National Centre for Medium-Range Weather Forecasting (NCMRWF), Delhi.
- ▶ **Features:** utilizes **drones, mobile vans, and high-end meteorological instruments and 100-meter tallest meteorological flux tower** to measure carbon dioxide, water vapor, and energy exchange.
- ▶ **Significance:** aid in timely **thunderstorm predictions, issue nowcast warnings, and assist the administration and locals.**

BRIEF BACKGROUND

- ▶ **About Nor 'westers:** Local winds affecting India's east and northeast regions every summer, causing **thunderstorms and destructive tornadoes.**
 - Known as "**Kalbaishaki**" in Bengal and "**Bardoli Chheerha**" in Assam.
- ▶ **Other Local Winds and their socio-economic influence**
 - **Loo:** Hot, dry winds in north and western India causing **dehydration, aid in grain separation, reduces insect-borne diseases** like malaria.
 - **Aandhi, or 'Kali Aandhi':** Intense dust storms in north-western and central India, causing destruction to life, property, pollution in cities.
 - **Mango showers:** pre-monsoon local rain-carrying winds causes early showers along coastal Karnataka and Kerala, causing early ripening of mangoes.
 - **Blossom showers,** pre-monsoon showers in late-summer Kerala and its surrounding areas, crucial for the commercial growth of coffee flowers.

5.7. CONCEPT IN NEWS

5.7.1. Planetary Boundaries Framework

- ▶ The **2024 Tyler Prize for Environmental Achievement** awarded to **Johan Rockstrom** for his work on the Planetary Boundaries framework.
- ▶ **About Planetary Boundaries framework**
 - ▶ First published in 2009, the Planetary Boundaries integrate **nine systems** that determine the **functioning and the state of the planet**.
 - ▶ **Nine planetary boundaries** include Climate Change, Biosphere Integrity, Land-System Change, Freshwater Change, Biogeochemical Flows, Novel Entities, Stratospheric Ozone Depletion, Atmospheric Aerosol Loading, and Ocean Acidification.
 - ▶ They provide **life-support to humans** and humanity is **well outside of safe operating space on first six planetary boundaries**.

5.7.2. Ecocide

- ▶ **Belgium** has become the **first country in Europe to recognize 'ecocide' as a national as well as an international crime**.
- ▶ **About Ecocide:**
 - ▶ It means **unlawful or wanton acts** committed with knowledge that there is a substantial likelihood of severe and either **widespread or long-term damage to the environment** being caused by those acts. Ex: Deforestation, Ocean damage etc.
 - ▶ Term was invented by **American Biologist Arthur Galston in 1970**.
- ▶ **India is yet to make it an offense**.

5.7.3. Star Dunes

- ▶ Scientists unveiled the **first in-depth study of Earth's magnificent desert star dunes** revealing the internal structure.
 - ▶ The study focused on a star dune in Erg Chebbi (eastern **Morocco**) called **Lala Lallia**, meaning "**highest sacred point**".
- ▶ **About Star Dunes**
 - ▶ Formed in **areas with complex wind regimes**, which means winds blowing from different directions.
 - ▶ They **make up just under 10% of the dunes** in Earth's deserts and are the tallest ones.
 - ▶ **Earth's largest star dunes** are found in the **Badain Jaran desert (China)**.
 - ▶ They also have been **spotted on Mars and Saturn's moon Titan**.

5.7.4. Gape Limitation

- ▶ Concept in **ecology that limits the size of prey a predator can consume**, primarily determined by the size of their mouth, i.e., small predators can only eat small prey and vice-versa.
- ▶ **Importance of Gape limitation in Ecology**
 - ▶ Shapes food webs, influences energy flow, and drives adaptations.
 - ▶ Predators can evolve cooperative hunting strategies or use tools to capture larger prey beyond their gape size.
 - ▶ Gape limitation regulates predator-prey balance, maintaining their population dynamics.
 - ▶ Helps predict environmental changes like invasive species or removal of top predators.

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5.7.5. Negative Leap Second

- ▶ Researchers have shown that Ice melting may delay need for negative leap second.
- ▶ **Negative leap second:**
 - It is a second subtracted from clocks to align with **Earth's rotation**.
 - Applied when **Earth spins faster and day length decreases**.
 - It is in contrast to **positive leap second** (one-second addition), done when the length of the day is rising i.e., when Earth is spinning more slowly.
 - So far, **27 positive leap seconds and no negative leap seconds** have been witnessed.

5.7.6. Blue Hole

- ▶ Researchers found **Taam Ja' Blue Hole** to be the deepest in the world, located in Mexico's Chetumal Bay.
- ▶ **About Blue Hole:** Water filled caverns below the seafloor, found in coastal areas prone to erosion.
- ▶ **Other notable blue holes** include **Dragon Hole** in the South China Sea, **Great Blue Hole** near Belize, and **Dahab Blue Hole** in Egypt.

5.7.7. Catatumbo Lightning

- ▶ It is a natural phenomenon occurring at the **Catatumbo River's mouth** (where it meets Lake Maracaibo- largest lake in Latin America in Venezuela), strikes 300 days a year, making it the lightning capital of the world.
- ▶ The high frequency lightning is due to convection between **Andean and Caribbean air**, forming Cumulonimbus clouds.

5.7.8. Keeling Curve

- ▶ In March 2024, the **global average CO2 concentration** reached **4.7 ppm**, marking the **largest ever recorded rise at 425.22 ppm** signifying large spike in Keeling Curve.
- ▶ **Keeling Curve: Record of atmospheric CO2 from Mauna Loa Observatory (MLO)**, since 1958.
 - MLO is a station measuring **the elements in atmosphere contributing to climate change**.
 - **Located in Hawaii on the side of Mauna Loa**, the world's largest active volcano. Named after Dr. Charles David Keeling.



5.8. PLACES IN NEWS



Aral Sea On Kazakhstan-Uzbekistan border.

Study found that desert emerged due to drying of Aral Sea has made Central Asia a dustier place.

Great Lakes

North America's Great Lakes have recorded **below-average ice cover** for the second consecutive year. Great Lakes - comprising **Superior, Michigan, Huron, Erie and Ontario** - form the **largest fresh surface water system** on Earth.

Except Michigan, they provide a natural border between **Canada and United States**.

Batagay Crater

Also known as the **Gateway to underworld**, or **Doorway to Hell**, is the world's largest permafrost crater in Siberia, Russia. New aerial footage of **Batagay Crater**, shows its annual growth due to melting of frozen ground.

Mount Etna volcanic Rings (VVR) were observed at **Mt Etna**, the world's active volcano, in the Mediterranean Sea region, created by rapid water vapor release.

Venezuela

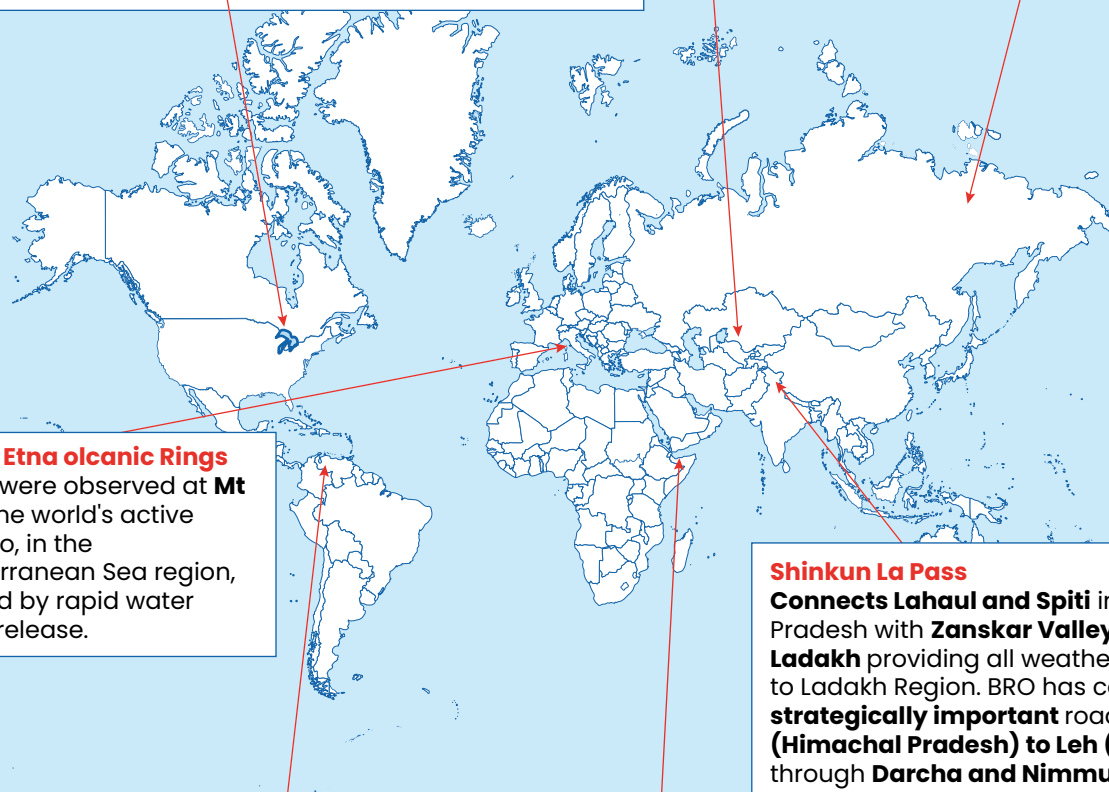
First nation to lose all its glaciers. **Humboldt (or La Corona)** - Venezuela's last glacier in the Andes, has shrunk to a size that **no longer qualifies it as a glacier** as per International Cryosphere Climate Initiative (ICCI).

Afar Triangle

Geologists predict emergence of **new ocean at Afar Triangle** in Horn of Africa, represents **northernmost portion of Great Rift Valley**, comprising Eritrea, Djibouti, and Ethiopia. **Geologically active region** inundated by Red Sea and Gulf of Aden.

Shinkun La Pass

Connects Lahaul and Spiti in Himachal Pradesh with **Zaskar Valley in Kargil, Ladakh** providing all weather connectivity to Ladakh Region. BRO has connected **strategically important** road from **Manali (Himachal Pradesh) to Leh (Ladakh)** through **Darcha and Nimmu** on Kargil-Leh Highway.



5.9. REPORTS IN NEWS

<p>Green and Social Bond Impact Report 2023</p>	<ul style="list-style-type: none"> ▶ Released By: International Finance Corporation (IFC) ▶ Key Highlights <ul style="list-style-type: none"> ▶ \$2 billion raised through Green bond is expected to reduce 3.3 million metric tons of carbon dioxide equivalent per year. ▶ \$1.2 billion raised through Social bonds will cater sectors like Agribusiness, Gender finance, Education, etc.
<p>State of Global Climate Report 2023</p>	<ul style="list-style-type: none"> ▶ Released by: World Meteorological Organization (WMO). ▶ Key Highlights <ul style="list-style-type: none"> ▶ 2023 was record Warmest Year with global average near-surface temperature 1.45 degrees Celsius above pre-industrial baseline. ▶ Extreme climate conditions worsened humanitarian crises, leading to food insecurity and displacement. ▶ Record highs in greenhouse gas levels, surface temperatures, ocean heat, and acidification.
<p>Clean Energy Transitions Programme (CTEP) Annual report 2023</p>	<ul style="list-style-type: none"> ▶ Released By: International Energy Agency (IEA) ▶ About CTEP <ul style="list-style-type: none"> ▶ Launched in 2017, aligned with 2015 Paris agreement and SDGs. ▶ Under it, IEA provides technical assistance, insights, etc. to accelerate clean energy transitions.
<p>Climate Promise Initiative, 2025</p>	<ul style="list-style-type: none"> ▶ By: UN Development Programme ▶ Key Highlights <ul style="list-style-type: none"> ▶ Aims to align next generation of developing countries' NDCs to the goals of Paris Climate Agreement (2015). ▶ World's largest offer of support to developing countries on NDC enhancement and implementation.
<p>Global Status Report for Building and Construction, 2024</p>	<ul style="list-style-type: none"> ▶ Released By: United Nations Environment Programme and Global Alliance for Buildings and Construction (GlobalABC). ▶ GlobalABC founded at COP21, committed to vision of zero-emission, resilient building and construction sector. ▶ Key Highlights <ul style="list-style-type: none"> ▶ Sector contributes to 21% of global GHG emissions, with India attributing 40% of its CO2 emissions. ▶ In 2022, buildings caused 34% global energy demand and 37% of energy and process-related CO2 emissions. ▶ Decarbonization is crucial to limit warming to 1.5°C and achieve net zero by 2050.
<p>World Wildlife Crime Report, 2024</p>	<ul style="list-style-type: none"> ▶ Released by: United Nations Office on Drugs and Crime (Established in 1997 in Vienna, Austria). ▶ Key Findings <ul style="list-style-type: none"> ▶ Rhinoceroses and cedars were most impacted in 2015-2021. ▶ Largest seizures reported in 2015-2021 were of corals, crocodilians, and elephants. ▶ Seizures of animal species increased from 2015-2019, then declined in 2020 and 2021. ▶ Seizures of plant species saw a sharp increase in 2020 and 2021.

<p>Water for Shared Prosperity Report</p>	<ul style="list-style-type: none"> ▶ Released By: World Bank at 10th World Water Forum, Bali, Indonesia. ▶ Key Findings <ul style="list-style-type: none"> ▶ Defined four interconnected building blocks: Health and Education, Jobs and Income, Peace and Social cohesion, and Environment. ▶ Global water access disparity due to population growth, urbanization, and climate change. ▶ 197 million people lack safe drinking water and 211 million lack basic sanitation. ▶ 450 million live in high-poverty, low-water-access hotspots. ▶ About Shared Prosperity: Boosting prosperity, especially for poorest, for equitable societies.
<p>Global Land Outlook Report on Rangelands and Pastoralists</p>	<ul style="list-style-type: none"> ▶ Released By: UN Convention to Combat Desertification (UNCCD) ▶ Key Findings: <ul style="list-style-type: none"> ▶ Rangelands cover over 54% of terrestrial surface, with 78% in drylands. ▶ Up to 50% rangelands are estimated to be degraded due to factors like population growth, urban expansion, and overexploitation. ▶ About Rangelands: Natural ecosystems grazed by livestock and/or wild animals. They comprise the mosaic of ecosystems including grasslands, savannahs, shrublands, etc. ▶ Status of Rangelands in India: occupy about 121 million hectares, with 100 million considered underutilized. <ul style="list-style-type: none"> ▶ Pastoralists face marginalization in public policies, insecure tenure rights, and restricted access to resources.
<p>Global Electricity Review (GER) 2024 report,</p>	<ul style="list-style-type: none"> ▶ Released by global energy think tank Ember. ▶ Key Findings of the Report <ul style="list-style-type: none"> ▶ Renewables provided 30% of global electricity for the first time. ▶ Solar was the main supplier of electricity growth in 2023. ▶ India saw the world's 4th largest surge in solar generation in 2023 behind China, the US and Brazil. ▶ India overtook Japan to become the third-largest solar power generator in 2023, providing 5.9% of global growth in solar. ▶ India produced the second highest amount of electricity from coal.



5.10. TEST YOUR LEARNING

MCQs

Q1. Consider the following statements regarding Green Credit and Carbon Credit:

1. Both are notified under the Environmental Protection Act, 1986.
2. They are applicable to both industries and communities but not individuals.

Which of the statement(s) given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q2. Consider the following statements regarding the Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge:

1. It is a legally binding and first such treaty of its kind supported by India.
2. It is retrospective or applicable to patents filed prior to the enactment of the treaty.
3. It requires mandatory Patent Disclosure Requirements (PDRs) including the country of origin.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q3. Consider the following pairs:

Report

1. Green and Social Impact Bond
2. World Wildlife Crime Report
3. Water for Shared Prosperity Report

Published By

- World Meteorological Organization
- World Wildlife Fund for Nature
- World Bank

How many of the pairs given above are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q4. Consider the following statements regarding Baseflow:

1. It is the portion of stream flow originating from rivers and flowing through groundwater.
2. Reduction in base flow would lead to higher water temperatures.
3. It ensures recharge of the river water and fulfills water demand during dry seasons.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2, and 3

Q5. Consider the following statements regarding Global Environment Facility:

1. It was launched during CoP 16 of UNFCCC (United Nations Framework Convention on Climate Change).
2. Its FARM initiative offers concessional loans to marginalized farmers for adoption of solarized pump sets.

Which of the statements given above is/are incorrect?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Questions

1. In the light of the recently reported fire accidents, discuss the various measures in place for ensuring fire safety India. Also, highlight the challenges plaguing India's fire regulatory framework. (150 Words)
2. What are the major factors responsible for the rising urban water crisis in Indian cities? Citing a few best practices, suggest ways by which it can be countered. (250 Words)





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Scan to Read 

**Quick Facts:
Mains 365
International
Relations**



Scan to Read 

**Quick Facts:
Mains 365
Security**



Scan to Read 

**Quick Facts:
Mains 365
Ethics (Values
and Indian
Thinkers)**



Scan to Read 

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Economics**



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SOCIAL ISSUES



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6.1. WOMEN

6.1.1. Women Entrepreneurs in India



CONTEXT

Recently Reserve Bank of India's Innovation Hub (RBIH) released a white paper titled 'At the Helm: Women Entrepreneurs Transforming Middle India'.

ANALYSIS



Significance of Women Entrepreneurs in Middle India

- ▶ **Economic Significance**
 - ▶ **Sustainable economic development & employment generation:** By accelerating women's entrepreneurship, India could create more than 30 million women-owned enterprises, potentially creating 150-170 million jobs (NITI Aayog).
 - ▶ **Poverty Alleviation:** India could increase GDP growth by 1.5 percentage points by including 50% of women in the workforce (World Bank).
- ▶ **Social Significance**
 - ▶ **Gender equality:** Help in bridging the gender gap in the business world. e.g., there is a 50.9% employability gap between men and women. (ILO)
 - ▶ **Fuller Utilization of human capital:** Female labor force participation rate is merely 41.7% compared to 78.8% LFPR of men according to PLFS (2023).
- ▶ **Developing local and global markets:** Using digital and social platforms.
 - ▶ e.g., The Splendor of Kashmir: By Varuna Anand to promote Kashmiri shawl artistry through online sales and exhibitions across India.
- ▶ **Role Models and Agents of Social Change:** Women entrepreneurs inspire other women to embark on their entrepreneurial journeys.
 - ▶ e.g., Maa Bimaleshwari Janhit Karya Samiti: A SHG started by Phool Basan Yadav, empowering 200,000 poor women.
- ▶ **Women Empowerment:** By providing women with financial independence and decision-making authority. E.g. Usha Jha (Usha auntie) from Patna.

Challenges faced by women entrepreneurs in Middle India

- ▶ **Capital Gap:** Low access to external funding, such as bank loans or investments, for business expansion.
- ▶ **Data Gap:** Lack of gender disaggregated data hampers the ability to present compelling business cases to investors or lenders.
- ▶ **Visibility Gap:** Women entrepreneurs face societal undervaluation of their work, due to gender stereotypes within the family or are judged by their age or level of ambition.



Read From Essential Material

Nari Shakti Vandan: Economic Empowerment of Women (NCERT - Special Module)

BRIEF BACKGROUND

Status of Women entrepreneurship in India

- ▶ 13.76% of entrepreneurs are women (NITI Aayog).
- ▶ India is ranked 57th among 65 countries in MasterCard Index of Women Entrepreneurs (MIWE, 2021).
- ▶ Contribution of Women to GDP is 17% in India, well below global average of 37%.

Observations in the White Paper

- ▶ The study is aimed at understanding complex socioeconomic dynamics affecting women's entrepreneurship in Middle India (i.e. Tier II and Tier III cities).
- ▶ Despite notable progress in education and legislative measures improving workplace conditions, women's participation in entrepreneurship remains limited, particularly in Middle India, which requires immediate attention.

Initiatives Taken:

- ▶ **Mudra Yojana for Women/ Mahila Udyami Nidhi Scheme:** Collateral-free Loans up to Rs 10 lakh for women entrepreneurs.
- ▶ **Pradhan Mantri Virsat Ka Samvardhan (PM Vikas) Scheme:** To improve livelihoods of the minorities with a focus on women, youth and disabled.
- ▶ **Mahila Samridhi Yojana:** Micro Finance scheme for women with a rebate in interest.
- ▶ **Women Entrepreneurship Platform (WEP):** NITI Aayog aggregator platform hosting information and services relevant to women entrepreneurs.
- ▶ **Trade Related Entrepreneurship Assistance and Development (TREAD):** Lending institutions/ banks would finance loan assistance for women through NGO for undertaking non-farm activities.

- ▶ **Safety Gap:** Enhancing women’s safety can directly contribute to fostering a more vibrant entrepreneurial ecosystem.
- ▶ **Network Gap:** Women face challenge of rebuilding their social networks after migration due to marriage often leads to slower career progression.
 - **Marriage (87%)** is primary factor behind **women’s migration**.
- ▶ **Care Gap:** Career pauses due to caregiving responsibilities, including maternity leave and other family care needs.

- ▶ **Support to Training and Employment Programme for Women (STEP)**
- ▶ **Stand-Up India:** For financing SC/ST and/or Women Entrepreneurs.

Way Forward and Policy Recommended by White Paper

- ▶ **Gender-disaggregated data:** It is needed at a granular level to counter stereotypes and make effective policy interventions based on data.
- ▶ **Local role models** play an important role in developing an enabling environment. New urban infrastructure in tier-II India can be used to showcase success stories of local entrepreneurs. e.g., Airports.
- ▶ **Access to capital:** Provision of grants to women entrepreneurs to break the vicious cycle of women owned businesses not scaling because of lack of funding.
- ▶ **Fiscal incentives to female-owned businesses** for childcare leave and expenses.
- ▶ **Providing co-working and co-building space:** To expand their operations, support ecosystem and knowledge sharing.

6.1.2. Localizing the SDGs: Women in Local Governance in India



CONTEXT

Recently, Elected Women Representatives (EWR) of Panchayati Raj Institutions (PRI) participated in an Event: “Localizing the SDGs: Women in Local Governance in India Lead the Way” in United Nations Headquarters.

ANALYSIS



Impact created by EWRs in Localisation of SDGs in India

- ▶ **Enhanced policy outcomes:** e.g., EWRs from Rajasthan are promoting **environmental sustainability** through initiatives like Swachh Bharat Abhiyan etc.
- ▶ **Inclusive decision-making:** e.g., EWRs in Tripura constructed separate restrooms in government offices and assisted in growth of Self-Help Groups (SHGs) from 600 to almost 6,000.
- ▶ **Address Gender-based Violence:** EWRs play a key role in providing redressal support on issues of **domestic violence and child marriage**. (2021 survey in Bihar)
- ▶ **Challenging regressive norms:** In Haryana, which is known for its low sex ratio, **EWRs have attempted to reduce the prevalence of the purdah system**, encourage school education for girls, etc.

Challenges faced by EWRs

- ▶ **Balancing responsibilities:** Prevailing gender norms make it difficult for EWRs to manage **public duties and household responsibilities**.
- ▶ **Lack of experience, leadership skills and confidence:** This affects their decision-making and governance.
- ▶ **Gender-based perception:** Most EWRs report facing **gender-based discrimination** and feeling **ignored** in the panchayat owing to their gender as other **vital roles are dominated by men**.

BRIEF BACKGROUND

About Localization of SDGs in India

- ▶ Localizing SDGs means **enabling local governments and communities to be the catalysts of change** to support the achievement of the global goals.
- ▶ Women leaders are a **critical link between local governance, sustainable development, and gender equality**. Elected Women Representatives (EWRs) have been instrumental in driving positive change.
 - The **73rd Constitutional Amendment Act** provides for **reservation of 1/3 seats in the local bodies** and has elevated women’s participation in rural governance.

Status of EWRs

- ▶ According to **Global Gender Gap report (2023)**, which added the inclusion of women in local governance as a new indicator:
 - **Globally**, only 18 of the 117 countries surveyed have achieved representation of women of over 40% in local governance.
 - **India is among the countries with the highest participation of EWR in local governance (above 44%)**.

- ▶ **Digital divide:** The **gender-based digital divide** among EWRs hampers their capacity to fulfil their roles effectively in an era of increasing **digitisation in governance and public service delivery**.
- ▶ **Proxy Participation:** A critical challenge to **women's representation is the placement of 'rubber stamp candidates' in reserved seats**. e.g., Sarpanch Pati.
- ▶ **Financial Constraints:** **Financial constraints** due to low economic empowerment both as contestants and as representatives **results in loss of autonomy and independence**.
- ▶ **Policy of rotation of reserved seats:** It hinders extension of learned experience by EWRs.

Way Forward

- ▶ **Awareness creation:** **Targeted training and public campaigns** aimed at promoting positive masculinity to **tackle gender biases within governance and households**.
- ▶ **Capacity building:** **Quality capacity-building programmes** to enable EWRs to function independently as leaders.
- ▶ **Institutional Reforms:** Panchayats have a vital role in combating challenges posed by patriarchal society **by promoting women's access to education, skilling, and safe work opportunities**.
- ▶ **State funding:** It will allow more women to contest panchayat elections. Greater financial remuneration for EWRs could also incentivise them to participate despite multiple societal hindrances.
- ▶ **Other steps:** Tailored solutions, such as **customised digital literacy, an inclusive and safe digital environment**, should be prioritised.

6.1.3. Gender Inequality Index (GII), 2022



CONTEXT

GII, 2022 released by **United Nations Development Programme (UNDP)** in their report **Human Development Report 2023/2024; Breaking the gridlock, Reimagining cooperation in a polarized world**.

ANALYSIS



Key Highlights of the GII 2022

- ▶ Topped by **Denmark**, followed by **Norway** and **Switzerland**.
- ▶ India has been ranked at **108 out of 193** countries with a score of 0.437.
 - ▶ In **2021**, **India** stood at rank **122** out of 191 countries.
- ▶ India's neighbouring nations such as **Bhutan (80)**; **Sri Lanka (90)**; and **Maldives (76)** have performed better.

About GII

- ▶ GII is a composite measure, reflecting inequality in achievements between women and men in **three dimensions**:
 - ▶ **Reproductive Health:** Use indicators namely the **maternal mortality ratio**, the **adolescent fertility rate** and the **Female reproductive health Index**.
 - ▶ **Empowerment:** Measured by the share of **parliamentary seats held** and at least **secondary level attainment** by both genders. It uses Female and male empowerment Index.
 - ▶ **Labour market:** Measured by **labour force participation rates** by both genders. It also uses Female and male labour market Index.
- ▶ GII score varies between **0** (when women and men fare **equally**) and **1** (when men or women fare poorly compared to the other in all dimensions).

Initiatives which helped in improving India's rank:

- ▶ **'Mission Shakti'**: An umbrella scheme for the **safety, security and empowerment of women**.
- ▶ **Code on Social Security, 2020:** Provisions for enhancement in **paid maternity leave** from 12 weeks to **26 weeks**, etc.
- ▶ **Code on Wages 2019:** No employer shall make any discrimination on the ground of sex while recruiting any employee for the same work.
- ▶ Others: **Mission Poshan 2.0**, **Pradhan Mantri Matru Vandana Yojana (PMMVY)**, etc.

6.1.4. UNESCO's "Technology on Her Terms" Report



CONTEXT

UNESCO released 2024 Gender Report of the Global Education Monitoring Report, titled "Technology on her Terms".

- ▶ The report looks at the **impact of technology on girls' educational opportunities and outcomes, and role of education in shaping future technological development.**

ANALYSIS



Impact of technology on girls' education

- ▶ ICT can **overcome barriers of access to education** for girls in crisis.
 - E.g. **M-shule platform (Kenya)** delivers education through text message without need for internet.
- ▶ **Digital divide:** Girls and women are **less able to access technology** with 130 million fewer women than men owning mobile phone and 244 million fewer women having Internet access.
- ▶ **Social media negatively affects well-being and reinforces gender norms.** Greater interaction on social media at age 10 is associated with **worsening socio-emotional difficulties with age among girls.** E.g. Cyberbullying

Role of Education in shaping technological development

- ▶ **Average share of STEM** is 15% among young female graduates and 35% among young male graduates.
- ▶ **Underrepresentation in technological design and deployment:** In 2022, women held less than 25% of science, engineering and ICT jobs.
- ▶ **Negative gender stereotypes,** reinforced by low expectations from parents and teachers, impact girls' STEM aspirations.

Key Recommendations of the report

- ▶ **Establish bodies to evaluate and critically appraise education technology and algorithms and rectify issues.**
- ▶ Encouraging more **girls to take up scientific careers and promote female leadership in artificial intelligence and technology development.**
- ▶ Avoid infrastructure-only approaches and **invest in gender-responsive education and training programmes to enhance digital literacy and skills for all.**



6.2. CHILDREN

6.2.1. Online Child Sexual Exploitation and Abuse (OCSEA)

CONTEXT



United Nations Children’s Fund (UNICEF) released a report titled “Role of Social Media in facilitating Online Child Sexual Exploitation and Abuse”.

ANALYSIS



About OCSEA

- ▶ Online Child Sexual Exploitation and Abuse (OCSEA) involves the **use of information and communication technology as a means to sexually abuse and/or sexually exploit children.**
 - As per National Human Rights Commission, **Child Sexual Abuse Material (CSAM) has increased by 250 to 300 percent on social media in India.**

How social media facilitates OCSEA?

- ▶ **Online predators:** Social media platform could be used by predators to entice and coerce children into posting graphic content.
- ▶ **Access to Inappropriate Content:** Children may purposefully or unintentionally gain access to sexually explicit material, easily accessible on social networking sites.

Impact of Child Sexual Abuse Material on Child

- ▶ **Impairs brain development, and causes psychological stress** like Anxiety, Post-traumatic stress disorder, etc.
- ▶ Potential to normalize or **desensitize children to inappropriate behavior.**
- ▶ **Leads to communicable and non-communicable diseases** like sexually transmitted infections like HIV, cardiovascular disease, and unintended pregnancies etc.

Recommendations from report

- ▶ Make it **mandatory for online platforms to have clear, accessible, child-friendly mechanisms** for children to report concerns.
- ▶ Social media platforms and service providers should **publish periodic transparency reports.**

Steps Taken to Curb OCSEA

- ▶ **Information Technology (IT) Act, 2000:** Sections 66E, 67, 67A, and 67B of IT Act impose **stringent penalties and fines for online transmission** of obscene or pornographic content including CSAM.
- ▶ **IT Rules 2021** curb circulation of CSAM on social media platforms.
- ▶ **Online Child Sexual Abuse and Exploitation Prevention/Investigation Unit** set up by CBI.
- ▶ **YouTube** uses an automatic tool called **Child Sexual Abuse Imagery Match** to weed out CSAM.



6.2.2. Significant Increase In Screen Time Among Children



CONTEXT

In several studies, it has been found that screen time among children is more than 2 hours a day.

ANALYSIS



Reasons for Rise in Screen time among children

- ▶ **Role Modelling:** Children usually imitate their parents/other family members and peer group.
- ▶ **Educational or recreational purposes:** With the advent of **COVID-19 pandemic**, use of **Mobile** has witnessed **rapid and widespread acceptance**.
- ▶ **Working parents:** They usually provide mobile phones to children for purposes such as safety.
- ▶ **Increased Accessibility:** Proliferation of smartphones, tablets, and other digital devices in recent times.

Concerns associated with excessive screen time

- ▶ **Mental and Physical Health Issues:** High exposure may lead to anxiety, depression, and sleep disturbances.
 - ▶ **Sedentary lifestyle** may lead to physical health issues like obesity.
- ▶ **Cognitive ability and social skills:** High screen time can hinder the development of important cognitive, social and emotional skills, such as **empathy**.
- ▶ **Cyber Bullying and Child Abuse:** Incidents of bullying and abuses are rising. Young girls are more prone to them.

Initiatives taken to deal with concerns associated with screen time

- ▶ **World Health Organization (WHO)** released guidelines on physical activity, sedentary behaviour and sleep for children.
- ▶ **Manodarpan Initiative**, launched by the **Ministry of Education** to provide **psychosocial support** to students for Mental Health and Emotional well-being.
- ▶ **Cyber Crime Prevention against Women and Children (CCPWC)** scheme, launched by the **Ministry of Home Affairs** to provide a safe and secure online environment for children.

Way Ahead

- ▶ Emphasis on physical activities, limiting screen time by creating awareness, etc.



6.3. OTHER VULNERABLE SECTIONS

6.3.1. Rights of Persons with Disabilities (RPwD) Act, 2016



CONTEXT

Recently, in the **Seema Girija Lal & Anr vs. Union of India & Ors** case the Supreme Court expressed disappointment at the inadequate implementation of the RPwD Act, 2016 across states.

ANALYSIS



Challenges faced by PwDs

- ▶ **Stigma, discrimination, and neglect:** Faced due to prejudice, socio-psychological and cultural reasons, despite the Constitutional guarantee of equality of all citizens.
- ▶ **Vicious cycle of underachievement:** Their abilities are often underestimated, **hindering their growth.**
- ▶ **Limited access to education:** Hurdles like lack of accessible infrastructure, teaching ecosystem etc.
- ▶ **Healthcare services:** Difficulties in accessing affordable and appropriate care. E.g. **Assistive devices.**
- ▶ **Poverty and economic marginalization:** Lack of employment opportunities, increased expenses impact sustenance.
- ▶ **Lack of affordable assistive technologies** reinforce **digital divide.** E.g. screen readers, speech recognition software etc.

Reasons for sub-optimal implementation of the RPwD Act

- ▶ **Inadequate allocation of resources:** The Parliamentary Standing Committee in 2022-23 highlighted suboptimal budget allocation for PwD program.
 - Increase in budget allocation (9%) not proportionate to increased scope SIPDA. (2016-17 to 2020-21)
 - Disability pension of ₹300 or 500 per month under **Indira Gandhi National Disability Pension Scheme** is too low.
- ▶ **Coordination issues:** Between centre and states and various departments and agencies of states.
 - e.g., the non-receipt of Utilisation Certificates from the State Governments resulting in non-release of funds for initiatives for PwDs by the Centre.
- ▶ **Rehabilitation services:** 69% of the PwDs reside in rural areas where accessibility, availability, and utilization of rehabilitation services is inadequate.
 - Under Deendayal Disabled Rehabilitation Scheme the present cost norms are **not sufficient to get qualified rehabilitation professionals** and there is **scarcity of professionals in remote areas.**
- ▶ **Hindrance in educational empowerment:** Budgetary allocations for schemes remain stagnant.
 - Additionally, **except the National Fellowship Scheme,** no other targets were achieved.

BRIEF BACKGROUND

About PwDs

- ▶ “Person with disability” means a person with long term physical, mental, intellectual or sensory impairment which, in interaction with barriers, **hinders his full and effective participation in society equally with others.** (RPwD Act, 2016)
- ▶ PwDs constitute 2.21% of the total population. (Census 2011)
- ▶ 69% of all PwDs live in rural areas while 21% of all PwDs are elderly.

Rights of Persons with Disabilities (RPwD) Act, 2016

- ▶ Act aims to ensure that **all PwDs can lead their lives with dignity,** without discrimination and **with equal opportunities.**
- ▶ It was enacted to give effect to the **United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)** of 2007, to which India is a signatory.

Key Provisions of the RPwD Act

- ▶ It provides for a **wide definition of PwDs** while **recognizing 21 types of disabilities** including **acid attack victims, intellectual disability, mental illness, etc.**
- ▶ **Rights of PwDs**
 - Governments are responsible for ensuring PwDs enjoy the **right to equality, life with dignity and respect.**
 - **Protection from abuse,** cruelty, inhuman treatment, violence and exploitation, etc.
 - **Other rights** include the **right to home and family, reproductive right, accessibility in voting, the right to own or inherit property.**
- ▶ **Persons with Benchmark disabilities:** It refers to person with **at least 40% of a specified disability,** whether defined in measurable terms or not as certified by the relevant authority.
- ▶ **Guardianship:** If a PwD cannot make legally binding decisions even with support, **a limited guardian** may be appointed.

- ▶ **Lack of data and research:** There is a **lack of updated reliable and disaggregated data**, which hinders evidence-based policymaking and targeted interventions.

Way Forward

- ▶ **Handholding of states:** The Union ministry should guide state agencies with expert advice, targets, and resources to implement the Act's provisions effectively.
- ▶ **Enhancing Collaboration:** Foster collaboration across government bodies and with civil society, disability rights groups, and private sector to promote the rights and inclusion of PwDs.
- ▶ **Improve accessibility:** Incorporate accessibility criteria in all **central and state level procurement laws and policies** for physical, digital and transport infrastructure.
- ▶ **Advancing impact assessment:** Establish robust data systems to monitor the RPwD Act's implementation and assess its impact, while supporting relevant research to understand challenges faced by PwDs.
- ▶ **Social audit:** Section 48 of the Act requires the appropriate **government to undertake a social audit** of all general schemes and programmes involving PwDs.

Other Provisions in the Act for its effective implementation



Financial Support: Creation of National and State Funds to support PwDs financially.



Chief Commissioner and Commissioners: To be appointed at Central and State level. They are mandated to take steps (including Suo motu) to safeguard the rights of PwDs.



Advisory Boards: Establishment of Central & State Advisory Boards on Disability as policy-making bodies.



Regulatory Bodies: Strengthening of regulatory bodies for monitoring and grievance redressal.



Special Courts: Notification of Special Courts and Special Public Prosecutors by the State Governments to try offenses under the Act.



Penalties: Provision of fine for breaching any of the provisions of this Act.

- ▶ Limited guardianship is a **joint decision-making system** based on mutual understanding and trust between the guardian and the PwD. It follows the **PwD's will** and is **limited to specific periods, decisions, and situations**.

- ▶ **Social security:** Mandates the government to formulate necessary programmes to safeguard the rights of PwDs for an **adequate standard of living** to enable them to live independently or in the community.

Special Provisions for Persons with Benchmark Disabilities

- ▶ **Education: Free education** between the age of **6 to 18 years**. At **least 5% reservation** in Government and Government aided higher educational institutions.
- ▶ **Employment: At least 4% reservation** in government jobs. **Age relaxation** could also be allowed.
- ▶ **Incentives to private sector:** Government may **incentivise employers** in private sector to ensure that **at least 5%** of their workforce constitutes PwDs.

Initiatives taken for PwDs

- ▶ **Draft National Policy for Persons with Disabilities (2021)** in line with UNCRPD, RPwD Act, 2016 and National Education Policy, 2020.
- ▶ **National Legislations**
 - ▶ Rehabilitation Council of India Act, 1992
 - ▶ National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999
 - ▶ RPwD Act, 2016
 - ▶ Mental Healthcare Act, 2017.
- ▶ **Schemes for PwDs**
 - ▶ **Scheme for Implementing of Persons with Disabilities Act, 1995 (SIPDA)**
 - ▶ **Accessible India Campaign (Sugamya Bharat Abhiyan) (2015)**
 - ▶ Assistance to disabled persons for purchase/fitting of aids/assistive devices (ADIP)
 - ▶ National Action Plan for Skill Training of PwDs
 - ▶ Deendayal Disabled Rehabilitation Scheme (DDRS)

India is also a signatory to the following international initiatives:

- ▶ Adoption of **Incheon Strategy** "To make the Right Real" for Persons with Disabilities in Asia and Pacific.
- ▶ **Declaration on the Full Participation and Equality of People with Disabilities** in the Asia-Pacific Region.
- ▶ **Biwako Millennium Framework** working towards an inclusive, barrier-free and rights-based society.

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6.3.2. UNHRC Adopted First Resolution of Its Kind for Intersex Rights



CONTEXT

Resolution is adopted at the 55th Session of the **United Nations Human Rights Council (UNHRC)**.

ANALYSIS



Resolution calls on states-

- ▶ To combat discrimination, violence and harmful practices against persons with **innate variations in sex characteristics** and
- ▶ Address their root causes as well as help **intersex** people 'realize the enjoyment of the highest attainable standard of physical and mental health'.

About Intersex people

Intersex people are born with **sex characteristics** (such as sexual anatomy, reproductive organs, hormonal patterns and/or chromosomal patterns) that do not fit **typical binary notions of male or female bodies**.

- ▶ They may have **any gender identity or sexual orientation**.
- ▶ Experts estimate that up to **1.7 % of the populations are born with intersex traits**.
- ▶ Intersex people are **different from transgenders**.
 - **Transgenders** are born with a body that has unambiguous sexual characteristics (either male or female) but they don't match the person's gender identity.

Key issues faced by Intersex People

- ▶ They are subjected to **human rights violations** because of their physical characteristics.
- ▶ Society has created **harmful stereotypes and pathologization** (treating intersex persons as necessarily ill or disordered) towards them.
- ▶ They face issues like **infanticide, forced and coercive medical interventions**, discrimination in different spheres, legal recognition, etc.



6.4. EDUCATION

6.4.1. Early Childhood Care and Education (ECCE)



CONTEXT

Ministry of Women and Child Development (MoWCD) launched **Aadharshila** a National Curriculum for Early Childhood Care and Education (ECCE) for Children from Three to Six Years, 2024.

ANALYSIS



Key highlights of the policy

- ▶ **ECCE is based on the Panchakosha concept:** Rooted in ancient wisdom, providing a comprehensive and balanced approach to nurturing the child's body, mind, and spirit.
- ▶ **Teaching Language and Literacy in Early Years:** Developing children's emergent Literacy Skills like drawing, scribbling, Mathematical Concepts etc.
- ▶ **Positive Learning Habits (Executive Function and Self-Regulation Skills):** Empowering the child to lead and make independent choices.
- ▶ **Play as Learning:** Experiential learning through play-based activities like puzzles, roleplaying, reading books, Story creation etc.
- ▶ **Others**
 - **Embracing learning diversity** in the Anganwadi Centres.
 - **Ensuring gender equality from an early age is crucial**, because gender initiation and internalization start early, influencing children's self-concept, aspirations, and behaviour.
 - **Divyang Inclusion:** The Anganwadi Protocol for Divyang Children (2023) providing for screening, inclusion and referrals of children with disabilities.

Challenges of ECCE

- ▶ **Inadequate funding:** In 2020-21, public expenditure on ECCE was only 0.1% of GDP.
- ▶ **Infrastructure, Material and Classroom Environment:** Lack of age and developmentally appropriate equipment and play materials.
- ▶ **Teachers:** Issues of qualification, appointment, salary, language barriers and training/ capacity building.
- ▶ **Uncertain Admission process:** Lack of clarity and transparency on admission in ECCE centres in terms of date of admission, age, etc.
- ▶ **Monitoring and supervision:** Lack of monitoring and supervision mechanism for ensuring the quality of ECCE centres.
- ▶ **Overburdened childcare support system:** There is one Anganwadi worker for every 22 children under Saksham Anganwadi and Poshan 2.0, and one District Child Protection Officer for every 69 children under Mission Vatsalya.
- ▶ **Convergence/Coordination issues** of different ministries and institutions.



Read From Essential Material

Chapter 6: Early Childhood Care and Education, Human Ecology and Family Sciences, Class XII, NCERT

BRIEF BACKGROUND

Early Childhood Care and Education (ECCE)

- ▶ Early Childhood Care and Education (ECCE) is defined as the care and education of children from birth to eight years. **85% of brain development occurs before the age of 6 years.**
- ▶ **It includes:**
 - Early stimulation programmes for **0-3-year-olds**.
 - ◊ **Navchetana - National Framework for Early Childhood Stimulation (ECS)**
 - It focuses on the principles of serve and return, caregiver's three acts: **love, talk, play, and positive guidance.**
 - **Early childhood education (ECE) programmes for 3-6-year-olds**
 - ◊ **Aadharshila, the National Curriculum for ECCE 2024 for 3-6-year-olds.**
 - Improve the quality of early childhood education **at the Anganwadi Centres, by prioritising competency-based lesson plans and activities.**
 - Early Primary Education Programmes as part of schooling for **6-8-year-olds.**

Other Policy Initiatives

- ▶ **National Early Childhood Care and Education (ECCE) Policy, 2013**
- ▶ **National Education Policy (NEP), 2020**
- ▶ **National Curriculum Framework for Foundational Stage (NCF-FS), 2022**
 - Institutionalized guidelines specifically tailored for fostering **quality ECCE for 3-6 years and the age group of 0-3 years.**

Way Forward

- ▶ **Expansion and strengthening of ECCE facilities:** Ensuring universal access to high-quality ECCE in a phased manner, with a special focus on socio-economically disadvantaged.
- ▶ **Regulatory framework:** Registration and accreditation of centers, to ensure quality outcomes to be developed by States.
- ▶ **Research, Evaluation and Documentation:** to generate innovative and successful models.
- ▶ **Recognize ECCE as a statutory obligation of MoWCD (including care):** In line with Business Conduct Rules, Ministry of Education would derive limited powers and functions from MoWCD for pre-school education.
- ▶ **Others**
 - Pedagogy should be **more child-led than teacher-led.**
 - Need to advocate for ECCE and ensure government funds are invested in sustainable solutions.
 - Ensure availability and time dedication of Anganwadi teachers (AWTs).
 - **CSR funds** can help in expanding the quality and coverage of childcare.

Initiatives for ECCE in India

- ▶ **The Integrated Child Development Services, 1975**
- ▶ **Saksham Anganwadi and Poshan 2.0:** Integrated Nutrition Support Programme addressing malnutrition in children, adolescent girls, pregnant women and lactating mothers.
- ▶ **Palna (PROVISION OF ANGANWADI CUM CRECHES) and Pradhan Mantri Matru Vandana Yojana (PMMVY) Schemes** under Mission Shakti.
- ▶ **Poshan Bhi Padhai Bhi (2023)**

Global initiatives

- ▶ **UNESCO Global Partnership Strategy for Early Childhood**
- ▶ **Convention on the Rights of the Child (CRC), 1989 and Education for All (EFA), 1990**
 - o India is also a signatory to both.
- ▶ **The SDG4 - Education 2030** agenda marked the first global commitment to ECCE beyond the education community.



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6.5. HEALTH

6.5.1. Declining Total Fertility Rate in India



CONTEXT

Recently, the Global Burden of Disease Study 2021 published in Lancet highlighted that India's Total Fertility Rate (TFR) is projected to fall to 1.29 and 1.04 in 2050 and 2100 respectively.

ANALYSIS



Reasons for declining Total Fertility Rate

- ▶ **Educational Opportunities:** Increased education of women leads to improved contraception use, child health, and workforce participation, consequently lowering fertility rates.
- ▶ **Family Planning (FP):** Government-led FP initiatives enable couples to decide on child number and spacing, resulting in declining TFR.
- ▶ **Delayed Marriage:** The average age of first pregnancy has dropped from the mid-20 to mid to late 30's, due to delays in the age of marriage.
- ▶ **Infertility:** Rising concern over lifestyle factors like obesity, stress, smoking, and increased pollution leading to infertility among couples.

- o The general fertility rate in India has fallen 20 per cent in 10 years, with nearly 30 million people affected by infertility.

- ▶ **Decline in Child mortality:** Due to improvements in child health services, and immunisation programs, further leading to a decline in TFR.

Impact of declining Total Fertility Rate

Negative Impact

- ▶ **Increase in dependency ratio:** As sustained low fertility will produce a contracting population with fewer young people relative to older people as noted in China, Japan etc.
- ▶ **Fiscal challenges:** A decreased working-age population, along with the increase in spending on social security, pensions, geriatric care etc. would put pressure on the fiscal resources of the country.
- ▶ **Labour Force:** Lower TFR can adversely affect economic productivity and growth due to a shortage of skilled workers, further leading to labour market imbalances and potential economic stagnation.
- ▶ **Migration:** Countries with ageing populations may attract immigrants to address workforce shortages, fostering diversity and immigration policy tensions.
- ▶ **Shifting Family Dynamics:** Decreasing family size can disrupt traditional support systems like grandparental childcare, potentially increasing elder loneliness, psychological issues etc. due to the rise in nuclear families.

Positive Impact

- ▶ **Resource mobilisation:** A falling fertility rate will lead to lower pressure on land, water and other resources and would contribute to achieving environmental goals.
- ▶ **Educational Efficiency:** Declining TFR could improve educational outcomes without additional resources being spent per capita by the state, as the number of enrolled children will decrease.

Way Forward

- ▶ **Enhancing Support:** Governments and businesses should focus on childcare support, provide tax subsidies, improve parental leave entitlements etc.
- ▶ **Gender equity:** For women to be able to manage careers with motherhood, it would be crucial for men to take greater responsibility for household and care work.
- ▶ **Economic Policies:** To combat potential threats to public health, need policies stimulating growth and job creation, social security and pension reforms, for mitigating the impacts of declining fertility rates.
- ▶ **Skill enhancement:** Skilling working-age population to improve productivity to mitigate economic impact of ageing population.

BRIEF BACKGROUND

Total Fertility Rate (TFR)

- ▶ TFR may be defined as average number of children that would be born to a woman if she experiences the current fertility pattern throughout her reproductive span (15-49 years).
- ▶ A TFR of 2.1 i.e., two children per women is considered the replacement rate for a population, resulting in relative stability in terms of total population numbers.
- ▶ Estimated Global TFR is 1.83 and 1.59 in 2050 and 2100 respectively.
- ▶ India's TFR in 2021 is 1.91 which is far lower than replacement rate of 2.1.

6.6. POVERTY AND DEVELOPMENTAL ISSUES

6.6.1. Social Infrastructure



CONTEXT

Recently, the **Ministry of Labour and Employment** has joined the **PM Gati Shakti portal** to identify and bridge gaps in social security coverage which is in line with PM Gati Shakti's plan to cover social infrastructure.

ANALYSIS



Significance of Social Infrastructure in India

- ▶ **Promotes inclusive growth** by reducing incidents of poverty and inequality.
- ▶ **Enhances human resource productivity** by improving education and skills, thereby maximizing capitalization of India's demographic dividend.
 - Social security and labour welfare improves mobility, productivity and efficiency of labour.
- ▶ **Encourages upward social mobility and enhances social well-being.**
- ▶ **Improves quality of life of individuals** by increasing their incomes and employment opportunities.
 - Access to clean water and sanitation has direct benefits in **reducing mortality and morbidity.**
- ▶ **Helps in achievement of Sustainable Development Goals.** e.g., SDG 3,4,7,10 etc.
- ▶ **Reduces sense of alienation among citizens** by creation of liveable and inclusive settlements to the marginalised groups such as poor, women, children, persons with disability etc.

Challenges related to developing Social Infrastructure in India

- ▶ **Inadequate public funding** in key social sectors such as education and health.
 - Low **private sector** participation due to low return on investments further complicates the problem.
- ▶ **Lack of Human Resources:** Such as absence of trained teachers, lack of high skilled health professionals, planning etc.
- ▶ **Inequality in access: Uneven distribution and regional disparities.** E.g. rural-urban disparities.
- ▶ **Low awareness among citizens about the importance of social infrastructure:** E.g., ignorance of sanitation benefits due to high costs of toilet construction.

Way Forward

- ▶ **Supplement public resources with Public-private partnerships (PPPs)** to address financial gaps in social infrastructure by leveraging private sector technical expertise, experience and efficiency.
- ▶ **Use of innovative finance initiatives to attract private investments.** E.g. Development Impact Bonds

BRIEF BACKGROUND

What is meant by Social Infrastructure?

Social infrastructure includes **assets which provides for social services** such as **education, health, washing and sanitation facilities, housing, etc.**

- ▶ India ranked **134th** in Human Development Index in 2022 (improvement from 135th in 2021).
- ▶ **<5%** of the workforce (of age 19-24) receives formal vocational education. (NEP,2020)

Constitutional Provisions for Social Infrastructure in India

- ▶ **Directive Principles of State Policy (DPSP)**
 - **Article 42:** Provision for securing **just and humane conditions of work and for maternity relief.**
 - **Article 47:** Duty of the State to raise the level of **nutrition** and the **standard of living** and to improve **public health.**
 - **Article 45:** Provision for free and compulsory education for children (till 6 years).
 - **Article 39(b):** Encourages **distribution of material resources** to subserve the common good.
 - **Article 39(c):** Emphasises that economic system should not result in the concentration of wealth.
- ▶ **Seventh schedule:** Public health and sanitation is placed in State List whereas education, welfare of labour, including conditions of work, are in **Concurrent List.**

Development of Social infrastructure in India

Education:

- ▶ National Education Policy, 2020
- ▶ Samagra Shiksha Scheme
- ▶ Rashtriya Uchchatar Shiksha Abhiyan

Health:

- ▶ Ayushman Bharat Pradhan Mantri - Jan Arogya Yojana
- ▶ Pradhan Mantri Ujjwala Yojana (PMUY)
- ▶ National Health Mission

Housing:

- ▶ Pradhan Mantri Awas Yojana (Rural and Urban)

- ▶ **Securing the unsecured** by ensuring universal coverage of life, accident, and pension insurance.
- ▶ **Increase public expenditure on healthcare and education to 2.5% and 6% of GDP** in line with **National Health Policy, 2017** and **National Education Policy, 2020** respectively.
- ▶ **Direct Benefit Transfer** can be used as a tool to achieve desired outcomes related to the standard of living.

6.6.2. Urban Poverty in India



CONTEXT

Recently, the India Employment Report (IER), 2024 highlighted **coexistence of higher unemployment and wages in urban areas** and called for further investigation to understand its implications for the urban poor.

ANALYSIS



Key highlights of the report

- ▶ **Higher unemployment in urban areas:** And among younger youths (aged 15–19) than older youths (aged 20–29).
- ▶ **Persistence of gender gap:** In both rural and urban areas in 2022, the Labour Force Participation Rate (LFPR) of young men (at 61.2%) was almost three times higher than that of young women (at 21.7%).
- ▶ **Decline in urban poverty:** Urban poverty decreased from 13.7% in 2012 to 12.55% in 2022 at the all-India level.

Reasons for prevalence of Urban Poverty

- ▶ **Urbanisation of poverty:** Rural-to-urban migration in search of a better livelihood is acknowledged as a key reason for urban poverty.
- ▶ **Exclusionary urbanization:** The urban planning processes largely exclude people living in informal settlements like slums.
 - Inadequate access to basic services such as healthcare, education, etc., perpetuates the cycle of poverty.
- ▶ **Regional disparity in urbanization:** Insufficient development of Tier II and Tier III cities has led to excessive population pressure on megacities like Delhi, Mumbai, etc.
 - **Higher per capita infrastructure investment costs in smaller cities** are one of the reasons for unbalanced urbanization (2011, High Powered Expert Committee Report on Infrastructure).
- ▶ **Inaccessibility to social security:** Many poor migrants in urban areas lack proof of residency or identity, which excludes them from government welfare programs and traps them in a cycle of poverty.
- ▶ **Financial insecurity:** High prevalence of **informal employment, underemployment,** as rapid urbanization has not been accompanied by the creation of enough job opportunities.

Way Forward

- ▶ **Inclusive urbanization:** Decentralize decision-making and involve local communities for inclusive urban development planning.
 - Encourage **community-driven initiatives and support self-help groups in slums.**

BRIEF BACKGROUND

IER, 2024

- ▶ Jointly published by the **International Labour Organization (ILO)** and the **Institute for Human Development (IHD)**.
- ▶ The report **poses questions on the trickle-down effect of benefits to the working class** in the backdrop of a 5.4% average real economic growth, from 2015–16 to 2022–23.

About urban poverty

- ▶ Urban poverty is closely linked to **inadequate access to employment, food, health care and education** as well as a **lack of voice in the settlements** in which they live.

Differences between Urban and Rural Poverty

- ▶ **Lack of adequate housing and security** of tenure due to unauthorized nature. E.g. slums
- ▶ **Lack of basic services** toilet facilities, especially for women; lack of drinking water, clean air and ventilation etc.
- ▶ **Challenges of transport,** dangers of **extortion** and increased **vulnerability to crime.**
- ▶ **Social cohesion of the urban poor is also weaker** as compared to rural areas, where community ties and traditional support structures may be stronger, leading to isolation and loneliness.
- ▶ **Poverty is more visible in urban areas,** leading to greater feelings of deprivation and social exclusion. In rural areas, poverty tends to be more widespread and uniform.
 - E.g. **Dharavi, Asia's largest slum surrounded by luxury hotels, towers.**

Initiatives to tackle Urban Poverty

- ▶ **Housing:** Pradhan Mantri Awas Yojana- Urban (PMAY-U)
- ▶ **Sanitation:** Atal Mission For Rejuvenation and Urban Transformation 2.0 (AMRUT 2.0)
- ▶ **Employment and skill:** Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM), PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi)

- ▶ Promote **mixed-use development and inclusive zoning policies** to prevent the formation of ghettos and ensure access to employment opportunities.
 - ▶ **Regionally distributed development:** Promote balanced regional development by incentivizing economic activities, entrepreneurship and job creation in **smaller towns and cities to reduce pressure from megacities.**
 - ▶ **Improve rural infrastructure, and agriculture–industry linkages** to reduce distress migration to urban centres.
 - ▶ **Sustainable livelihoods and skill development:** Encourage the growth of **labour-intensive industries and small-scale enterprises** in urban areas through improved access to credit, business development services, and market linkages. E.g. Kudumbashree in Kerala
 - ▶ **Portability of social security programmes:** This would facilitate expanding access to social security nets and financial services such as banking, credit, and insurance for urban poor.
- ▶ **Food security:** Portability of ration card under One Nation One Ration Card scheme.
 - ▶ **Health:** Portability benefits under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana, self-certification for benefits under PM Ujjawala Yojana.

6.6.3. World Migration Report 2024



CONTEXT

International Organization for Migration (IOM) released World Migration Report 2024.

ANALYSIS



Key Findings at Global level

- ▶ **Factors driving global displacement:** Conflict and climate change remain the most significant.
- ▶ **Total international migrants:** About 281 million worldwide, of which 117 million are displaced, marking the highest level recorded.

India-related findings

- ▶ In India, strong influence of climate impacts on internal migration from Rajasthan, Uttar Pradesh and Madhya Pradesh.
- ▶ India hosts the world’s largest number of international migrants (18 million), residing notably in UAE, USA, and Saudi Arabia.
- ▶ In 2022, India remains the top remittance recipient country, receiving more than USD 111 bn, the first country to reach and even surpass the USD 100 bn mark.

Issues faced by Migrants

- ▶ **Reduced migration pathways** for individuals from less developed countries are driving more people to resort to irregular migration pathways.
- ▶ Migrants are subjected to racism, xenophobia, criminalization, gender-based violence and other human rights violations.



6.6.4. IOM released “A Decade of Documenting Migrant Deaths” Report



CONTEXT

International Organization for Migration (IOM) released a report “A Decade of Documenting Migrant Deaths”. Report was released on completion of **ten year of IOM’s Missing Migrants Project (MMP)**.

- ▶ MMP was launched in 2014 to **document deaths and disappearance of people in migration process** towards an international destination.



ANALYSIS

Key findings

- ▶ **More than one in three migrants** whose country of origin could be identified come **from countries in conflict**.
- ▶ **More than two-thirds** of those whose **deaths were documented** through IOM’s MMP are **unidentified**.
- ▶ **Major causes of death:** Drowning; Vehicle accidents; Suffocation due to fuel inhalation, Inadequate shelter, healthcare etc.

About Migration

- ▶ **Migration** refers to movement of persons away from their place of usual residence, either across an international border or within State.
- ▶ **Factors behind Migration:** Urbanisation, Marriage, Economic disparities, Political instability, Impacts of climate change, etc.
- ▶ **Consequences of migration**
 - Intermixing of diverse cultures and **evolution of composite culture**.
 - **Overcrowding in cities** led to their haphazard growth and slum development.
 - Changes resource- population ratio.
 - **Brain drain** i.e. skilled people migrate from poorer countries to developed countries for better economic opportunities.

Initiatives taken

Global Steps:

- ▶ **Global Compact for Safe, Orderly and Regular Migration (GCM):** First intergovernmental agreement, prepared under United Nations, to cover all dimensions of international migration in holistic manner.

Indian Steps:

- ▶ Welfare measures in destination countries like **Pravasi Bharatiya Bima Yojana**.
- ▶ **Pre-departure Orientation Training** to better prepare migrants for their life abroad and awareness of their rights, duties, etc.



6.6.5. State of World Population – 2024 Report



CONTEXT

United Nations Population Fund's (UNFPA) released the State of World Population 2024 report titled "Interwoven Lives, Threads of Hope: Ending Inequalities in Sexual and Reproductive Health (SRH) and Rights."

- ▶ **Women's SRHR** includes right to be free from torture, right to health, privacy, education, life, and prohibition of discrimination.

ANALYSIS



Key findings

- ▶ **India leads** globally with an estimated population of **144.17 crore**, followed by China (142.5 crore).
- ▶ India's population is estimated to **double in 77 years**.
- ▶ **68% of India's population** belongs to **age group of 15- 64 years**, followed by 10-24 years group (26%).
- ▶ **India's Total Fertility Rate** i.e. births per woman in reproductive age is estimated at **2.0**.
- ▶ In India, **life expectancy at birth** is estimated at **71 and 74 years** for **men and women** respectively.
- ▶ **Child marriage rate** in India was 23% between 2006-2023.
- ▶ **Women with disabilities** experience up to **10 times more gender-based violence** than women without disabilities.
- ▶ 30 years (1994-2024) of progress in SRH has mostly **ignored the most marginalized communities**.

Initiatives taken to improve SRH

- ▶ **India:** Janani Suraksha Yojana, Surrogacy (Regulation) Amendment Rules, 2024 etc.
- ▶ **Global:** International Conference on Population and Development Programme of Action in Cairo, Egypt, 1994, Beijing Declaration and Platform for Action, 1995, etc.

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6.7. MISCELLANEOUS

6.7.1. Live-In Relationships



CONTEXT

The recently introduced **Uttarakhand Uniform Civil Code (UCC) Bill** mandates **compulsory registration with registrar for all live-in relationships in the state**, irrespective of residency.

ANALYSIS



How is Live-in Relationship Affecting Marriage as an Institution?

Social change, global influence, urbanization, and cosmopolitan norms have **increased acceptance of pre-marital cohabitation and live-in arrangements**, especially among younger generations.

- ▶ **Individual Autonomy:** The concept of live-in relationships is rooted in the desire for **personal autonomy and freedom of choice**, as a challenge to the system of **arranged marriages and societal expectations**.
- ▶ **Evolving Views on Commitment:** Increased emphasis on **emotional connection, communication, and compatibility**, reducing the sanctity of marriage as the ultimate symbol of commitment.
- ▶ **Testing Compatibility:** Live-in relationships offer a **way to test domestic compatibility before marriage**, addressing concerns about restrictive or cumbersome marriage procedures.
- ▶ **Legal and Social Dynamics:** Despite legal recognition, societal acceptance of live-in relationships challenges traditional family structures and raises debates on legal reforms.
- ▶ **Family Impact:** Live-in relationships challenge traditional family structures, leading to conflicts and societal tensions.
- ▶ **Economic Considerations:** Concerns about financial stability, asset division in case of divorce, and prenuptial agreements is nudging towards live-in relationships.

Conclusion

The ambiguity in law often leads to conflicting opinions and judgments. Ambiguous clauses in current legislation must be revised to clearly define the status and rights of children born within such relationships.

BRIEF BACKGROUND

About Uttarakhand Uniform Civil Code (UCC)

- ▶ It requires **compulsory registration with the state** while starting or ending a live-in relationship for heterosexual couples.
- ▶ Provision for providing for **maintenance to the woman when "deserted" by her partner**.
- ▶ It also prescribes **jail term of up to six months for not producing a "certificate" of the relationship**.
- ▶ It imposes **stringent terms on a consensual relationship between adults and raises constitutional concerns of privacy and personal liberty**.

Live in Relationships in India

- ▶ In India, **live-in relationships are not explicitly governed by law or custom**.
- ▶ However, through judicial decisions, the **Supreme Court has expanded the recognition of live-in partnerships** and established guidelines for handling such relationships.
- ▶ **Supreme Court Judgements related to Live-In Relationships:**
 - ▶ **Badri Prasad v. Dy. Director of Consolidation (1978):** The Supreme Court observed **live-in relationships as legal if they meet the requirements of marriage, such as legal age, consent, and mental capacity**.
 - ▶ **Lalita Toppo vs The State Of Jharkhand (2018):** SC ruled under the provisions of the Domestic Violence Act, 2005 the live-in-partner would be entitled to more relief than what is contemplated under the Code of Criminal Procedure, 1973.
 - ▶ **Bharatha Matha vs R Vijay Renganathan & Ors (2010):** SC held that the children born through live-in relations will be considered legitimate children and will be allowed share in the ancestral undivided property.
 - ▶ **Indra Sarma v. VKV Sarma (2013):** The Court affirmed that **a mutual live-in relationship is not illegal if both partners are unmarried, and does not constitute an offense**.

6.7.2. Doping in Sports



CONTEXT

India recorded **highest percentage of doping offenders (3.26%)**, according to the 2022 testing figures released by the World Anti-Doping Agency (WADA).

ANALYSIS



Reasons for high doping incidents in Indian sports

- ▶ **Recognition and rewards:** Attraction of instant recognition, financial rewards and government jobs related to winning.
- ▶ **Accessibility and availability:** Despite regulations and efforts to curb banned substance distribution, these substances remain readily available in various forms.
- ▶ **Lack of comprehensive education and awareness:** Athletes are not well aware of the risks and consequences of doping to the health or integrity of sports.
- ▶ **Lack of sports infrastructure and support:** This drives athletes to seek alternative means, including doping, to get an edge over other athletes.
- ▶ **Societal pressure:** Sport as a career is often looked down upon in India, making Athletes feel pressured by coaches, family and society to perform well.
- ▶ **Ineffective testing and monitoring:** Smaller competitions in many parts of the country have no anti-doping officials.

Why Doping in Sports is Problematic?

- ▶ **Ethical implications:** Against integrity of sports and violates the values of hard work, dedication, and fair competition.
- ▶ **Health impacts:** Lead to short- and long- term impacts including organ damage, hormonal imbalances, etc.
- ▶ **Impacts on athletes:** Can damage person's reputation and social relations, and sets poor example for other athletes.
- ▶ **Governance issues:** Difficulty in maintaining integrity of competitions and enforcing rules and regulations.
- ▶ **Societal impact by erosion of trust** and normalization of cheating behavior.



BRIEF BACKGROUND

Doping

- ▶ It is the act of consuming banned artificial and often illegal substances to gain an advantage over others in sporting competitions.
- ▶ Doping may also include other methods like **increasing oxygen in the bloodstream** through blood transfusions.

Different Kinds of Doping Used by Athletes:

- ▶ **Androgenic agents** like anabolic steroids to train harder and build more muscle.
- ▶ **Stimulants** to be more alert and hide fatigue by increasing heart rate and blood flow.
- ▶ **Diuretics & masking agents** to remove fluid from the body and used to falsify the results of doping controls.
- ▶ **Peptide hormones** like Erythropoietin to increase bulk, strength and red blood cells.
- ▶ **Glucocorticoids** to mask serious injury as they are anti-inflammatory.
- ▶ **Beta blockers** to keep the heart rate low and reduce tremble in hands.

Efforts to stop doping in India

- ▶ **National Anti-Doping Act, 2022:** Framework and mechanisms for doping control programs.
 - ▶ It provided for the constitution of National Anti-Doping agency as a **statutory** body.
- ▶ **National Anti-Doping Agency (NADA):** An autonomous body under the Ministry of Youth Affairs & Sports to implement the anti-doping programme in India, in line with the World Anti-doping Code 2021.
 - ▶ It was set up as a registered society under the **Societies Registration Act of 1860** in 2005.
- ▶ **Key Initiatives of NADA:**
 - ▶ **Program for Education and Awareness on Anti-Doping in Sports (PEADS)**
 - ▶ **Anti-Doping helpline number** to provide information about Anti-Doping rules and guidelines.
 - ▶ **Memorandum of Understanding (MoU) with South Asia Regional Anti-Doping Organization (SARADO)** to increase the Regional Cooperation in anti-doping in sport.

Way Forward to prevent doping in India

- ▶ **Education:** For athletes of all ages about the dangers of banned substances.
- ▶ **Regulating supplements:** Food safety and standards Authority of India (FSSAI) can issue certification to supplements that they do not contain banned substances.
- ▶ **Enhance testing and monitoring:** To act as a deterrent, NADA can increase the frequency and quality of doping tests, both in-competition and out-of-competition.
- ▶ **Strengthening sports infrastructure:** Availability of trained support personnel, advanced instruments.
- ▶ **Developing positive attitude towards sports in society:** There is a need to address societal barriers and biases to reduce pressure on athletes.

- ▶ **Narcotic Drugs and Psychotropic Substances Act, 1985:** It prohibits any individual from engaging in any activity consisting of production, cultivation, sale, purchase, transport, consumption of any narcotic drug or psychotropic substance.
- ▶ India has **signed and ratified the UNESCO International Convention against Doping.**



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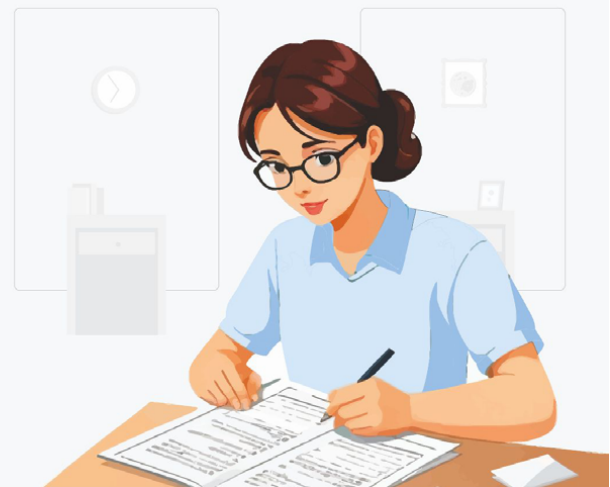
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6.8. TEST YOUR LEARNING

MCQs

Q1. With reference to the Gender Inequality Index, 2022, consider the following statements:

1. It is released by United Nations Development Programme (UNDP) in their report Human Development Report 2023/2024; Breaking the gridlock Reimagining cooperation in a polarized world.
2. India has been ranked at 108 out of 193 countries.
3. Gender Inequality Index score varies between 1 (when women and men fare equally) and 0 (when men or women fare poorly compared to the other in all dimensions).

How many of the above statements given is/are **correct**?

- a) Only one
- b) Only two
- c) All Three
- d) None

Q2. Consider the following statements:

1. Early Childhood Care and Education (ECCE) is defined as the care and education of children from birth to eight years.
2. It includes Navchetana, the National Curriculum for ECCE 2024 for 3–6-year-olds and Aadharshila, National Framework for Early Childhood Stimulation (ECS) for 0–3-years-olds.

Which of the above statements is/are **correct**?

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

Q3. Consider the following statements:

1. TFR may be defined as average number of children that would be born to a woman if she experiences the current fertility pattern throughout her reproductive span (15–49 years).
2. India's TFR in 2021 is 1.91 which is far lower than replacement rate of 2.1.

Which of the above statements is/are **incorrect**?

- a) Only 1
- b) Only 2
- c) Both 1 and 2
- d) None

Q4. Consider the following statements about Doping in Sports:

1. National Anti-Doping Agency (NADA) is an autonomous body under the Union Ministry of Youth Affairs & Sports formed under the National Anti-Doping Act, 2022.
2. It was set up as a registered society under the Societies Registration Act of 1860 in 2005.
3. India has signed and ratified the UNESCO International Convention against Doping.

Which of the above statements is/are **correct**?

- a) Only 1 and 2
- b) Only 2 and 3
- c) 1, 2 and 3
- d) None

Q5. Consider the following statements about State of World Population 2024 report:

1. It is released by United Nations Population Fund (UNFPA).
2. The Report focuses on Women’s Sexual and Reproductive Health (SRH) and Rights.
3. According to the report, 68% of India’s population belongs to age group of 15- 64 years.

Which of the above statements is/are **correct**?

- a) Only 1
- b) Only 1 and 3
- c) Only 2 and 3
- d) 1, 2 and 3

Questions

1. Inadequate implementation of Rights of Persons with Disabilities, Act, 2016 hinders their progress and violates their fundamental rights. In this context, highlight the key provisions of the Act and issues with its implementation. Suggest some ways to ensure effective implementation of the Act? (250 Words)
2. Declining Fertility rates are both a boon and a bane for the women and the society. Discuss the implications of declining fertility rates globally and suggest sustainable interventions. (250 Words)

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7.1. BIOTECHNOLOGY

7.1.1. Human Genome Sequencing



CONTEXT

Department of Biotechnology (DBT) announced the completion of Genome India project.

ANALYSIS



About Genome India Project

- ▶ **Launched:** by DBT under **Ministry of Science and Technology** in 2020.
- ▶ **Aim:** To collect **10,000** genetic samples from citizens across India and create a **Reference Genome database** for Indian Population.
- ▶ **About the mission:**
 - Mission is led by **Centre for Brain Research, Bengaluru.**
 - Datasets generated will be stored at **Indian Biological Data Centre** in **Faridabad.**
 - Inspired by the **Human Genome Project (HGP)**, the First international research effort to determine entire human genome DNA sequence.
 - ◊ HGP was launched in **1990**, completed in **2003** and covered **~92%** of total human genome sequence.

What is genome and genome sequencing?

- ▶ Genome is a **complete set of genes of an organism** and includes all the chromosomes, which house the **Deoxyribonucleic acid (DNA)** and genes.
- ▶ **Genome sequencing** means determining the exact order of base pairs in a strand of DNA in an individual.

Significance of Genome sequencing

- ▶ **Enable treatments for genetic diseases: It is useful in:**
 - **Prenatal screening:** To identify genetic disorders in foetuses
 - **Liquid biopsies:** To diagnose cancer early
 - **Pharmacogenetics:** Study of how genes affect a person's response to drugs to prevent adverse drug reactions).
- ▶ **Development of Predictive diagnostics and personalized healthcare:** Through customised drugs and gene therapies based on genome sequencing.
- ▶ **Facilitate Advanced Analytics and AI integration:** To enhance understanding of genetic causative factors and develop disease treatments.

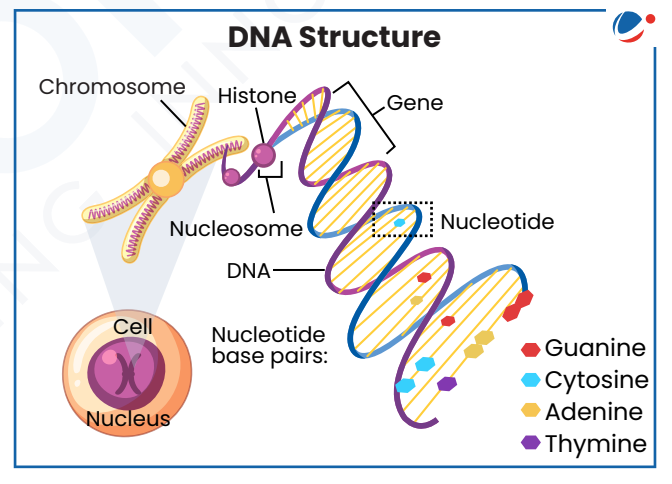
Challenges related to genome sequencing

- ▶ **Lack of regulatory framework:** Instances of samples from India sequenced and analysed abroad have been observed.
- ▶ **Privacy and data issues:** Involves sensitive information such as personal data, medical history, and family history with diseases.

BRIEF BACKGROUND

About Deoxyribonucleic acid (DNA)

- ▶ DNA molecules are polymers of long chains of nucleotides, which are **sugar molecules attached to a phosphate group and a nitrogen-containing base.**
- ▶ DNA bases are Adenine (A), Cytosine (C), Guanine (G), and Thymine (T).



Other key Initiatives for Genome sequencing

- ▶ **IndiGen programme:** It took whole genome sequencing of thousands of individuals representing diverse ethnic groups from India.
 - Funded by the Council for Scientific and Industrial Research (CSIR).
- ▶ **Global Alliance for Genomics and Health (GA4GH):** Formed in 2013, it is a not-for-profit alliance that sets standards to expand genomic data use within a human rights framework.

- ▶ **Fragmentation of genetic data:** With data remaining in silos, it prevents its access to public health decision-making.
- ▶ **Ethical issues:**
 - ▶ **Inequity and low diversity:** Unregulated market forces may create barriers to better healthcare access, especially for the poor and ethnic minorities.
- ▶ **Technological challenges:** Cyber threats, problems of sample contamination and viable run quality etc.
- ▶ **Other issues:**
 - ▶ **Financial constraints** in establishing and maintaining sequencing facilities
 - ▶ Limited skilled personnel for sequencing facilities.

Way Forward

- ▶ **Establish clear regulations** for fair competition and stakeholder trust.
- ▶ **Prioritize genomic research funding** and establish centralized sequencing facilities
- ▶ **Develop advanced training programs** for researchers at both experimental and computational levels
- ▶ **Improved access of up-to-date genomic data** through collaboration with scientific publishers and **open access publication models**.
- ▶ **Follow best practices** to curb data misuse and ensure ethical technology use, E.g. Genetic Information Non-discrimination Act in the U.S.A.

7.1.2. Gene Therapy



CONTEXT

India has conducted the first human clinical trial of gene therapy for **Haemophilia A (FVIII deficiency)** at Christian Medical College (CMC) Vellore (Tamil Nadu).

ANALYSIS



About Gene Therapy

- ▶ A technique that uses a **gene(s)** to treat, prevent or cure a disease or medical disorder.
 - ▶ In most gene therapy, a **normal gene is inserted into the genome with the help of vector** to supplement an abnormal disease-causing gene and **restore the target cell to a normal state**.
 - ◊ **Vector** refers to the **carrier used for delivering the therapeutic gene** to the patient's target cells.
- ▶ **Types of Gene Therapy**
 - ▶ **Germline gene therapy:** Modifies Germline Cell by introducing **functional genes**, which are **integrated into the genome**.
 - ▶ **Somatic cell gene therapy:** Therapeutic genes are **transferred to a patient's somatic cells**. Any modifications are **not inherited** by future generation.
- ▶ **Application:** Both **inherited genetic diseases** (e.g., haemophilia and sickle cell disease) and **acquired disorders** (e.g., leukaemia) could be **treated** with gene therapy.

BRIEF BACKGROUND

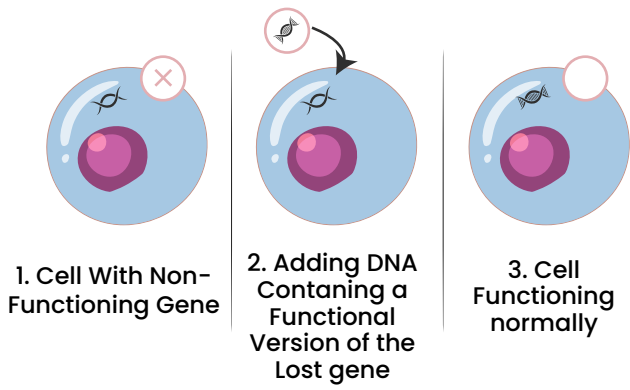
About Haemophilia

- ▶ **Inherited, life-long, sex-linked bleeding disorders** occurring predominantly in males.
- ▶ In it, people **bleed for a longer time** which can lead to serious health problems. However, they **do not bleed any faster than normal person**.
- ▶ Caused by a **mutation in one of the genes**, that provides instructions for making the clotting factor proteins.
 - ▶ Blood contains proteins **factor VIII (8)** or **factor IX (9)** which is necessary for clotting that facilitates help to stop bleeding.
- ▶ **Inherited** through an X chromosome.
 - ▶ **Male are more vulnerable** to haemophillia, since males have **only one copy of X chromosome (XY)**.
 - ▶ Females are **haemophilic in rare cases** since they have **two copies of X chromosome (XX)**.

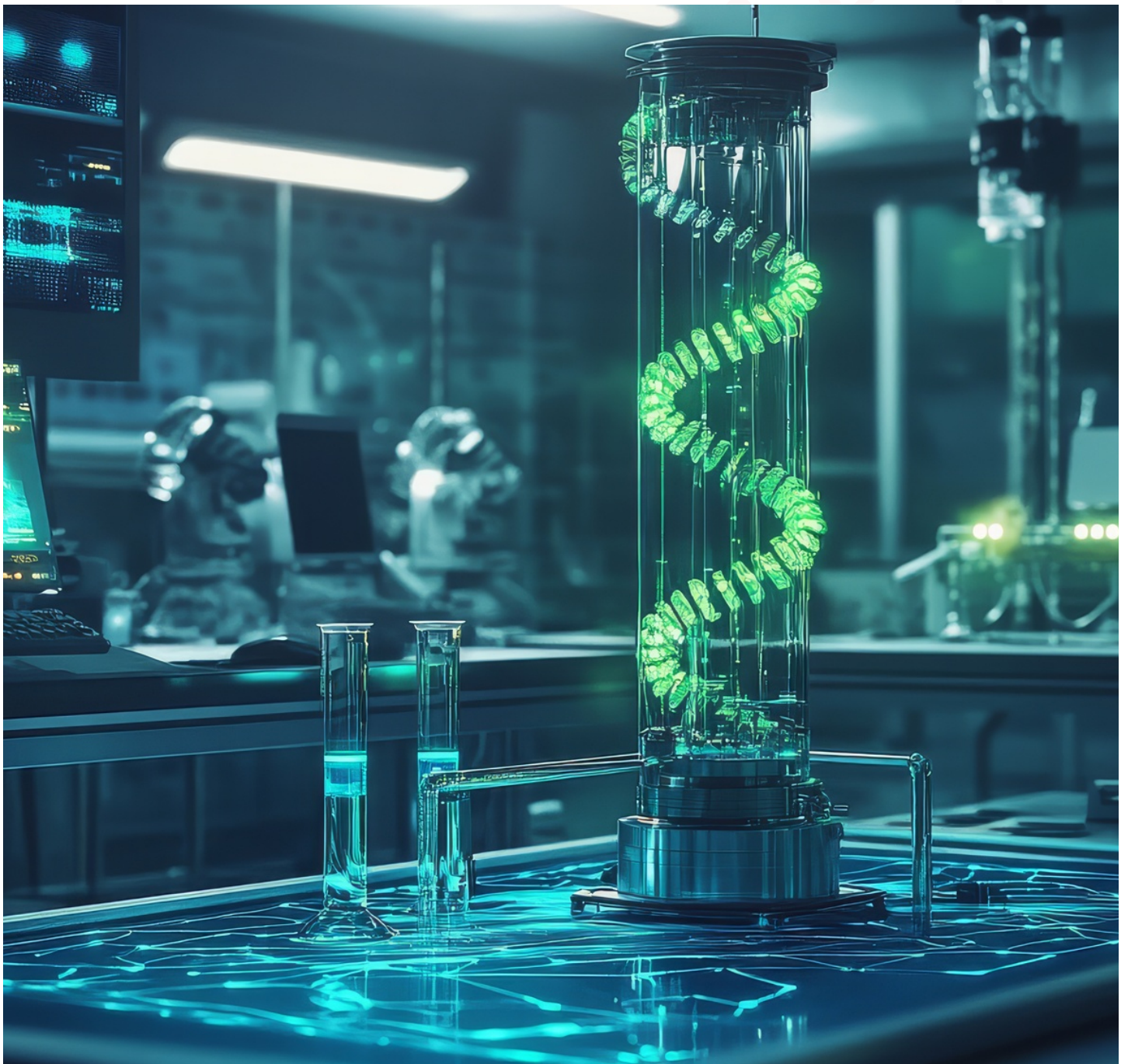
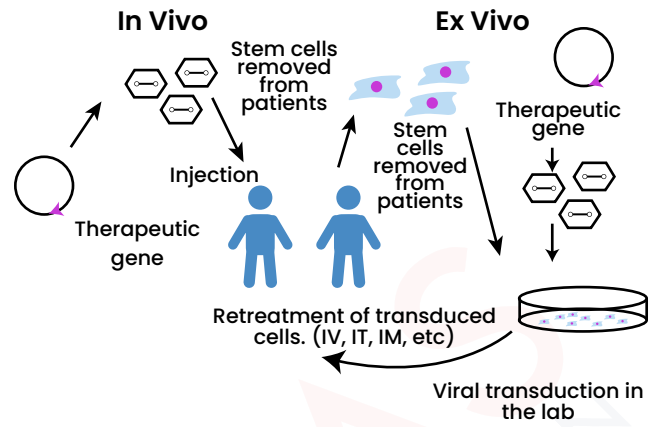
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Gene Therapy



Methods of Gene therapy



7.2. IT AND COMPUTER

7.2.1. India AI Mission



CONTEXT

The Union cabinet has approved over Rs 10,300 crore for **IndiaAI Mission** to strengthen Artificial Intelligence (AI) Innovation Ecosystem

ANALYSIS



About IndiaAI Mission

- ▶ **Aim:**
 - ▶ Establish an ecosystem for AI innovation through **public-private partnerships**.
 - ▶ Deploying over **10,000 Graphics processing units (GPUs)** for advanced AI computing infrastructure.
- ▶ **Ministry:** Ministry of Electronics and Information Technology (MeitY).
- ▶ **Funding:** To be made available over **5 years** through a public-private partnership model.
- ▶ **Implementing agency:** 'IndiaAI' Independent Business Division under Digital India Corporation.

Pillars of IndiaAI and Related Schemes

AI in Governance	AI Compute & Systems	Data for AI
<ul style="list-style-type: none"> ▶ BHASHINI - [BHASHa Interface for India] an AI- based language translation tool. ▶ India Stack and AI 	<ul style="list-style-type: none"> ▶ AIRAWAT: India's AI supercomputer installed at C-DAC, Pune. ▶ National Supercomputing Mission ▶ MeitY Quantum Computing Applications Lab 	<ul style="list-style-type: none"> ▶ Data Management Office: Helps in standardisation of data management. ▶ India Datasets Program and India Data Platform ▶ IndiaAI porta
AI, intellectual property (IP) & Innovation	Skilling in AI	AI Ethics & Governance
<ul style="list-style-type: none"> ▶ Centre of Excellence for Artificial Intelligence ▶ MeitY Start-up Hub 	<ul style="list-style-type: none"> ▶ Future Skills Prime: Joint initiative by Nasscom & MeitY for AI certification programs. 	<ul style="list-style-type: none"> ▶ RAISE: Responsible AI for Social Empowerment.

Challenges in AI Adoption in India

- ▶ **Lack of trained professionals:** According to NASSCOM, India houses a talent base of 4,16,000 AI professionals as opposed to the current demand of approximately 6,29,000.
- ▶ **Impact on Jobs:** WEF has estimated that **AI will replace some 85 million jobs by 2025**.
- ▶ **Infrastructural challenges (Physical and Digital):** Lack of AI-based infrastructure, such as cloud computing and **limited availability of quality and open-source data**.
- ▶ **Ethical and Integrity Concerns:** AI-based decisions are susceptible to **inaccuracies, discriminatory outcomes and biasness**.
- ▶ **Regulatory challenges:** such as **lack of universal definition**, liability issues, etc.
- ▶ **Growing Instances of misuse:** AI is being misused for **Malicious Intent** such as creation of **Deep fakes**.

Way forward

- ▶ **Incorporate AI into curriculum**, boost teaching and learning and encourage AI ventures.
- ▶ **Firms can undertake upskilling of employees.**
 - As per a LinkedIn's report, **nearly 94% of companies in India are upskilling employees** due to advancing AI.
- ▶ **Incentivize Indian start-ups** to develop home-grown AI applications
- ▶ **Identify suitable policymakers and regulatory institutions** for AI governance laws.
- ▶ **Frame appropriate AI laws** drawing on existing national technology policies and international frameworks.

7.2.1.1. Artificial Intelligence (AI) in Health Care



CONTEXT

World Health Organization unveiled a **digital health promoter prototype S.A.R.A.H harnessing generative Artificial Intelligence (AI)** for public health.

ANALYSIS



Potential of AI in Health Care

- ▶ **Diagnosis and Treatment Planning:** Analyze imaging (such as X-rays), help doctors in identifying diseases etc.
- ▶ **Predictive Analytics:** Analyze electronic health records and other patient data to **predict which patients are at risk of developing certain conditions.**
- ▶ **Clinical research and discovery:** E.g. ProteinSGM, a Generative AI model from the University of Toronto is used for protein designing.
- ▶ **Other:** AI based **Robotic** surgeries will minimize surgery-related complications, **Healthcare supply chain resilience** (Predictive models driven by data will provide real time information regarding shortages and surpluses), etc.

Concerns Associated with AI in Health Care

- ▶ **Data Privacy and Security:** Requires large amounts of patient data, which raises concerns about data privacy and security.
- ▶ **Biasness:** Biased result can be produced from AI based healthcare models if they are not trained by data which represent wider section of the society.
- ▶ **Lack of Transparency:** The internal workings of the AI Based model is not known by the user (**considered as black boxes**).
- ▶ **Regulation and Governance:** Lack of clear regulations and guidelines for the use of AI in healthcare.
 - This raises question who will take responsibility of any mistake committed by AI based system (E.g. any mistake committed by AI based robotic surgeon).

Conclusion

AI has immense potential but it needs to be accompanied with adequate regulation and governance mechanism. In this regard, World Health Organisation has released guidance on the ethics and governance of AI for health.

BRIEF BACKGROUND

About S.A.R.A.H.







- ▶ A **Smart AI Resource Assistant for Health** which uses new language models and cutting-edge technology.
- ▶ It can provide **information across major health topics**, including healthy habits and mental health.

Initiatives facilitating Integration of AI in Current Healthcare Ecosystem

- ▶ **Ayushman Bharat Digital Mission (ABDM):** Providing unique digital health ID for each citizen.
- ▶ **Healthlocker/Personal Health Records (PHR):** Digital national health database backed with cloud-based storage system which serves as a single source of health data for the nation.
- ▶ **National Health Stack (NHS):** It includes National Health Analytics Platform etc.

Guiding Principles for use of AI in Health Care (Proposed by World Health Organisation)



-  Protect **autonomy**
-  Ensure **transparency, explainability and intelligibility**
-  Foster **responsibility and accountability**
-  Ensure **inclusiveness and equity**
-  Promote **human well-being, human safety and the public interest**
-  Promote AI that is **responsive and sustainable**

7.2.2. 3D Printing



CONTEXT

IIT Madras-incubated space startup Agnikul Cosmos has successfully launched world's first single-piece 3D printed rocket engine (Rocket Agnibaan SOrTeD).

ANALYSIS



About Additive Manufacturing (AM)/ 3D Printing

- ▶ A technology that constructs a **three-dimensional object** from a digital 3D model by **adding material layer by layer**.
- ▶ It is **opposite of subtractive (traditional) manufacturing**, in which an object is created by cutting away at a solid block of material.
- ▶ AM materials include thermoplastics, metal and metal alloys, ceramics and biomaterials such as bioinks.

Advantages of 3D Printing

- ▶ **Rapid Prototyping:** Expedited prototyping, serving as a **catalyst** in the **product development cycle**. Facilitates swift transition of ideas from concept to tangible form.
- ▶ **Design Flexibility:** **Intricate** designs are now feasible.
- ▶ **Sustainability:** Significantly reduces material waste by **only consuming what's necessary for the print** and the support structures.
- ▶ **On-demand Production:** Companies can move from mass production to mass customization, allowing for the swift manufacturing of parts based on specific demand.
- ▶ **Other: Quality Assurance, Supply Chain Enhancement** etc.

Key Challenges of 3D Printing

- ▶ **Expensive:** Initial investment in equipment is substantial.
- ▶ **Limited Materials:** Selection of plastics and metals is not exhaustive.
- ▶ **Restricted Build Size:** Print chambers have small sizes, larger parts need to be joined after printing.
- ▶ **Part Structure:** Layers can delaminate under stress due to the layer-by-layer production process.

Key Initiatives Taken to Promote 3D Printing

- ▶ Ministry of Electronics and Information Technology (MeitY) released "National Strategy for Additive Manufacturing" in 2022.
- ▶ National Institute of Electronics & Information Technology, Aurangabad, has established a 3D printing lab.
- ▶ In 2023, National Centre for Additive Manufacturing was set up by MeitY in collaboration with the Government of Telangana.

Conclusion

3D Printing has revolutionised the manufacturing process. In India, it is in a nascent stage. Implementation of National Strategy for Additive Manufacturing in letter and spirit will decide its future. Private sector needs to shift towards it as it has multiple benefits over traditional methods.

BRIEF BACKGROUND

About Agnibaan SOrTeD

- ▶ Rocket Agnibaan SOrTeD (SubOrbital Technological Demonstrator) is India's first semi-cryogenic engine-powered rocket launch flight.
- ▶ Launched from India's first privately developed launchpad called 'Dhanush' established by Agnikul at Sriharikota in Andhra Pradesh.

About Semi-Cryogenic Engine (SCE)

- ▶ Agnilet (engine of Agnibaan rocket) utilizes a propellant **combination of Liquid Oxygen (LOX) and Kerosene**.
- ▶ SCE uses a fuel that is **storable at higher temperatures compared to cryogenic engines**, which makes handling and storage simpler while offering high performance.

Applications of 3D Printing

Aerospace & Defence: Landing gears, thrust reverser doors, small surveillance drones etc.	Automotive: Engine components, gear boxes, air inlet, etc
Electronics: Wearable devices, soft robots, RFID (Radio Frequency Identification) devices, etc.	Healthcare: Surgical Models (Organs), Surgical Instruments (medical) etc.

7.2.3. Submarine Cable System (SMC)



CONTEXT

An incident in the Red Sea has resulted in damage to three submarine cables-Asia-Africa-Europe-1, Europe India Gateway, and Tata Global Network.

ANALYSIS



About SMCs

- ▶ **Fibre optic cables** laid on the ocean floor that connect countries across the world to provide internet and telecommunications.
- ▶ **Significance:**
 - ▶ International cables carry around **99% of the world's international Internet traffic**.
 - ▶ **United Nations General Assembly (UNGA)** in 2010 described SMCs as a "critical communication infrastructure".
- ▶ **Other threats to SMCs:** Fishing and anchoring, earthquakes, Damage by marine animals, etc.

SMC connectivity in India

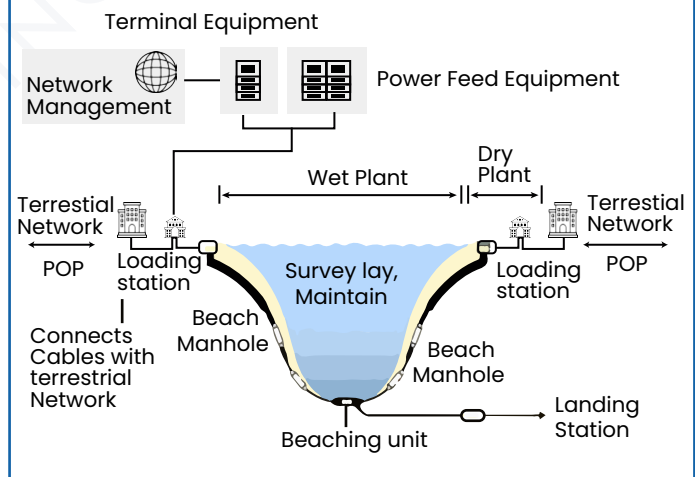
- ▶ India has **17 International SMCs**, landing at **14 Cable Landing Stations (CLS)** in 5 cities near the coast.
- ▶ **Mumbai and Chennai** have the maximum concentration of SMCs.
- ▶ **India also has domestic submarine cables such as:**
 - ▶ **Chennai-Andaman and Nicobar Island Cable (CANI)** connecting Port Blair along with seven other Islands of Andaman & Nicobar
 - ▶ **The Kochi-Lakshadweep Island (KLI) cable system** for a direct communication link between Kochi and 11 Islands of Lakshadweep.
- ▶ **Regulation: Department of Telecommunications (DoT)** issues **International Long-Distance (ILD) licenses**.
 - ▶ ILD licensees, with prior approval of DoT, are authorized to set up their CLS and to lay submarine cables in India.
 - ▶ Internet Service Licensees under Unified license is also allowed to install operate and commission International Internet Gateway using submarine cable as medium.

BRIEF BACKGROUND

About Optical Fibre

- ▶ **Optical fibres** are made of glass or plastic those are used to transmit **information as light pulses**.
- ▶ Mechanism is based on a principle called **Total Internal Reflection (TIR)**.
 - ▶ As per TIR, light in a fibre-optic cable travels through the core (hallway) by constantly bouncing from the cladding (mirror-lined walls).
- ▶ Cables enable the **transmission of huge amounts of data rapidly from one point to another** without a significant loss of optical power.
- ▶ **Dr. Narinder Singh Kapany**, a U.K. based scientist (born in India) is known as the father of Optics.

Submarine Communication Cable System and It's Components



7.3. SPACE TECHNOLOGY

7.3.1. Higgs Boson



CONTEXT

Nobel Laureate Physicist Peter Higgs passed away recently.

ANALYSIS



About Peter Higgs

- ▶ Peter Higgs proposed the Higgs field in 1964 as a new field that fills the entire Universe and gives mass to all elementary particles.
 - Also, he proposed a new fundamental particle 'Higgs Boson'.
- ▶ Idea was validated in 2012 through a Toroidal LHC Apparatus (ATLAS) and Compact Muon Solenoid (CMS) experiments at the European Organization for Nuclear Research (CERN)'s Large Hadron Collider.
- ▶ Honored with a Nobel Prize in 2013 for this discovery.

Relationship between Higgs Field and Mass of Elementary Particles

- ▶ **Mass from interaction:** Idea of the Higgs field highlights that particles do not have a mass of their own, they get their mass by interacting with the Higgs field.
 - This mass-giving interaction with the Higgs field is known as the Brout-Englert-Higgs mechanism.
- ▶ **Quantity of mass:** The intensity of interaction between the field and the particle decides the quantity of mass of the particle.
 - Photons, for example, do not interact with this field and therefore have no mass.

About Higgs Boson

- ▶ An elementary particle and it is popularly known as the God particle.
- ▶ It is a type of boson, a force-carrying subatomic particle. Other bosons include photons (light, carrying electromagnetic force), gluons (particles that act as force carriers in the nucleus), etc.
- ▶ Gets its mass just like other particles—from its interactions with the Higgs field.
- ▶ **Properties of Higgs Boson:**
 - **Mass:** $125 \text{ GeV}/c^2$, about 130 times the mass of a proton.
 - ◊ Also interact with other Higgs boson (this property helped in knowing that mass of Higg's Boson is greater than that of protons or neutrons).
 - **Spin:** Scalar particle and has '0' spin. Only elementary particle with no spin.
 - **Lifetime:** Very short and it rapidly decays into other particles after it is produced in high-energy collisions.
 - **Detection:** Detected indirectly by observing the particles it decays into.
 - ◊ It normally decays into pairs of photons or pairs of W or Z bosons

BRIEF BACKGROUND

About Elementary Particles (Fundamental Particles)

- ▶ Elementary particles are the smallest known building blocks of the universe.
- ▶ These particles join together to create the more well-known particles, such as the neutron and the proton.
- ▶ E.g. Protons are made from two up quarks and a down quark.

Large Hadron Collider (LHC)

- ▶ World's largest and most powerful particle accelerator, set up in 2008 at CERN near Geneva.
- ▶ **Objective:** Understand the fundamental structure of matter by re-creating the extreme conditions that occurred in the first few moments of the universe according to the big-bang model.

European Organization for Nuclear Research (CERN), 1954

- ▶ Researchers at CERN are probing fundamental structure of the universe and study basic constituents of matter the fundamental particle.
- ▶ Consists of 23 members (India is an associate member)
- ▶ Recently, launched the White Rabbit Collaboration (WRC)
 - WR technology provides sub-nanosecond accuracy and picosecond precision of synchronisation for the LHC accelerator chain.
- ▶ **Key Achievements:** Higgs Boson, W Boson, Z Boson, etc.

► **Importance/Relevance:**

- The Higgs bosons have **confirmed the predictions of the standard model of particle physics.**
 - ◊ Also, recent evidence of its decay can provide indirect evidence of the existence of **particles beyond those predicted by the Standard Model.**
- It can be a unique portal to finding signs of **dark matter** due to its **distinctive characteristics** and properties.

7.3.2. Ghost Particles



CONTEXT

Scientists at **Ice Cube Neutrino Observatory in Antarctica** have detected seven tau neutrinos (ghost particles), which passed through the Earth.

ANALYSIS



What are Neutrinos/Ghost Particles?

- **About:** Subatomic particles with **no electrical charge and negligible mass.**
 - High-energy neutrinos which are released from **cosmic sources at the Milky Way's edge** are known as **"astrophysical neutrinos"**.
 - Also known as Ghost Particles because nearly 100 trillion of neutrinos pass through the human body every second without us noticing.
- **Classification:** Under the **Standard Model of particle physics**, they're classified as a **"lepton."**
- **3 types or flavours:** Electron, muon, and tau
- **Possible sources of high-energy neutrinos:** Events like supernovas and objects like active galactic nuclei and black holes.
 - **Sun's nuclear reactions, particle decay in Earth, Beta decay, particle accelerators and nuclear power plants** all release neutrinos.
- **Properties of neutrinos:**
 - Travel at **nearly the speed of light.**
 - Neither get deflected by magnetic fields, nor scattered or easily absorbed. Thus, are very difficult to detect.
 - Travel in **straight lines** from their source.
 - Most abundant particles that have mass in the universe.
- **Excellent messengers of information** about the objects or events in which they originate.

Note: It is **different from the 'God Particle' or Higgs boson.**

Significance of studying neutrinos

- **Understanding universe's evolution:** Provide insights into the **early stages of the universe.**
- **Better understanding of dark matter and dark energy:** 95% of our universe is comprised of dark matter (27%) and dark energy (68%).
- **Study the structure of nucleons:** Explain how matter evolved from simple particles into more complex ones.
- **Neutrinos emitted from stars:** Helps to understand the interior of stars, including the sun, and discover new planets.
- **Monitoring of nuclear proliferation:** The process of fission inside of the nuclear reactor or from nuclear explosions leads to the birth of neutrinos through beta decay.
 - E.g., **U.S.-U.K. collaboration- WATCHMAN** aims to demonstrate remote monitoring of nuclear reactors using neutrinos.

BRIEF BACKGROUND

About Ice Cube Observatory

- **Aim:** Observe cosmic rays that interact with the Earth's atmosphere and study the nature of dark matter and the properties of the neutrino.
- **Location:** Near the **Amundsen-Scott South Pole Station in Antarctica.**
- **Other Major Neutrino Observatories**
 - **Indian Neutrino Observatory (INO)**, aimed at building underground laboratory for studying neutrinos.
 - ◊ Jointly funded by **Department of Atomic Energy and the Department of Science and Technology.**
 - ◊ **Location:** Bodi West hills of **Theni District of Tamil Nadu.**
 - **China's TRIDENT (Tropical Deep-sea Neutrino Telescope)**

The Standard Model of Particle Physics

- **Describe the most basic building blocks of the universe.**
 - Explains how particles called **quarks** (which make up protons and neutrons) and **leptons** (which include electrons) make up all known matter.
 - Also explains how **force carrying particles (bosons)** influence the quarks and leptons.
- Also, **explains three of the four fundamental forces** that govern the universe: electromagnetism, the strong force, and the weak force.

7.3.3. Space Debris



CONTEXT

Indian Space Research Organization (ISRO) released the **Indian Space Situational Assessment Report (ISSAR) for 2023** which highlighted the issue of Space debris.

ANALYSIS



About Space Debris

- ▶ Defined as all **non-functional, artificial objects**, including fragments and elements thereof, **in Earth orbit** or re-entering into Earth's atmosphere.
- ▶ Majority of debris objects originate from **on-orbit break-ups** as well as on-orbit collisions.
 - Also, originates from defunct satellites, missing equipment, etc.
- ▶ **Kessler syndrome** is a phenomenon in which the density of objects in the Low Earth Orbit grows leads to collision, triggering a chain reaction that generates more space debris and further collisions.

Concerns/Risks associated with Space Debris

- ▶ **Operational risks:** Debris can completely destroy the **spacecraft**, thus ending its operation, and generating thousands of debris fragments.
- ▶ **Threat to astronauts' lives:** Current and future space-based explorations and operations pose a safety risk to astronauts.
- ▶ **Risk to ground population:** Large space debris objects that re-enter the atmosphere in an uncontrolled way can create risk to the population on ground.
- ▶ **Limited natural resource:** Orbits are a limited natural resource and space debris threatens the economically vital orbits.

Initiatives for mitigating Space Debris

- ▶ **Global initiatives and international partnerships**
 - **Inter-Agency Debris Coordination Committee (IADC)**, 1993
 - **UN Space Debris Mitigation Guidelines**, prepared by UN Committee on the Peaceful Uses of Outer Space (UN-COPUOS).
 - **Zero Debris Charter:** Signed by **12 countries** such as Austria, Belgium, Cyprus, etc.
- ▶ **Indian initiatives**
 - **Debris Free Space Missions (DFSM) 2030**
 - **IS4OM** is operational since 2022 to safeguard ISRO's space assets
 - **Other: Space Situational Awareness Control Centre (SSACC), Project Network for Space Object Tracking and Analysis (NETRA)** etc.

Way Forward

- ▶ **Minimize generation:** Avoid debris generation during operational life of satellites and launch vehicles through regulatory action or international agreements.
- ▶ **Guarantee successful disposal:** Ensure the safe disposal of space objects through atmospheric reentry or re-orbiting to a safe altitude.
- ▶ **Avoid internal break-ups:** Satellite health monitoring must be improved, and robust passivation techniques implemented to prevent satellites breaking up from within.
- ▶ **Active Debris Removal (ADR):** Harpoons, magnets, lasers, and slingshots are being explored as possible ways to capture space junk and bring it down to LEO.

BRIEF BACKGROUND

About Space Situational Awareness (SSA)

- ▶ SSA is the knowledge, characterization, and practice of **tracking space objects and their operational environment** (mainly orbits).
 - In order to **enable Collision Avoidance Maneuvers (CAM)**, space operators can use **SSA data**.
 - Compiled by **ISRO System for Safe and Sustainable Space Operations Management (IS4OM)**

7.3.4. Solar Storm (Geomagnetic Storm)



CONTEXT

Recently, Earth witnessed G5 level of solar storm, the strongest in two decades and possibly one of the strongest displays of auroras in past 500 years.

ANALYSIS



What are Solar Storms?

- ▶ **Solar storms** are like massive bursts of energy from the Sun.
 - They happen when a large eruption on the Sun's surface, often accompanied by **solar flares** and **coronal mass ejections (CMEs)**, accelerates charged particles to incredibly high speeds.
 - ◊ **Solar Flare** is an intense burst of radiation, while CMEs are huge **cloud of plasma (hot, ionized gas)** and magnetic fields ejected from the Sun near Sunspots.
- ▶ Depending on the intensity, they are classified from G1 (Minor) to G5 (extreme).
- ▶ **These are high speed solar winds** bring **geomagnetic storms**.
- ▶ These are a result of Sun entering a **period of peak activity** called **Solar Maximum**.

Implications of solar storms

- ▶ **Damage to space infrastructure:** Penetrate the materials of spacecraft and potentially damage them.
- ▶ **Damage to ground assets:** such as power grids and can also interfere in radio communications.
- ▶ **Dangers to satellites:** Intense space weather causes changes in Earth's atmosphere and making it difficult for satellite to stay on track.
- ▶ **Auroras:** An aurora (northern or southern light) is caused when charged particles from the Sun, mainly electrons and protons, interact with the upper atmosphere.
- ▶ **Other:** Negative impact on Astronauts, etc.

BRIEF BACKGROUND

About Sun's Activity Cycle

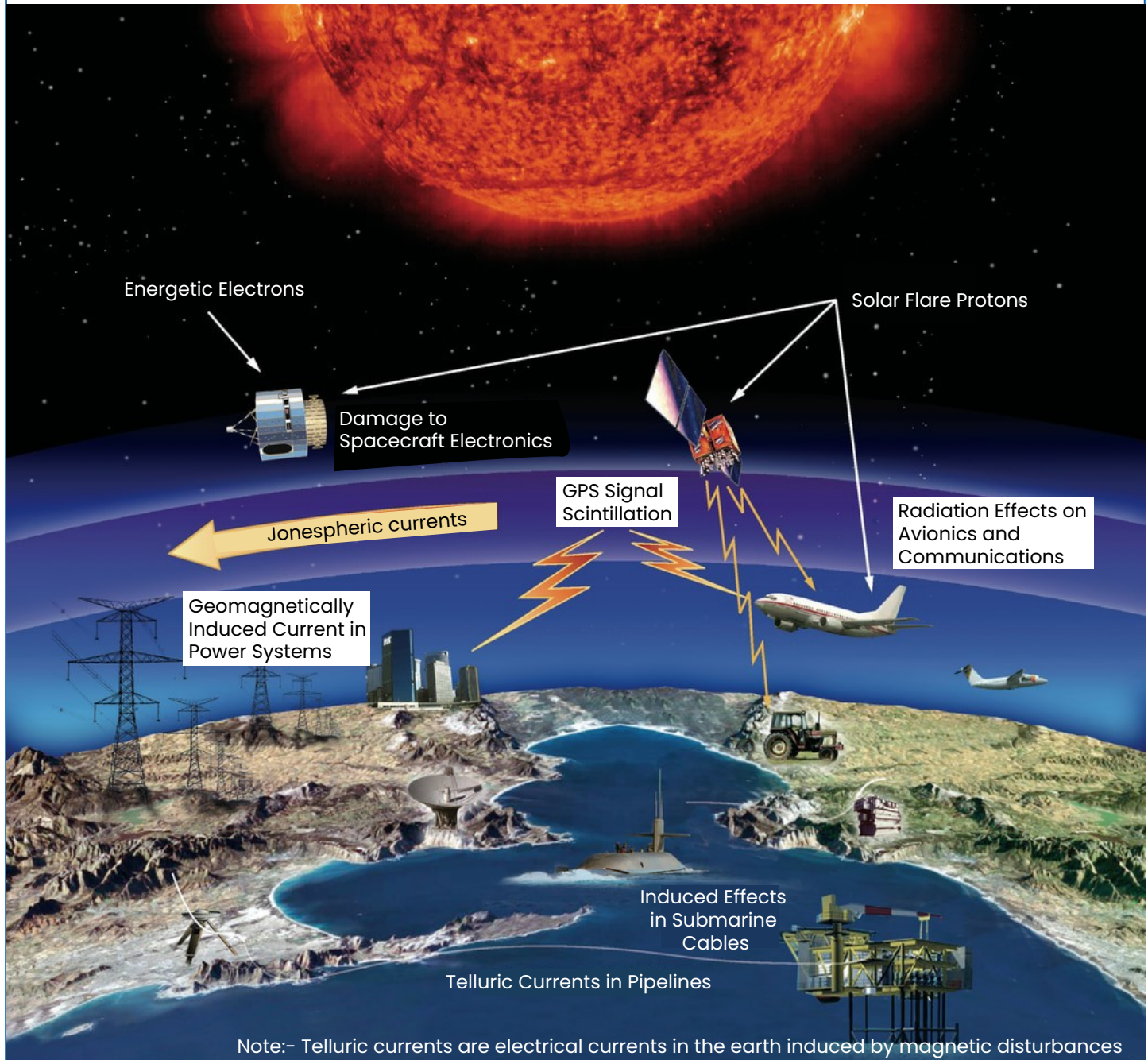
- ▶ The Sun goes through cycles of activity, with **periods of high and low activity**.
- ▶ **These cycles last about 11 years**, and during the peak of the cycle, called the **solar maximum**, there are frequent solar storms and increased instances of **sunspots** (cooler regions on the Sun's surface)
 - This is because the **Sun's magnetic fields** are more complex and twisted during this phase, leading to more eruptions and ejections of charged particles.

Key Missions to study solar activity

- ▶ **Aditya L-1 (India), 2023**, India's first space mission dedicated to observing the Sun.
- ▶ **Parker Solar Probe (NASA), 2021**, first to fly through the Sun's outer atmosphere, the corona.
- ▶ **Solar Orbiter (NASA/ESA), 2020**
- ▶ **Solar and Heliospheric Observatory (NASA/ESA/JAXA), 1995**



Implications of solar storms



Current Affairs Quarterly Revision (March to May 2024)



7.3.5. Space Tourism



CONTEXT

Space startup Blue Origin has announced that Gopi Thotakura will be part of its New Shepard's 25th Mission (NS-25 mission).

ANALYSIS



What is Space Tourism?

Space tourism is the commercial practice of sending **private individuals to space for recreational, adventure, or leisure purposes.**

- ▶ At present, it is in a **nascent stage**. Companies like Virgin Galactic, SpaceX are making efforts to promote space tourism.
- ▶ **Types:**
 - ▶ **Suborbital:** Passengers are taken between 50 and 70 miles above Earth (crossing the **Kármán line** and back).
 - ▶ **Orbital:** Passengers are taken significantly above the Kármán line. Passengers may spend several days or weeks in the space.
 - ▶ **Other:** Lunar Space Tourism, Interplanetary Tourism etc.
- ▶ **India:** Currently, there is not much endeavour on space tourism in India.

Challenges associated with Space Tourism

- ▶ **High Costs:** Currently, the cost of flights is quite high.
 - ▶ It requires **building specific spacecraft** to provide adequate facilities to the passengers ranging from food to medical services.
- ▶ **Limited Market Demand:** Potential market comprises mainly of wealthy individuals willing to pay a high price for a **once-in-a-lifetime experience.**
- ▶ **Safety Concern:** Involves complex technological set-up and mechanism, the risk of **failure and explosion is quite high during launch and re-entry.**
- ▶ **Lack of Regulation:** Currently, there is **no specific treaty** to deal with issues related to space tourism.
- ▶ **Space Debris:** Space debris will increase due to potential collision of rockets with satellites. It can aggravate the **Kessler syndrome.**

Way Forward

To encourage the development of Space Tourism, several steps would have to be taken from developing a global standard (like the **Outer Space Treaty (1967)**) to ironing out passenger challenges such as safety and application of rights. Additionally, research should be encouraged towards sustainable technology, in order minimize the environmental impact of Space Tourism and the issue of Space debris.

BRIEF BACKGROUND

Initiatives which could pave way for Space Tourism in India

- ▶ **Space Policy 2023:** allows private players into the sector and is expected to give academia, startups and the industry a fillip in the Space Sector.
- ▶ **Indian National Space Promotion and Authorization Centre (IN-SPACe):** It is an autonomous agency under the Department of Space (DoS).
- ▶ **Indian Space Association (ISPA):** Established in 2020 an apex non-profit industry body, setup for development of the private space industry in India.

About Kármán line

- ▶ It is a boundary 62 miles (100 kilometers) above mean sea level that borders Earth's atmosphere and the beginning of space.

Advantages of the Space Tourism



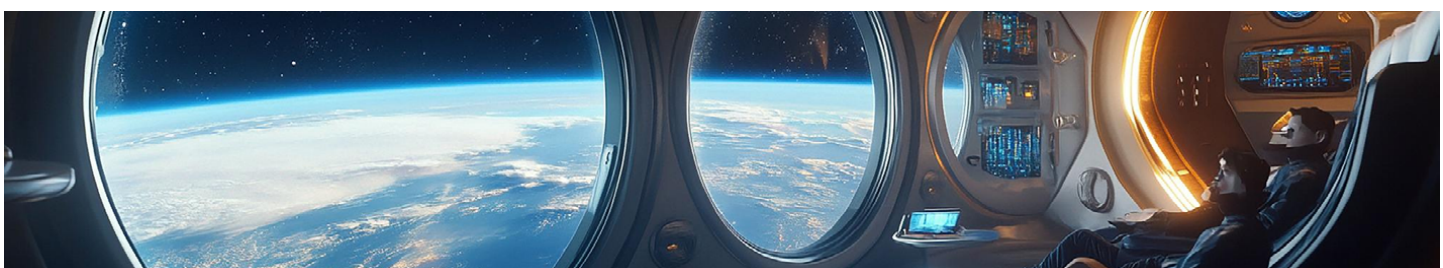
Promoting Space Infrastructure Development



Technological Advancement
(Improving Spacecraft and Rocketry)



Promoting International Collaboration



7.4. HEALTH

7.4.1. Tuberculosis (TB)



CONTEXT

Union Ministry of Health and Family Welfare released **India TB Report 2024**.

ANALYSIS



Key Findings of the Report

- ▶ **Notified Tuberculosis (TB) patients:** 25.52 lakh TB patients in 2023 (increase from 24.22 lakh cases in 2022).
- ▶ **Achievements:**
 - **Target of initiating treatment in 95% of patients** diagnosed with the infection was achieved in 2023.
 - **Reduction in mortality:** 18% in comparison to 2015

About Tuberculosis

- ▶ An infectious disease caused by bacillus **Mycobacterium tuberculosis bacteria** which most often **affects lungs** and is known as **pulmonary TB**.
 - **Extrapulmonary TB** affects **other areas of the body**. (e.g. gastrointestinal TB, skeletal TB)
- ▶ **Transmission:** By air when an infected person coughs, speaks, laughs, sings, or sneezes.
- ▶ **Common symptoms:** Prolonged cough (sometimes with blood), chest pain, weakness, fatigue, etc.
- ▶ **Tests for Identification:** Xpert MTB, RIF Ultra and Truenat assays.
- ▶ **Treatment:** Preventable and curable.
 - Most common medications include **isoniazid, rifampin, ethambutol**, etc.
 - **Bacillus Calmette-Guerin (BCG)** vaccine is also available for its prevention.
- ▶ **Drug-Resistant TB** are Tuberculosis that doesn't respond to standard drugs.

Challenges in eradication of TB in India

- ▶ **Social Stigma and Taboo:** Leads to delayed diagnosis and social isolation of patients.
- ▶ **Poor Healthcare Infrastructure:** E.g., lack of diagnostic facilities in rural areas
- ▶ **Poverty and Malnutrition:** Weakens immune system, increases transmission risk, etc.
- ▶ **Comorbidities (with HIV, diabetes):** Increases vulnerability of patients
- ▶ **High Treatment Costs:** in private hospitals and in cases of Drug Resistant-TB
- ▶ **High- dropout rates:** Due to migration, absences of regular follow up etc.

Way Forward

- ▶ **Enable Early Detection** by increasing the use of **chest X-ray**, **strengthening of referral networks** for better screening of patients.
- ▶ **Long-term and sustained treatment** should be ensured by regular follow-ups.
- ▶ **Nutritional Support to patients** (E.g. a 2023 Lancet study found that nutritional support in a 'RATIONS' trial in Jharkhand reduced the risk of death in lung TB patients).
- ▶ **Decentralizing TB service delivery** to the level of "Ayushman Arogya Mandirs".
 - E.g., TB-WIN platform was launched in India for registration of the Adult BCG Vaccination beneficiaries.
- ▶ **Increase Investment** can lead to **better outcomes**.
 - As per WHO study, for every dollar spent on screening of TB, there is potential benefit of \$39.

BRIEF BACKGROUND

Types of Drug-Resistant TB

- ▶ **Multidrug Resistance TB (MDR):** Resistant to at least Isoniazid and Rifampicin.
- ▶ **Extensively drug Resistance TB (XDR-TB):** Resistant to Isoniazid and Rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (amikacin, kanamycin, or capreomycin).
- ▶ **Totally drug-resistant TB (TDR-TB):** Resistant to all first- and second-line TB drugs.

Initiative Taken



India's Initiatives

- ▶ **The National Tuberculosis Elimination Programme (NTEP):** Aims to reduce TB burden by 2025, five years ahead of global target of 2030.
- ▶ **Pradhan Mantri TB Mukh Bharat Abhiyan:** Provides additional patient support, **augment community involvement** and leverage **Corporate Social Responsibility (CSR)** activities.
- ▶ **Nikshay Poshan Yojana:** Provides **financial incentive of Rs 500** for TB patients registered on Nikshay Portal.
- ▶ **Mission Indradhanush:** BCG vaccine is provided under the mission.
- ▶ **Other:** National TB Call Centre – Ni-kshay SAMPARK, TB Mukh Panchayat Initiative, **Tribal TB Initiative etc.**



WHO Initiative

- ▶ **#ENDTB Strategy** with goals of-
 - ▶ 95% reduction by 2035 in number of TB deaths compared with 2015.
 - ▶ 90% reduction by 2035 in **TB incidence** rate compared with 2015.
 - ▶ Zero TB-affected families facing **catastrophic costs** due to TB by 2035.
- ▶ **TB vaccine accelerator Council:** To facilitate the development, testing, authorization, and use of new TB vaccines.

7.4.2. Cervical Cancer



CONTEXT

First ever **Global Cervical Cancer Elimination Forum** took place in Colombia, recently.

ANALYSIS



About Cervical Cancer

- ▶ Cancer is a disease in which **cells in the body grow out of control**. When cancer starts in the cervix, it is called cervical cancer.
 - ▶ The cervix **connects the vagina (birth canal) to the upper part of the uterus** (or womb where a baby grows during pregnancy).
- ▶ Occurs **most often in women over age 30** and is the **fourth most common cancer** in women globally.
 - ▶ It is the **second most common cancer among females in India**.
- ▶ Main cause of cervical cancer is the **persistent infection with the human papillomavirus (HPV)**.

About HPV

- ▶ A **common sexually transmitted infection** which can affect the skin, genital area and throat.
- ▶ In **most cases** the immune system clears HPV from the body.
- ▶ **Persistent infection with high-risk HPV** can cause abnormal cells to develop, which go on to become cancer.

BRIEF BACKGROUND

About HPV Types

- ▶ HPV is a **group of more than 200 related viruses** and fall into two groups: **low risk and high risk**.
- ▶ **Low-risk HPVs** rarely cause cancer.
- ▶ **High-risk HPVs** can cause several types of cancer including anal, cervical, oropharyngeal, penile, vagina and vulvar cancer.
- ▶ There are **12 high-risk HPV** types. Two of these, **HPV 16 and HPV 18**, are responsible for most HPV-related cancers.

About Cervavac

- ▶ It is the **first indigenous vaccine** against cervical cancer in India, developed and manufactured by Serum Institute of India.

HPV vaccination and other prevention steps

- ▶ There are 6 HPV vaccines available globally. All protect against the high-risk HPV 16 and 18, which cause most cervical cancers.
- ▶ HPV vaccines (1 or 2 doses) should be given to all girls aged 9–14 years.
- ▶ Screening, every 5-10 years, from the age of 30 (25 years in women living with HIV) can detect cervical disease, which when treated, also prevents cervical cancer.
- ▶ Early detection followed by prompt quality treatment. There is no treatment for the virus itself. However, there are treatments for the health problems that HPV can cause like Cervical Cancer.

Initiatives for prevention

- ▶ Cervical Cancer Elimination Initiative (by World Health Organization): WHO has outlined the '90-70-90' targets for each country by 2030-
 - Vaccination: 90% of girls fully vaccinated with the HPV vaccine by the age of 15;
 - Screening: 70% of women screened by the age of 35, and again by the age of 45;
 - Treatment: 90% of women with pre-cancer treated and 90% of women with invasive cancer managed.
- ▶ Vaccination to prevent Cervical Cancer: Union Government in India proposed it in Interim Budget 2024-25. The programme will be for girls in the age group of 9 to 14 years for prevention of cervical cancer.

7.4.3. Glycemic Index



CONTEXT




A recent scientific study has revealed the relationship between the Glycemic Index in food to the risk of Type II diabetes and cardiovascular diseases.

ANALYSIS



About Glycemic Index (GI)

- ▶ Definition: A measure of how quickly a carbohydrate-containing food raises blood sugar levels after it is consumed.
 - Index ranks the carbohydrate-rich foods on a scale of 0 to 100 based on their ability to raise blood sugar levels as compared to pure glucose (which has a GI of 100).
- ▶ Proposed by: Prof. David Jenkins
- ▶ Factors that determine GI:
 - Internal factors: Amylose, lipids, protein, phytic acid, dietary fibre, resistant Starch etc.
 - External factors: Cooking, processing, retro-gradation, soaking and germination.

GI Index	Examples
 High (>70)	Wheat, White rice, potatoes, white bread etc.
 Medium (56-69)	Orange juice, honey, and wholemeal bread etc.
 Low (<55)	Fruits, Non Starchy vegetables (Carrots, Spinach, Tomatoes etc.), Whole Grains, Legumes etc.

About Glycemic Load (GL)

- ▶ Glycemic Load (GL): Uses GI and the amount of total Carbohydrates in a serving of a specific food to estimate how quickly and how much blood sugar will rise after its consumption.
- ▶ Calculation: The GL of a food, is obtained by multiplying the quality of carbohydrate in a given food (GI) by the amount of carbohydrate in a serving.

Link between GI and Human Health

- ▶ Complications for people with diabetes: High GI foods cause rapid fluctuations in blood sugar levels, which may strain the body's ability to produce insulin or utilize it effectively.
 - Focus on low-GI foods can improve blood sugar control and overall diabetes management.
- ▶ Issues to Cardio Vascular Health: Diets rich in GI lead to weight gain, higher triglyceride levels and blood pressure in the body thereby making the individual susceptible to Cardiovascular complications in the long run.

7.4.4. Magnetic resonance imaging (MRI) Technology



CONTEXT

'Iseult' the World's most powerful MRI scans the first images of the human brain.

ANALYSIS



About Magnetic resonance imaging (MRI) Technology

- ▶ MRI is **non-invasive medical imaging test** that produces detailed images of almost every internal structure in human body.
- ▶ Magnetic field inside **works with radio waves and hydrogen atoms** in body to create cross-sectional images.
- ▶ **Applications:**
 - Images produced by an MRI scan can show **organs, bones, muscles and blood vessels.**
 - ◊ Used in **medical diagnosis and treatment planning** for brain disorders, cardiovascular diseases, cancer, etc.
 - **Functional MRI (fMRI)**, a special type of MRI **produces images of blood flow to certain areas of brain which help in brain surgery.**
- ▶ **Advantages over other technique:**
 - MRI images provide **better detail than** any other imaging technique. Since they create a 3D image of the area being studied, they offer more information than X-rays or ultrasounds.
 - MRI machine **uses magnets and radio waves**, unlike X-rays, CT scans, or PET scans, which all utilize radiation.

BRIEF BACKGROUND

About Iseult

- ▶ Iseult' can help refine our understanding of **anatomy of brain.**
- ▶ It could also shed light on diseases like **Alzheimer's** or psychological conditions like **depression or schizophrenia.**
- ▶ Iseult has **power of 11.7 teslas** which enables it to **scan images with 10 times more precision** than commonly used MRIs.

FAST TRACK COURSE 2025

GENERAL STUDIES PRELIMS

PURPOSE OF THIS COURSE

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

INCLUDES

- Access to recorded live classes at your personal student platform.
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- Access to PT 365 classes
- Sectional mini test and Comprehensive Current Affairs.

ENGLISH MEDIUM
19 NOV, 1 PM

हिन्दी माध्यम
21 NOV, 6 PM

Art & Culture

Geography

Polity

Indian History

International Relations

Science and Technology

Environment

Economics

7.5. MISCELLANEOUS

7.5.1. Fast Breeder Reactor



CONTEXT

Atomic Energy Regulatory Board (AERB) has granted permission for the “First Approach to Criticality” of the 500 MWe Indigenous Prototype Fast Breeder Reactor (PFBR) at Kalpakkam, Tamil Nadu.

ANALYSIS



What is Fast Breeder Reactor (FBR)?

- ▶ A nuclear reactor that uses fast neutron to **generate more nuclear fuel than they consume** while generating power.
- ▶ Uses **Uranium-Plutonium Mixed Oxide (MOX)** fuel.
- ▶ **Uranium-238 blanket** surrounding the fuel core will undergo nuclear transmutation (conversion of one element to another) to **produce more fuel**, which is why they are termed **breeders**.

Significance of FBR

- ▶ **Beginning of Stage 2 of nuclear programme:** The operationalisation of PFBR will mark the start of stage II of India’s three-stage nuclear power programme.
- ▶ **Paves way for third stage:** In FBR, Thorium-232 (Th-232) will also be used as blanket.
 - By **transmutation**, Thorium will create fissile U-233 which will be used as fuel in the third stage.
- ▶ **Technological advancement:** Once commissioned, India will be **second country after Russia** to have a commercial operating FBR.
- ▶ **Reduced waste:** As FBR uses the **spent fuel from the first stage**, it will also lead to significant reduction in nuclear waste, thereby avoiding the need for large geological disposal facilities.

BRIEF BACKGROUND

About Indigenous PFBR

- ▶ PFBR has been **designed and constructed indigenously by Bharatiya Nabhikiya Vidyut Nigam Ltd or BHAVINI** with significant contribution from more than 200 Indian industries.

About Core Loading

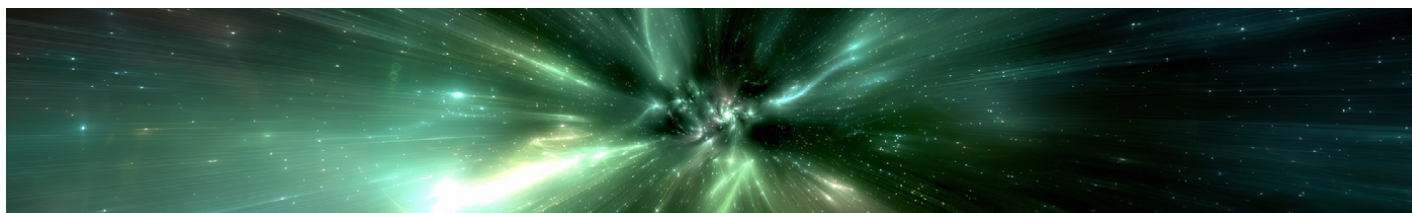
- ▶ **Core loading** is the process of **placing nuclear fuel assemblies inside the core** of a nuclear reactor.
- ▶ Completion of core loading will effectively mark the **first approach to ‘criticality’**.
 - Criticality means the initiation of a **self-sustaining nuclear fission reaction** that will eventually lead to the generation of power.

Thorium reserves in India

- ▶ Department of Atomic Energy (DAE) has so far established more than **11 million tonnes of in situ resources Monazite** (Thorium bearing mineral).
- ▶ These are found in beach and river sands in **Kerala, Tamil Nadu, Odisha, Andhra Pradesh, West Bengal, Jharkhand etc.**

India’s 3 stage Nuclear Power Program

- ▶ India holds only **about 2-3% of the world’s uranium reserves**, but it possesses **25% of world’s thorium reserves**.
- ▶ **Dr Homi J Bhabha, father of India’s nuclear program**, therefore, devised a **three-stage nuclear power program in 1950s** to make the most of India’s limited uranium reserves and abundant thorium reserves.
- ▶ The **three stages** are:
 1. Natural uranium fuelled Pressurized Heavy Water Reactors (PHWRs)
 2. FBRs utilizing plutonium-based fuel
 3. Advanced nuclear power systems for utilization of thorium



7.5.2. AgriTech



CONTEXT

World Economic Forum (WEF) in partnership with PwC India released a report titled "Agritech: Shaping Agriculture in Emerging Economies, Today and Tomorrow".

ANALYSIS



What is Agri-Tech?

- ▶ Refers to the use of technological innovations in agriculture to increase its **yield, efficiency, and profitability**.
- ▶ Employs **advanced technologies**, such as AI, IoT (Internet of Things), biotechnology etc.

Role of Agri-Tech in Agriculture Ecosystem

- ▶ **Smart farming or Precision farming:** Uses technologies to improve **efficiency in farm operations**. E.g., AI and Augmented Reality (AR) for crop planning, etc.
- ▶ **Farmgate-to-fork:** Addresses underlying issues such as a lack of **quality standards, crop loss between farm and market**, etc.
 - ▶ E.g., **Traceability using blockchain, smart logistics** and more.
- ▶ **Data governance:** For instance, **Digital public infrastructure (DPI)** in agriculture is a critical enabler of agritech services in emerging economies.

Challenges in Agritech adoption

- ▶ **Infrastructural Barriers:** Rural areas often face inadequate network coverage and slow internet speeds.
- ▶ **Resource Constraints:** A substantial number of farmers in rural India operate on small landholdings and have limited financial resources.
- ▶ **Other: Resistance to Change, Job loss** (due to automation), etc.

BRIEF BACKGROUND

Initiatives taken by India in AgriTech

- ▶ **Promotion of Agri-Startups:**
 - ▶ **Innovation and Agri-Entrepreneurship Development programme:** under Rashtriya Krishi Vikas Yojana (RKVY).
 - ▶ **Agriculture Accelerator Fund:** Govt. has approved a fund of **Rs. 500 crore** for five years commencing from 2023-24.
- ▶ **Agri Stack:** Designed to facilitate the delivery of **agritech and other digital services** to farmers.
- ▶ **Other:** Agricultural Data Exchange (ADeX), Digital Agriculture Mission (DAM), 2021, Agricultural Technology Management Agency (ATMA) Scheme etc.

Potential impact of AgriTech impact on Environment



Positive

- ▶ **Precision farming** lowers waste and **greenhouse gas emissions**.
- ▶ **Precision feeding**, genetic selection, and manure management can **reduce emissions** from **livestock farming**.
- ▶ **Biotechnology** can be used to develop crop varieties that are more resistant to pests and diseases.



Negative

- ▶ **Genetically modified crops** can pose risks like reduced genetic diversity and adverse impact on health of humans and pollinators.
- ▶ Agri-tech systems often **enable intensive mono-culture** practices which lead to reduced diversity, overuse of water resources etc.

Way Forward

- ▶ **Linking digital and physical channels:** for instance, using an existing channel of farmer **collectives, cooperatives or organized channels** with e-governance agents.
- ▶ **Creating the digital infrastructure for rural information:** Data related to geo-referenced land/soil details, crop production, etc., should be kept in the public domain.
- ▶ **Harness the power of public-private collaboration:** Incentives (financial and non-financial) will encourage the private sector to **invest in scaling agritech** in value chains or geographical regions.

7.5.2.1. Nanotechnology in Agriculture



CONTEXT

Indian Farmers Fertiliser Cooperative Limited (IFFCO) got the Fertiliser (Control) Order (FCO), 1985 approval for Nano Zinc and Nano Copper liquids.

ANALYSIS



About Nanotechnology

- ▶ Involves working with materials and devices at the nanoscale, typically ranging from 1 to 100 nm in size.
- ▶ **Need of Nanotechnology in Indian Agriculture**
 - **Indian agriculture fatigued after the Green Revolution:** Nutrient use efficiency has declined.
 - **Environmental Damage:** E.g., excessive use of subsidized urea deteriorated soil health, etc.
 - **Overcoming other issues in Indian agriculture:** Such as pests and diseases causing substantial crop losses, etc.

Applications of Nanotechnology in Agriculture

- ▶ **Nano fertilizers:** Nano fertilizers are nutrients that are encapsulated within a nanomaterial in order to enable controlled release, and its subsequent slow diffusion into the soil.
 - Enhances nutrient uptake by plants with **90–100% utilization efficiency.**
- ▶ **Nanopesticides:** Delivers active ingredients to pests in a targeted manner, reducing the amount of chemicals needed. E.g., **Nano Silver**
- ▶ **Nanobiosensors:** Monitors soil conditions, crop health, and **provide real-time data to farmers.**
- ▶ **Nanomaterials for Soil Improvement:**
 - **Nanoparticles of clay:** Improves soil structure, water retention, etc.
 - **Remediation:** E.g., **Photocatalysis** uses UV-activated nanoparticles to degrade pollutants efficiently.
- ▶ **Crop Protection:** Applying **silica nanoparticles** to leaves shield plants from high temperatures and intense UV radiation.
- ▶ **Nanotechnology in Crop Breeding:** Aids in the development of genetically modified crops **by enabling precise manipulation of plant genes at the nanoscale.**
- ▶ **Nanotechnology in Food Processing:** **Nanocomposites** can be used to create antimicrobial and oxygen-barrier coatings to reduce spoilage and food waste.

Potential harmful impacts of Nanoparticles

- ▶ **Nanophytotoxicity:** Accumulation of NPs at toxic levels produces negative impacts on growth and development of plant.
- ▶ **Hazardous to humans:** Accumulation of NPs in vital organs by consuming nano based food
- ▶ **Deleterious to soil micro-biota:** Exposure of non-target soil microflora to NPs causes disturbances in their metabolism and stability
- ▶ **Effect on underground waters:** NPs accumulated in soil interacts with groundwaters making them unusable
- ▶ **Toxicity in beehives:** Caused due to continuous exposure of hive with NPs uptaken by bees from plants.

Conclusion

Nanotechnology offers promising applications in agriculture, potentially revolutionizing crop production and management. However, challenges remain, including potential environmental and health risks associated with nanoparticles. Thus, we need to develop regulatory frameworks to ensure the safe and responsible development and use of nanomaterials in agriculture.

BRIEF BACKGROUND

Significance of Zinc and Copper Micronutrients

- ▶ **Zinc:** Enzyme functioning in plants, plant growth and development etc.
- ▶ **Copper:** Enzymatic activities in plants and chlorophyll and seed production

Government Initiatives on Nanotechnology in Agriculture

- ▶ **Mission on Nano Science and Technology (Nano Mission):** Launched in 2007, under the **Department of Science & Technology (DST)**
- ▶ **Guidelines for evaluating nano-agri inputs and products:** Developed by the Department of Biotechnology.
- ▶ **Other: National Agricultural Innovation Project (NAIP), Nano Fertilizer Plant (NFP)** established by IFFCO at Phulpur, Prayagraj

7.5.3. Multiple Independently Targetable Re-entry Vehicle (MIRV) Technology



CONTEXT

DRDO has conducted first successful flight test (named **Mission Divyastra**) of indigenously developed Agni-5 missile with Multiple Independently Targetable Re-Entry Vehicle (MIRV) technology.

ANALYSIS



About MIRV technology

- ▶ **Genesis:** Originally developed in the early 1960s to allow a single missile to carry **multiple nuclear warheads**, each capable of striking different targets independently.
 - ▶ Warheads can be released from the **missile** at different speeds and in different directions.
- ▶ **First country:** The **United States of America** was the first country to develop MIRV technology.
 - ▶ Russia, United Kingdom, France, and China also have MIRV Technology.
 - ▶ In 2017, Pakistan reportedly tested a MIRVed missile.
- ▶ **MIRVs** can be launched from land or sea platforms (with submarine).
 - ▶ The use of MIRVs on submarines is considered less destabilizing than on land-based missiles as nuclear submarines (carrying these missiles) is difficult to locate.
- ▶ Although MIRVs were **not initially intended to defeat ballistic missile defences (BMD)**, they are much more difficult to defend against than traditional missiles and are considered **effective BMD countermeasures**.

Significance of MIRV Technology

- ▶ **Enhanced Deterrence:** Align with India's objective of nuclear doctrine which emphasizes massive retaliation in response to a nuclear first strike.
- ▶ **Accuracy:** Strengthen India's ability to evade any current and future ballistic missile defense (BMD) systems.
- ▶ **Force Modernization:** In the future MIRVs can be installed on India's other ballistic missiles as well.
- ▶ **Regional Balance of Power:** Strengthens India's position vis-à-vis its neighbors (China, Pakistan).

Challenges in MIRV Technology

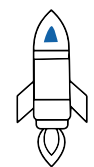
- ▶ **Vulnerable:** Land-based MIRVs are particularly **destabilizing** because many warheads on fewer missiles are vulnerable to attack, incentivizing an adversary to strike first in a time of crisis.
- ▶ **Arm-race:** MIRVs held open the possibility of a damage-limiting first strike against an adversary's strategic nuclear forces, thereby exacerbating both **arms-race and crisis instability**.
- ▶ **Other Challenges:** miniaturization of warheads, development of advanced guidance systems, requirement of additional fissile material like plutonium etc.

BRIEF BACKGROUND

Agni-5 Missile

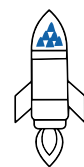
- ▶ **About:** **Surface to Surface** Ballistic Missile indigenously developed by DRDO.
 - ▶ A ballistic missile is a type of missile that uses projectile motion to deliver warheads on a target.
- ▶ **Range:** Greater than 5,000 km
- ▶ **Developed** under **Integrated Guided Missile Development Programme (IGMDP)**
- ▶ **IGMDP** was launched in 1983 headed by Dr. APJ Abdul Kalam to enable India attain self-sufficiency in the field of missile technology.
 - ▶ **The missiles developed under the programme:**
 - ◊ **Prithvi:** Short-range **surface-to-surface** ballistic missile.
 - ◊ **Agni:** Intermediate-range **surface-to-surface** ballistic missile.
 - ◊ **Trishul:** Short-range low-level **surface-to-air** missile.
 - ◊ **Akash:** Medium-range **surface-to-air** missile.
 - ◊ **Nag:** Third generation **anti-tank** missile.

Multiple Independently-Targetable Reentry Vehicles (MIRVs)



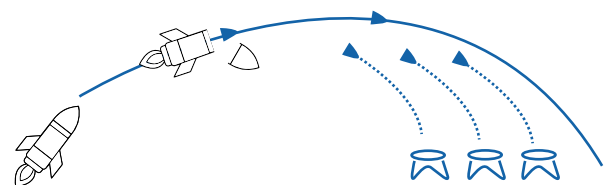
Normal Missile

Re-entry Vehicles carrying nuclear warheads



MIRV Missile

Each re-entry vehicle can be independently targeted launched from one missile, but hitting different targets



7.5.4. Satellite-Based Toll Collection System



CONTEXT

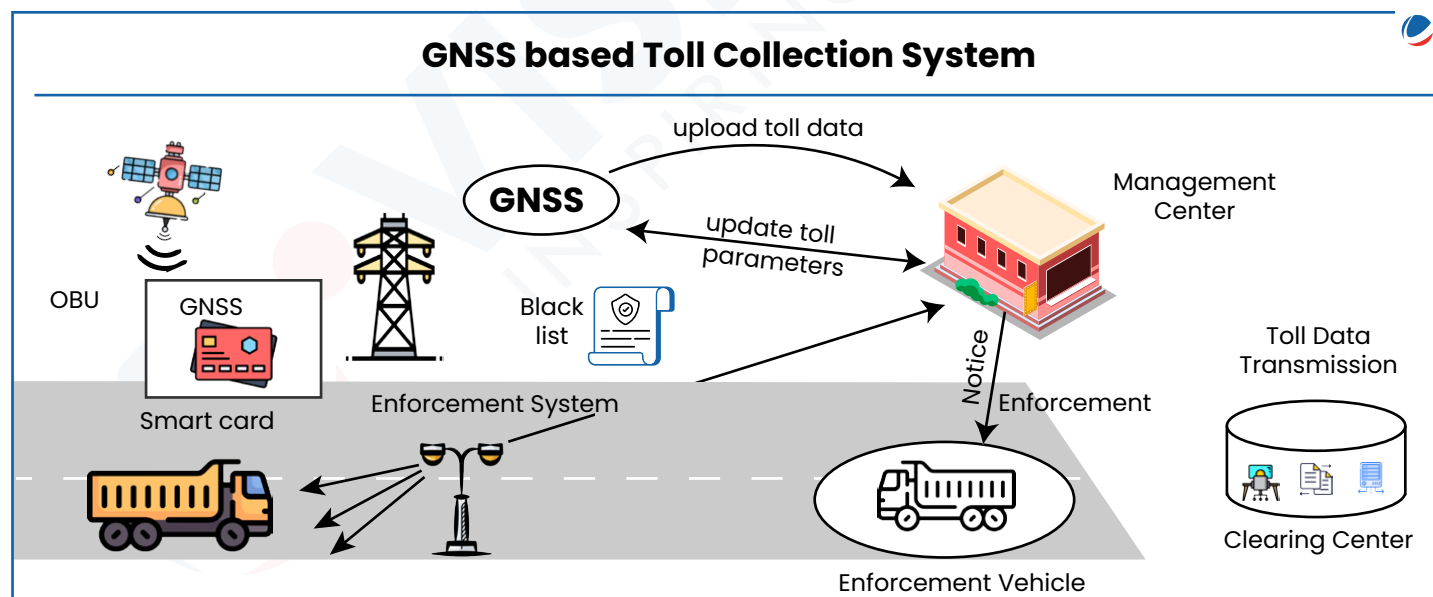
The Ministry of Road Transport and Highways (MoRTH) has amended the National Highways Fee (Determination of Rates and Collection) Rules, 2008 to include provisions relating to Global Navigation Satellite Systems (GNSS)-based electronic toll collection.

ANALYSIS







About GNSS-based toll collection

- ▶ **Working:** Uses satellite-based imaging to track the position of the vehicle and collect tolls based on the distance travelled.
- ▶ **Main components:**
 - ▶ **Online board Unit (OBU):** GNSS-enabled device installed in a vehicle to determine vehicle route and calculate toll.
 - ▶ **Automatic number plate reader (ANPR) cameras:** Installed on the highways to recognize vehicle's number plate and deduct toll money.
 - ◊ ANPR uses **optical character recognition on images** to read vehicle registration plates to create vehicle location data.
- ▶ **Benefits:** Decrease the need for roadside tolling infrastructure; reduce congestion; enhance toll collection effectiveness, etc.
- ▶ **Challenges:** Signal interference or inaccurate readings; Privacy Concerns; need to equip older vehicles with GNSS technology etc.
- ▶ GNSS-based toll systems have already been implemented in countries like **Germany and Singapore**.
- ▶ India has its own **satellite navigation systems**, namely **GAGAN** (GPS-Aided GEO Augmented Navigation) and **NavIC** (Navigation with Indian Constellation).



Difference between FASTags & Satellite-based toll collection

Parameters	FASTags	GNSS-based Toll collection
 Technology	Radio Frequency Identification (RFID)	Satellite-based imaging and Automatic number plate reader (ANPR) cameras
 Equipment needed to be installed in Vehicles	FASTag (RFID Tag) affixed on the windscreen	OBU with GNSS connectivity
 Calculation of Toll tax	Fixed rates	Based on real-time vehicle movement data
 Requirement of Toll Plazas	Physical toll booths required for scanning FASTag	Not required

Current Affairs Quarterly Revision (March to May 2024)



PERSONALITY DEVELOPMENT PROGRAMME

CIVIL SERVICES EXAMINATION - 2024

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7.6. TEST YOUR LEARNING

MCQs

1. If a major solar storm (solar flare) reaches the Earth, which of the following are the possible effects on the Earth? (UPSC, 2022)

1. GPS and navigation systems could fail.
2. Tsunamis could occur at equatorial regions.
3. Power grids could be damaged.
4. Intense auroras could occur over much of the Earth.
5. Forest fires could take place over much of the planet.
6. Orbits of the satellites could be disturbed.
7. Shortwave radio communication of the aircraft flying over polar regions could be interrupted.

Select the correct answer using the code given below:

- a) 1, 2, 4 and 5 only
- b) 2, 3, 5, 6 and 7 only
- c) 1, 3, 4, 6 and 7 only
- d) 1, 2, 3, 4, 5, 6 and 7

2. Which of the following is referred as Ghost Particle?

- a) Graphene
- b) Neutron
- c) Higgs Boson
- d) Uranium

3. Consider the following statements with reference to Genome sequencing:

1. It means determining the exact order of base pairs in a strand of DNA in an individual.
2. It helps in identifying genetic disorders in foetuses.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

4. "3D printing" has applications in which of the following?

1. Preparation of confectionery items
2. Manufacture of bionic ears
3. Automotive industry
4. Reconstructive surgeries
5. Data processing technologies

Select the correct answer using the code given below:

- a) 1, 3 and 4 only
- b) 2, 3 and 5 only
- c) 1 and 4 only
- d) 1, 2, 3, 4 and 5

5. Core Loading and Criticality is sometimes talked about with reference to which one of the following?

- a) Fast Breeder Reactor
- b) Green Hydrogen fuel
- c) Aditya L1
- d)None

Questions

1. Fast Breeder Reactor will revolutionise the India's nuclear energy sector. Elucidate (150 words)
2. What do you understand by nanotechnology and how is it helping in Agriculture sector? (250 words)



CULTURE



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8.1. ARCHITECTURE

8.1.1. Delisting of Monuments



CONTEXT

The Archaeological Survey of India (ASI) intends to delist 18 centrally protected monuments out of 24 “untraceable” monuments.

ANALYSIS



- ▶ These 18 monuments were “untraceable” and it was assessed as lacking national importance.
- ▶ **Untraceable monuments** were protected monuments, under the ASI: location and condition unclear due to urbanization, remote areas, dense forests, etc.
- ▶ **Monuments facing delisting:** Kos Minar No.13 (Haryana), Gunner Burkill’s tomb (Jhansi), Telia Nala ruins (Varanasi).
- ▶ The Kos-minars, erected during reign of Mughal Emperor Jahangir are the earliest known examples of the ‘road milestones’ in the Indian History.
- ▶ **Decision was based on the report** by the Ministry of Culture

Challenges in Protecting the Monuments

- ▶ **Uniform Restrictions:** AMASR Act imposes uniform 100-meter prohibited and 200-meter regulated zones around monuments, regardless of their unique characteristics, leading to potential inadequacies in protection measures.
- ▶ **Coverage Gaps:** Smaller monuments not covered by national or state lists lack legal protection.
- ▶ **ASI’s Limited Powers:** To address encroachment and delay in publishing notifications, affecting protection.
- ▶ **Lacks manpower:** ASI faces staffing and budget constraints, impacting security measures and leaving monuments vulnerable to theft and vandalism.
- ▶ As per 2022 report of Ministry of Culture, **only 248 of the 3693 protected monuments have guards.**

Recommendations:

- ▶ **Case-Specific Determination:** Develop a framework for determining prohibited and regulated areas around monuments on a case-by-case basis to ensure tailored protection measures.
- ▶ **Flexible Appointment Criteria:** Review NMA appointment rules to include professionals from ASI or Ministry of Culture.
- ▶ **Legal Coverage:** Amend the Constitution to include “monuments not of national importance” in the Concurrent List for better conservation by central government.
- ▶ **Empower ASI:** It recommends ministry to prescribe a time-bound limit for ASI to publish the final notification.
- ▶ Also incorporate the provisions of encroachment under the Indian Forest Act, 1927 to deal with encroachment of monuments.

BRIEF BACKGROUND

The Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958

- ▶ Provides for preservation of ancient/historical monuments, archaeological sites, and remains of national importance.
- ▶ Regulates archaeological excavations and protects sculptures, carvings, etc.
- ▶ **Section 4: Empowers Central Government** to declare monuments as National Importance.
- ▶ **National Monuments Authority (NMA)** under the Ministry of Culture established by AMASR (Amendment and Validation) Act, 2010.
- ▶ **Functions of NMA:**
 - Protects and preserves monuments/sites by managing prohibited and regulated areas.
 - Grants permissions for construction in prohibited/regulated areas near centrally protected monuments.

About Archaeological Survey of India (ASI)

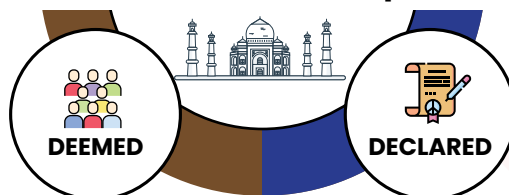


- ▶ **Genesis:** It was founded in 1861 by Alexander Cunningham.
- ▶ **Headquarters:** New Delhi
- ▶ It is a government agency that is responsible for archaeological research and the conservation and preservation of cultural historical monuments in the country.
- ▶ **Ministry:** Ministry of Culture.

About "Delisting" of monument

- ▶ **Delisting** means it will **no longer** receive conservation, protection, and maintenance from the ASI in accordance of Section 35 of AMASR Act, 1958
- ▶ Once delisted, **regular construction and urbanization** activities can take place in the area.
- ▶ It empowers the **Central Government to declare**, whether an ancient and historical monument or **archaeological site and remains have ceased to be of national importance.**
- ▶ There is **no term called "Missing Monuments"** in the AMASR Act and the term only came into existence as it was used by the CAG Audit team on their Report.
- ▶ **Article 49** of the Constitution directs the **state to protect monuments and places and objects of national importance across the country.**

Monuments of National Importance



Under **Section 3** of AMASR Act, it includes **all ancient and historical monuments and archaeological sites and remains** which have been **declared** by the:

- ▶ **Ancient and Historical Monuments and Archaeological Sites and Remains (Declaration of National Importance) Act, 1951**, or
- ▶ **By Section 126 of the States Reorganisation Act, 1956**, to be of **national importance.**

Under **Section 4** of AMASR Act, it includes **any ancient monument or archaeological sites and remains** which is

- ▶ **Declared by the Central Government through notification in the Official Gazette and are not included in section 3 is of national importance.**

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8.2. PERSONALITIES

8.2.1. Mahavir Jain

CONTEXT

Recently, Prime Minister inaugurated the 2550th Bhagwan Mahaveer Nirvan Mahotsav on the occasion of Mahavir Jayanti.

ANALYSIS

Contemporary Relevance of Teachings of Mahavir Jain

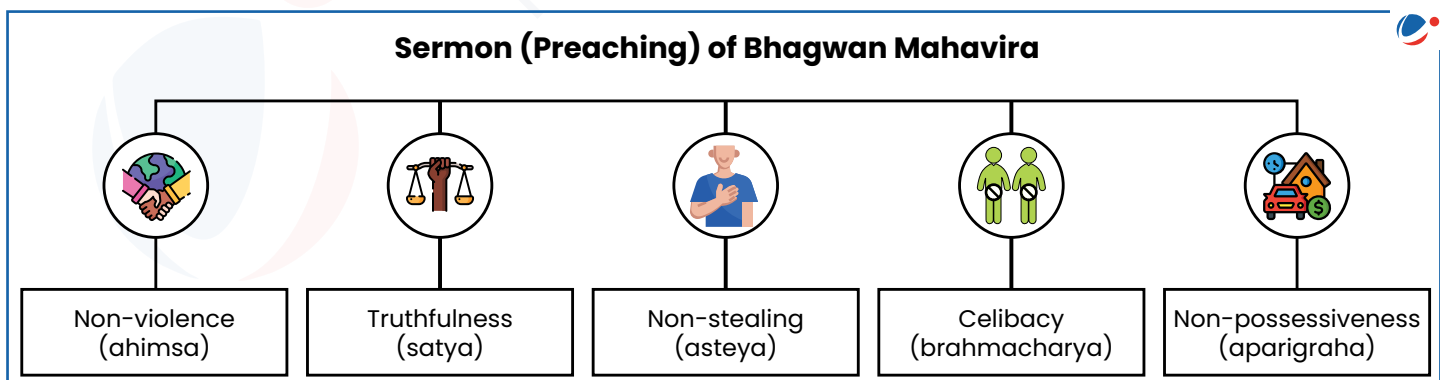
- ▶ **Conflict reduction:** There is a need of peaceful resolution of conflicts, reduction in violence and war.
- ▶ **Ahimsa** promotes nonviolence in all forms; **Asteya** advocates respect for others' property and rights.
- ▶ **Curb Consumerism:** Minimalistic living and detachment from luxury are needed today.
 - **Aparigraha:** Resolves issues like anxiety, materialism, and greed through detachment.
- ▶ **Promote mindfulness:** Emphasis on self-discipline, self-awareness, and inner peace will promote physical, mental, and emotional well-being.
 - **Brahmacharya:** Promotes self-discipline and reduces stress-related disorders.
- ▶ **Ethical Business Practices:** Emphasis on honesty, integrity, and fairness in all dealings will encourage ethical business practices.
 - **Satya** encourages honesty, integrity, and transparency in communication and actions and crucial for building trust and healthy relationships.
- ▶ **Social tolerance:** Today, differences in ideologies among various faiths are the root cause of many misdemeanors present in society like Blasphemy, mob lynching, and religious rioting etc.
 - **Anekantavada:** Encourages consideration of multiple viewpoints and respect for other beliefs.

BRIEF BACKGROUND

About Bhagwan Mahavira

- ▶ Considered founder of Jainism (24th Tirthankara of Jainism) who lived in 6th century CE.
 - He was Contemporary of Buddha.
- ▶ **Birth:** Named as Vardhamana, born in Kundagrama (near Vaishali in present-day Bihar) into the royal Kshatriya family of King Siddhartha of Ikshvaku dynasty and Queen Trishala.
- ▶ **Renunciation:** At the age of 30, he left his princely life, family, and worldly possessions to become an ascetic.
- ▶ **Kaivalya (Enlightenment):** After years of intense meditation, penance, and self-discipline, he achieved Kevala Jnana (omniscience) at the age of 42 to become jina.

Sermon (Preaching) of Bhagwan Mahavira



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8.2.2. Lachit Barphukan



CONTEXT

Prime Minister recently unveiled the "Statue of Valour", a 125-foot bronze statue of Ahom general Lachit Barphukan in Jorhat, Assam.

ANALYSIS



About Lachit Barphukan (1622 - 1672)

- ▶ **Place of Birth:** Charaideo district of Assam.
- ▶ **Mother:** Kunti Moran
- ▶ **Father:** Momai Tamuli Barbarua
 - The **first Barbarua** (military and judicial head) in the Ahom Kingdom.
 - As a **Barphukan** (commander-in-chief) of the Ahom army, he led successful **campaigns against the Mughals** during the reigns of Emperor **Jahangir and Shahjahan**.
 - The **founder of the Paik practices** (a system of forced labour in the Ahom kingdom).
- ▶ **Clan:** Lachit Barphukan belonged to Lukhurakhun clan (Ahom kingdom had many clans).
- ▶ **Role as Military Chief:** King Swargadeo Chakradhwaj Singh appointed Lachit **Barphukan**.
 - In this authority Lachit Barphukan led the Ahom forces to **victory in the Battle of Saraighat**
- ▶ Since 1999 in the **National Defence Academy (NDA)**, Lachit Barphukan Gold Medal is given to the best cadet

BRIEF BACKGROUND

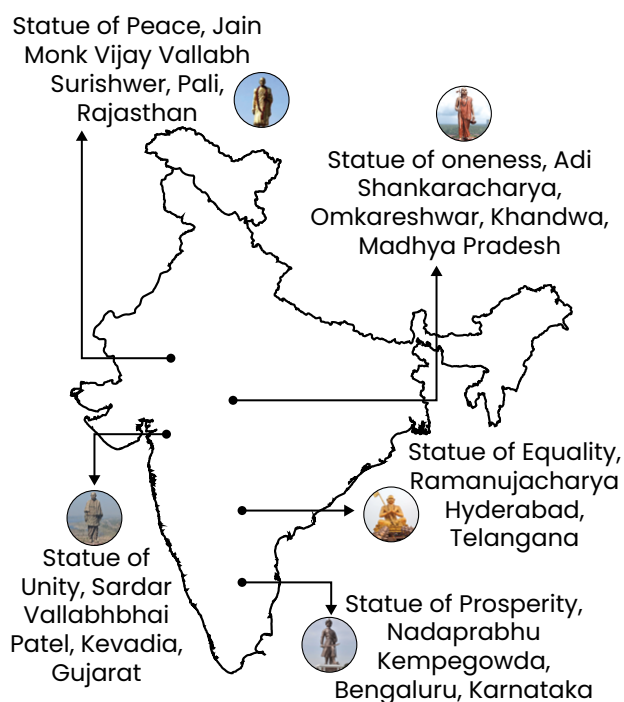
Battle of Saraighat (1671)

- ▶ **Background:**
 - In 1662, under the leadership of **Mir Jumla** the **Army of Emperor Aurangzeb** defeated the Ahom kingdom and **included it in the Tax-based state**.
 - In 1669, Mughal forces led by **Ram Sigh** annexed **Guwahati** in the **Battle of Alaboi**.
- ▶ **Location:** On the **Brahmaputra River** at Saraighat, near the city of Guwahati in Assam.
- ▶ **Combatant:** The battle was **largely a naval war**. The **Ahom forces** were led by **Lachit Barphukan**, while the **Mughal forces** were commanded by the **Mughal general Ram Singh**.
- ▶ **Outcome:** The **Ahom forces** under Lachit Barphukan **decisively defeated the larger Mughal army**, effectively ending the Mughal attempts to conquer the Ahom kingdom.
- ▶ **Significance:** The battle **stopped the Mughal advance to Assam**, and the **rest of today's Northeast India**.

Lachit Barphukan



Other Important Statues in India



About Ahom Kingdom (1228 to 1826)

<p>Kingdom</p>	<ul style="list-style-type: none"> ▶ Founder: Sukaphaa, a Shan prince of Mong Mao who came to Assam after crossing the Patkai Mountains. ▶ Establishment: Ahoms migrated to the Brahmaputra valley from present-day Myanmar in the 13th century. ▶ Expansion of territory: In the 16th century, under the rule of Suhungmung, Ahom captured territories of the Chutiya and Koch-hajo kingdoms. ▶ Capital: Charaideo (east of Guwahati) 	<p>Ahom Kingdom in Final Years</p> <p>The map shows the Ahom Kingdom in its final years, covering a large area in Assam, India. Key locations include Jorhat, Guwahati, and various tribal regions like Khasi, Jaintia, and Garo. Neighboring countries like Bhutan, Bangladesh, and Myanmar are also labeled. The map highlights the kingdom's expansion and its proximity to other regional powers.</p>
<p>Society</p>	<ul style="list-style-type: none"> ▶ Clan: Ahom society was divided into clans or khels. A khel often controlled several villages. <ul style="list-style-type: none"> ▶ The peasant was given land by his village community. Even the king could not take it away without the community's consent. <ul style="list-style-type: none"> ◊ People from heavily populated areas were shifted to less populated areas, thus Ahom clans were broken up. 	
<p>Political Features</p>	<ul style="list-style-type: none"> ▶ Suppression of Older Political Systems: Ahom created a new state by suppressing the older political system of the bhuiyans (landlords). ▶ Forced Labor System – Paiks: Ahom state depended upon forced labourers called Paiks. <ul style="list-style-type: none"> ▶ A census of the population was taken. Each village had to send several paiks by rotation. 	
<p>Administration</p>	<ul style="list-style-type: none"> ▶ Centralized Administration: By first half of seventeenth century administration became quite centralised. ▶ Council of Ministers <ul style="list-style-type: none"> ▶ The king was assisted by a council of ministers referred to as Patra Mantris. ▶ The foremost Patra Mantris were the Great Gohains (the Buragohain, Borgohain and Barpatragohain). ▶ Important officers: Barbarua (military and judicial head) and Barphukan (military and civil head) <ul style="list-style-type: none"> ▶ The position of Barphukan was similar to that of a Viceroy. 	
<p>Economy</p>	<ul style="list-style-type: none"> ▶ Artisans: There were very few castes of artisans. Hence, artisans in the Ahom areas came from the adjoining kingdoms. ▶ New agricultural practices: The Ahoms also introduced new methods of rice cultivation. 	
<p>Military Strategy</p>	<ul style="list-style-type: none"> ▶ Mandatory military services: Almost all adult males served in the army during war. ▶ Military Tactics <ul style="list-style-type: none"> ▶ Deployment of spies to monitor enemy movements and utilization of guerrilla warfare tactics was also used. ▶ A class of officials known as Kataki acted as messengers in the enemy camp. ▶ Naval Strength: The Navy constituted the most important and powerful force within the Ahom military system. ▶ Military Divisions: The military division included an elephant cavalry, commanded by an officer named Hatibaruah. 	
<p>Religion</p>	<ul style="list-style-type: none"> ▶ Originally, Ahoms worshipped their tribal gods. But, in the reign of Sib Singh (1714-1744), Hinduism became the predominant religion. 	

Burial System (Charaideo Maidams)	<ul style="list-style-type: none"> ▶ About: Charaideo Maidams are mounds containing remains of royalty of the Ahom dynasty. Mounds are located along the foothills of the Patkai range. ▶ Lachit Maidam: It has remains of Lachit Barphukan. It was built in 1772 by Swargadeo Udayaditya Singha at Hoolungapara near Jorhat. ▶ World recognition <ul style="list-style-type: none"> ➤ Charaideo Maidams are commonly known as the Pyramids of Assam. ➤ They are included in the tentative list of UNESCO's World Heritage.
Art and Culture	<ul style="list-style-type: none"> ▶ Artists: Poets and scholars were given land grants. ▶ Buranjis: They are a genre of historical chronicles of Ahom dynasty. <ul style="list-style-type: none"> ➤ These were initially written in Tai-Ahom language but later were mostly produced in Assamese language, presumably after the Ahoms converted to Hinduism ▶ Translations of Sanskrit books: Important works of Sanskrit were translated into the local language.
End of rule	<ul style="list-style-type: none"> ▶ The rule of this dynasty ended with the Burmese invasion of Assam and the subsequent annexation by the British East India Company following the Treaty of Yandaboo in 1826.

8.2.3. Nana Jagannath ShankarSeth

CONTEXT

Maharashtra cabinet has recently decided to ask the Ministry of Railways to rename Mumbai Central station after Nana Jagannath Shankarseth.

ANALYSIS

▶ Key Contributions

- **Architect of Mumbai:** Led major projects to plan buildings, streets, and avenues in Bombay.
- **Education Patronage:** Donated family-owned land for the establishment of schools, particularly emphasizing education for girls.
 - ◊ He founded the **Native School of Bombay**, which evolved into the **Elphinstone College in 1856**.
- **Culture:** Played a significant role in **promoting the Dr. Bhau Daji Lad Museum** in Byculla, constructed **Bhawani Shankar Temple and a Ram temple**.
- **Railway Project:** He was member of the committee that gave impetus to the project for the **first train** in India that ran **between Boribunder and Thane on April 16, 1853**.
- **Political Contributions:** He was the first
 - ◊ **Indian nominated to the Legislative Council of Bombay.**
 - ◊ **President of the Bombay Association.**
 - ◊ **Indian Member of Asiatic Society of Mumbai.**

▶ Legacy and influence

- Described as **'Architect of Modern India'** by the renowned scholar of economics, **Gangadhar Gadgil**.
- Influenced freedom fighters like **Dadabhai Naoroji and Justice Ranade**, who adopted his vision of economic nationalism in their pursuit of India's independence.

BRIEF BACKGROUND

- ▶ **Early life of Nana Jagannath Shankarseth (1803-1865)**
 - **Birth:** Born in a Brahmin family in **Murbad in Thane district, Maharashtra**.
 - **Father:** Shankar Murkute
 - **Mother:** Bhawanibai Murkute.
 - **Ideals and Influences:** He was greatly inspired by the merchant and philanthropist **Sir Jamsetjee Jeejeebhoy**.
- ▶ **About Bombay Association:** The association was founded in 1852 by notable figures like Naoroji Furdunji, Narryan Dinanathji, Dr. Bhau Daji, and Dadabhai Naoroji.
- ▶ **About Asiatic Society of Mumbai:** The society was established in **1804** by **Sir James Mackintosh** to promote **investigation and encouragement of Oriental Arts, Sciences and Literature**.

Nana Jagannath Shankar Seth



8.2.4. Ayya Vaikunda Swamikal



CONTEXT

The Prime Minister has paid tributes to Sri Ayya Vaikunda Swamikal on his birth anniversary.

ANALYSIS



Key Contributions

- **Among the Pioneer of Indian Renaissance:** His famous slogan was "One Caste, One Religion, One Clan, One World, One God" which makes all caste people to feel equality.
- **Founded Ayyavazhi Sect:** Taught the virtue of non-violence, charity, tolerance and love.
- **Temple Reformation**
 - ◇ Created new temples (Pathis and Nizhal Thankals) for those who were denied permission to enter the temple.
 - ◇ Introduced **Thottu Namam**, encouraging priests to apply sacred paste on devotees' foreheads, regardless of caste.
- **Social Initiatives**
 - ◇ Initiated the **Thuvayal Panthy** program to promote vegetarianism
 - ◇ Organized **Samapanthi-bhojana** (community eateries)
 - ◇ Undertook the digging of common wells, known as **Muthirkinarus**, to provide water access to lower castes who were barred from using upper caste wells.
- **Authored books:** Akilathirattu Ammanai and Arulnool

BRIEF BACKGROUND

- **About Ayya Vaikunda Swamikal (Early 19th Century)**
 - Birth: Born in a poor Nadar family in village of Poovandan Thoppu, near Kanyakumari (Tamil Nadu).
 - Parents: Ponnu Nadar and Veyilal Ammayiar.

Ayya Vaikunda Swamikal



8.3. TRIBES IN INDIA

8.3.1. Soliga Tribe

- ▶ Soligas Tribe are an **isolated tribal community restricted to only Karnataka & Tamil Nadu** (especially in Biligiri Rangana Hills and Male Mahadeshwara Hills).
 - ▶ Popularly known as **Soliga/Sholiga/Soligaru**.
 - ▶ Also **called the children of bamboo** because the word is believed to mean that they originated from bamboo.
 - ▶ Settlements are known as 'haaDi' and 'pooDu'.
 - ▶ Speak "**Soliga**" which is one of the **Dravidian Language**.
- ▶ **Rituals and Festivals:** They Perform rituals to **invoke rain gods during drought**, using freshly squeezed honey as offerings.
 - ▶ Traditional festivals are **Rotti habba, Hosa Ragi habba, Mari habba, Gowri habba, etc.**
 - ▶ Follow **Hinduism, with a deep reverence for nature**.
- ▶ **Occupation and Lifestyle:**
 - ▶ **Practice shifting cultivation and hunting** in tune with the seasonal cycle of the forest.
 - ▶ Main **occupation** of Soligas is to **collect minor forest products like gum, honey, soap nuts, root and tubers, tamarind**.
 - ▶ Use **more than 300 herbs for the treatment of various ailments**.
- ▶ **Other details:**
 - ▶ To recognise the efforts of the **Soliga Community in biodiversity and conservation**, a new genus of wasp, '**Soliga Ecarinata**,' has been named after them.
 - ▶ **Soligas became the first tribal community living inside a tiger reserve to get legal rights to the forest in 2011.**

8.3.2. Shompen Tribe

- ▶ Shompen cast their vote for the first time in Lok Sabha Election.
- ▶ **About Shompen Tribe**
 - ▶ One of the **Particularly Vulnerable Tribal Groups**.
 - ▶ Reside in dense **tropical rain forests of Great Nicobar island**.
 - ▶ Belong to the **Mongoloid group**.
 - ▶ According to Census (2011), **estimated population of Shompen is 229**.
 - ▶ They are **hunters and gatherers**. They used to hunt wild pig, python, monitor Lizard, crocodile, etc.

8.3.3. Lushai Tribe

- ▶ A rare hemi-parasitic terrestrial plant (**Phtheirospermum lushaiorum**) has been found in Phawngpui National Park of Mizoram.
- ▶ **Lushaiorum** is named after "**Lushai**" tribe of Mizoram.
- ▶ **About Lushai tribe**
 - ▶ Tribe under **Kuki-Chin group of tribes**.
 - ▶ Commonly known as **Mizos** and racially they are known to be under **Mongoloid origin**.
 - ▶ Main occupations are **Jhum and orange Cultivation**.
 - ▶ Lushai are known as **Head Hunter community**.
 - ▶ Popular Dance is **Bamboo Dance (Cheraw-dance)**.
 - ▶ Basic unit of Lushai (Mizo) society is a **patrilocal joint family with patrilineal descent and inheritance rules**.
 - ▶ Lushai (Mizo) society is **patrilocal joint family with patrilineal descent and inheritance rules**.

8.3.4. Deda Method

- ▶ Muria tribes practice the deda, **traditional method of preserving seeds.**
- ▶ **About Deda Method**
 - Seeds are wrapped in leaves, packed tightly to look like boulders, and woven with Siali leaves.
 - **Benefits: Protection of seed from pests and worms, which can be stored and used upto 5 years.**
- ▶ **About Murias**
 - Sub-group of Gond tribe, belonging to **Chhattisgarh.**
 - Associated with **Muria Rebellion of Bastar (1876)** against Gopinath Kapardas, diwan of Bastar.
 - **Customs: Dead pillars (Gudi)**, where dead are buried with a stone placed 6 to 7 feet high and **Ghotul** where young boys and girls chose their own life partner.



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17 JAN, 5 PM

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8.4. HISTORICAL EVENTS

8.4.1. Vaikom Satyagraha



CONTEXT

Recently, India celebrated the 100th anniversary of the Vaikom Satyagraha.

ANALYSIS



About the Vaikom Satyagraha

- ▶ It was a historic non-violent temple entry protest that began in Vaikom, a town in the princely state of Travancore (Kerala region), on March 30, 1924.
 - It was in a response to the discriminatory exclusion of "lower caste" Hindus from accessing the Vaikom Mahadeva temple.
 - Despite rise in the educational and economic status the lower caste community especially Ezhavas faced the social discrimination which eventually led to the agitation.
- ▶ Satyagrahis went in groups of three to enter the temple but were stopped and arrested by the police.
 - Dressed in khadi and wearing khadi caps, Govinda Panikkar (Nair), Bahuleyan (Ezhava) and Kunjappu (Pulaya), defied the prohibitory orders.
 - The movement gained popularity throughout India and received support from various regions.
 - ◊ The Akalis of Punjab provided food to the Satyagrahis.
 - ◊ Christian and Muslim leaders also supported the movement
- ▶ Lasted for 604 days: Vaikom Satyagraha was officially withdrawn on November 30, 1925 after consultations between Gandhi and W.H. Pitt, the then police commissioner of Travancore.

Outcome of the Vaikom Satyagraha

- ▶ Legal Reforms & initiatives:
 - The Satyagraha's pressure led to the Temple Entry Proclamation in 1936, a landmark legal victory granting access to lower-caste individuals into temples.
 - Also led to the establishment of Travancore Public Service Commission to ensure fairness in government roles.
- ▶ Political Awakening: It catalysed political awareness and activism among marginalized communities.
- ▶ National Impact: The movement's resonance extended beyond Kerala, inspiring similar protests and campaigns across India against caste-based discrimination.
- ▶ Vaikom Satyagraha brought open the rift between Gandhiji and Periyar:
 - While Gandhiji saw it as Hindu reformist movement, Periyar called it a fight against caste-based atrocities.
 - Periyar was not happy with the partial success attained (only 3 out of 4 roads leading to the temple were open for all the castes), and he eventually quit Congress months later.

BRIEF BACKGROUND

Associated Leaders & support

- ▶ T.K. Madhavan, K.P. Kesava Menon and K. Kelappan (Kerala Gandhi) are considered the pioneers of the Vaikom Satyagraha movement.
 - Issue of temple entry was first raised by Ezhava leader T K Madhavan in a 1917 editorial in his paper Deshabhimani.
 - In 1921, the Travancore Congress Committee, led by T.K. Madhavan, launched a campaign to have the ban lifted.
 - In 1923 session of INC in Kakinada, a resolution was passed by the Kerala Provincial Congress Committee to take up anti-untouchability as a key issue.
- ▶ George Joseph, an independence activist in Kerala, took over the leadership in the absence of Kesava Menon.
- ▶ E. V. Ramasamy Naicker (known as Periyar, Vaikom Veerar) was a key figure in the Vaikom Satyagraha who mobilized volunteers and garnered public support through his speeches. Among the all persons arrested in movement, only Periyar got rigorous imprisonment.
- ▶ Mahatma Gandhi supported a mass agitation led by Madhavan for temple entry in 1921.
- ▶ Sree Narayana Guru, Mannathu Padmanabhan, E. V. Ramasamy Naicker, etc also supported the agitation.
- ▶ Women like Nagammai (wife of Periyar), Kannammal played key roles empowering women

Other Anti-Caste Movements

Year	Movement	Leaders	Details
1873	Satyashodhak Movement	Jyotirao Phule	Emancipation of low castes, untouchables, and widows, Against Brahminic dominion
1916	Justice Party Movement	Dr. T.M Nair, P. Tyagaraja Chetti, C.N Mudalair	Against Brahminic control in government, education, and politics
1924	Depressed Classes Movement	BR Ambedkar	Upliftment of depressed classes, Against untouchability, published Marathi Newspaper titled Bahiskrit Bharat (1927)
1925	Self-Respect Movement	EV Ramaswami Naicker (Periyar)	Against caste system and Brahmin bias, Establishment of Kudi Arasu journal (1910)

8.4.2. Apartheid System

CONTEXT

South Africa recently celebrated 30 years of end of Apartheid, a system of racial discrimination.

ANALYSIS

Anti-Apartheid Movement (AAM)

- ▶ It was the first successful transnational social movement in 20th century.
- ▶ **Aim:** Internal campaign to destabilize racist apartheid regime in South Africa, and external campaign for political, economic, and cultural sanctions on Apartheid Regime.
- ▶ **AAM consisted of three phases**
 - **First Phase: use of nonviolent direct-action tactics** under the African National Congress (ANC), South African Communist Party (SACP) etc.
 - **Second Phase (After 1960s): Internationalization of struggle**, with support from African Union, United Nations and Including India.
 - **Third Phase: Massive resistance (After 1980s):** Making country ungovernable through strikes, boycotts, demonstrations, and acts of sabotage.
 - **Impact:** By 1990, apartheid laws were repealed, Mandela was released (1990), and became President in 1994.

Contribution of India in South African Anti-Apartheid Struggle

- ▶ **Mahatma Gandhi:**
 - **Seeds of AAM in South Africa** were sown by Mahatma Gandhi upon witnessing humiliation and contempt shown to Asians by White Europeans.
 - He established first **anticolonial and anti-racial discrimination movement** and founded **Natal Indian Congress (1894)** and newspaper **Indian Opinion (1903)**.
 - In **1906**, Satyagrahis under Gandhi's leadership **boycotted 1906 legislation** requiring **Indians to**

BRIEF BACKGROUND

About Apartheid System

- ▶ **About:** It was a legal system of racial discrimination unique to South Africa which was imposed by White Europeans on **Non-whites (Black Africans, Coloured and Indians)**
- ▶ Apartheid was institutionalized in 1948, but previous governments had passed many pass laws (precursors of apartheid) during 19th and first half of 20th century.
 - Laws **restricted movements of blacks** into areas **occupied by whites and colored**.
- ▶ **Statutory Basis of Apartheid System:**
 - **Population Registration Act of 1950** provided basic framework for apartheid by classifying all South Africans by race, including Bantu (Black Africans), Colored (mixed race), white and Asian (meaning Indian and Pakistani).
 - Through **Group Areas Act of 1950**, each race was allotted its own area, which was used in later years as a basis of forced removal.
 - Other apartheid laws: **Prohibition of Mixed Marriages Act 1949**, **Bantu Education Act 1953 (segregation of education)** etc.

Nelson Mandela (1918 -2013)

- ▶ **Early Life:**
 - Born in 1918 in **Eastern Cape of South Africa**.
 - He was son of a **Thembu Chief (traditional leader)**.
- ▶ **Political Career & Struggle:**
 - Mandela was a **symbol of AAM** and South Africa's first democratically elected President in 1994.

carry registration certificates all times.

- When Gandhi left South Africa in 1915, he had left behind his legacy of **Phoenix Settlement** (Ashram-like settlement near Durban).
- ▶ **Yusuf Mohamed Dadoo:**
 - He was a founder and leader of **Non-European United Front and of Communist Party** when it was revived as a secret organisation.
 - Since going into exile in 1960, he played a **key role in promoting underground and armed struggle** in South Africa and a world-wide anti-apartheid movement.
- ▶ **Role of Indian Government:**
 - India was the **first country to sever trade relations with apartheid Government (1946)** and subsequently imposed a complete embargo on South Africa.
 - India was first country to bring **issue of South African apartheid to United Nations in 1946**
 - **ANC maintained a representative office in New Delhi** from 1960s onwards. India actively worked for **AFRICA Fund** to sustain AAM.

Role of UN in South African Anti-Apartheid Struggle:

- ▶ Request to UN came after South Africa passed **Asiatic Landownership Act in 1946**, which restricted **Indian land ownership and segregated Indians**.
- ▶ **Some of the key actions taken by the UN include:**
 - **UN imposed diplomatic and economic sanctions** on South Africa. In 1971 resolution apartheid was declared as a "crime against humanity".
 - ◊ In 1977, the UN Security Council made **arms embargo** mandatory, and in General Assembly also imposed a **voluntary oil embargo**.
 - **Legitimizing resistance:**
 - ◊ UN established **Special Committee against Apartheid in 1963** and **Centre against Apartheid in 1976**.
 - ◊ In 1973, **International Convention on Suppression and Punishment of Crime of Apartheid** was approved by UN General Assembly.
 - **UNGA suspended South Africa in 1974** and only readmitted it in 1994 after the democratic transition.

- He joined ANC in 1944 and helped form ANC Youth League. Mandela led **ANC's nonviolent protest against the apartheid legislation**.
- He was **sentenced to life imprisonment** in 1964 and was released in 1990 after 27 years.
- ▶ **Philosophy of Mandela:**
 - Also known as '**Gandhi of South Africa**', He was a **strong follower of Gandhi's teachings**. He believed in Peace, compassion and Social Justice.
 - Both Mandela and Gandhi are remembered for their strong belief in truth and fairness.
- ▶ **Awards & Legacy:**
 - He was **awarded the Nobel Peace Prize in 1993**.
 - India conferred him with **Bharat Ratna** and subsequently with **International Gandhi Peace Prize in 2001** for his peacemaking efforts.
 - UN celebrates **Nelson Mandela International Day on 18 July** every year.

Indians in South Africa were divided into three groups:

- ▶ **Indentured Indian labourers**, from Uttar Pradesh, Bihar and South India, who had migrated to South Africa after 1890 to work on sugar plantations;
 - **Indentured labour:** A bonded labourer under contract to work for an employer for a specific amount of time, to pay off his passage to a new country or home.
- ▶ **Merchants**—mostly Meman Muslims who had followed the labourers; and
- ▶ **Ex-indentured labourers** who had settled down with their children in South Africa after their contracts expired.

About Natal Indian Congress (NIC)

- ▶ It was dominant **political organization among Indians in South Africa** throughout 20th century.
- ▶ In 1894, **NIC formed an alliance with African National Congress (ANC)**, breaking mould of racially exclusive mobilizations.
- ▶ In 1945, **Dr GM Naicker** was elected to organization's leadership and led **NIC in 1946 Indian Passive Resistance Campaign in Durban**.
- ▶ NIC in 1980s launched the most visible campaign i.e. **anti-South African Indian Council campaign of 1981**.



8.5. MISCELLANEOUS

8.5.1. Geo-Heritage Sites



CONTEXT

Pandavula Gutta and Ramgarh Crater were recognised as Geo-Heritage Sites

ANALYSIS



About Geo-Heritage Sites

- ▶ Geo-heritage sites are sites of rare and unique geological, geomorphological, paleontological, and stratigraphic significance.
 - These includes caves, natural rock-sculptures, sediments, rocks, minerals, meteorites or fossils
- ▶ Geological Survey of India (GSI) recognizes, declares and maintains the Geo-heritage sites in India (refer map)

About Pandavula Gutta

- ▶ Located in **Telangana (Jayashankar Bhupalpally district)** is considered to be **older than Himalayas**.
- ▶ Discovered in the year 1990.
- ▶ Houses **Palaeolithic Paintings** which depict:
 - **Wild life** (Bison, Antelope, Tiger, and Leopard etc.),
 - **Geometric shapes** (swastika symbol, circles and squares) and
 - **Weapons** (bows, arrows, sword and lancer etc.)
- ▶ These cave paintings offer a rare glimpse into the **prehistoric man's rock art identified on walls and ceilings of caves, rock shelters and isolated boulders**.

About **Ramgarh Crater (Ramgarh Astrobleme)**

- ▶ "**Astrobleme**" is used to describe a **geological feature formed by the impact of a meteorite**.
- ▶ Located in **Rajasthan (Baran district)**, situated on the **old course of river Parbati**.
- ▶ **First discovered by the Geological Survey of India in 1869** and was recognised as a 'Crater' by the **Geological Society of London**.
- ▶ The now eroded crater in the **Vindhyan Supergroup of sedimentary rocks dates back to the Mesoproterozoic age (roughly 1600 to 1000 million years ago)**
- ▶ **One of the three Meteorite Impact Craters of India**
 - The other two being **Lonar in Maharashtra and Dhala in Madhya Pradesh**.
 - The **presence of coesite, a high-pressure polymorph of Silicon dioxide (SiO₂)** indicates that the site has an **impact origin and confirms the meteorite strike**.
- ▶ **Diameter of around 3.2 kilometres and has an elevation of more than 200 metre**.
- ▶ The middle of the crater consists of a **10th Century temple** dedicated to lord Shiva "**Bhand Devara Temple**" (built in the style of Khajuraho).
 - Crater hill also comprises of **cave temples dedicated to a local goddess Kisanai and Annapurna**.

Pandavula Gutta



Ramgarh Crater

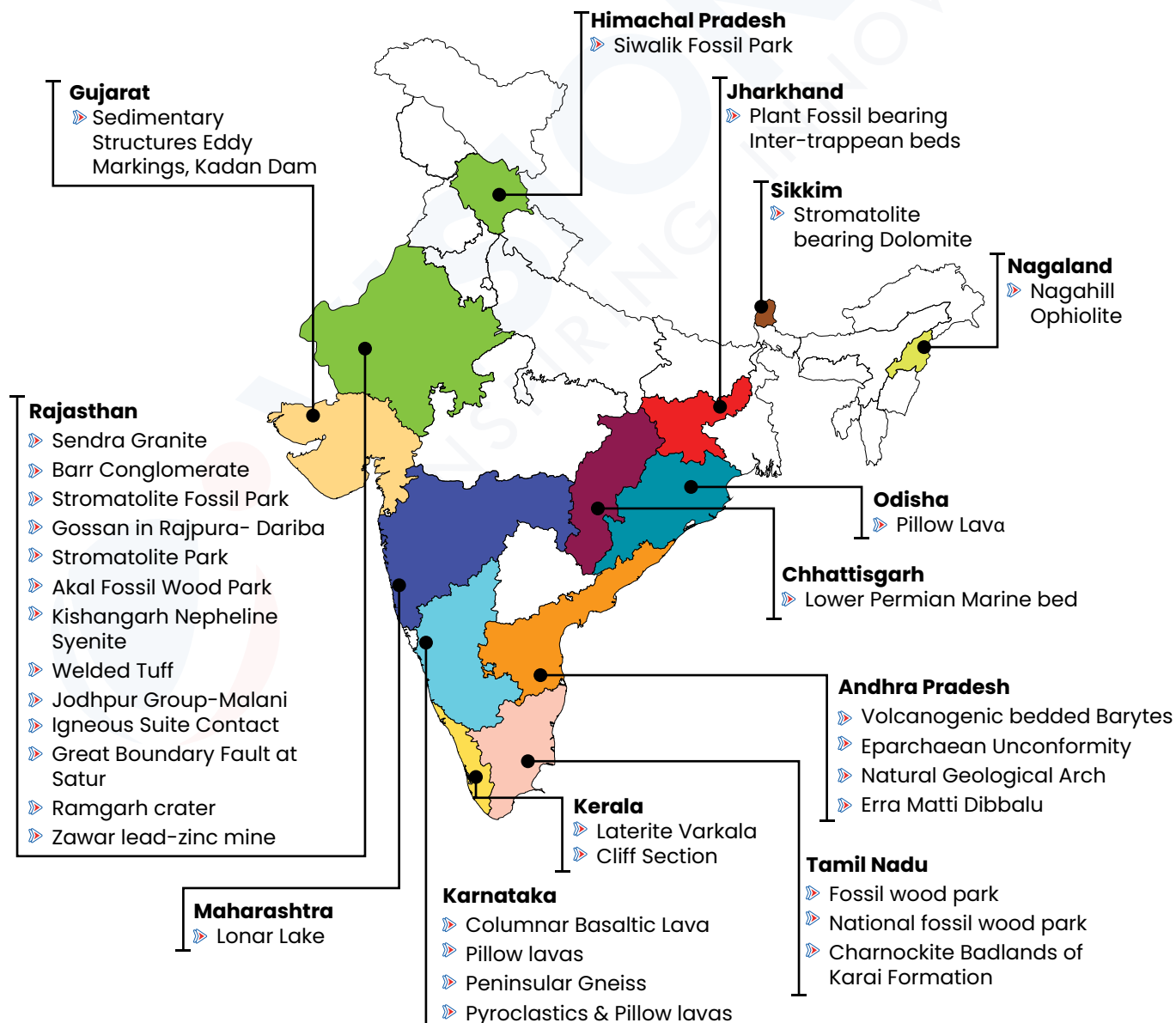


- ▶ Currently protected under the **Wildlife (Protection) Act, 1972** and its **Crater Lake (Pushkar Talab)** is notified under "wetland" under **Wetland (Conservation & Management) rules, 2017**.
- ▶ The Crater was **recognised** and added to the "**Earth Impact Database**" by the **Planetary and Space Science Centre (PASSC)** in Canada.
 - ▶ **The PASSC was established in Canada (2001)** and the "**Earth Impact Database**" provides information about confirmed meteoroid impact structures in the world




About Geological Survey of India (GSI)

- ▶ **Genesis:** Established in **1851 by Thomas Oldham**, primarily to find coal deposits for the railways.
- ▶ **Ministry:** Ministry of Mines
- ▶ **Organisational Structure:** **Headed by Director General** along with Additional and deputy generals in six regional offices of Lucknow, Jaipur, Nagpur, Hyderabad, Shillong and Kolkata.
- ▶ **Functions:**
 - ▶ **Creation and updation on national geo-scientific information** and mineral resource assessment
 - ▶ **Authorized curator and repository of all the meteorites fall on the Indian soil** and presently possesses about 700 meteorites of different kinds.

Geological Heritage Sites of India



8.5.2. Six Heritage Sites of Madhya Pradesh Included In UNESCO's Tentative List

 Six Heritage Sites of Madhya Pradesh Included In UNESCO's Tentative List	
 Sites on UNESCO's Tentative List	 Description
Gwalior Fort	Completed in 8th century AD by Raja Surya Sena , consisting of Man Mandir Palace, Gujari Mahal, Sas Bahu temples etc.
Khooni Bhandara, Burhanpur	<ul style="list-style-type: none"> ▶ Underground water management system, built by Abdur Rahim Khan-i-Khanan during Jahangir's reign. ▶ Based on Persian qanat approach.
Rock Art Sites of Chambal Valley	Rock art in hilly areas of Vindhyan, Satpura, and Kaimur ranges .
Bhojeshwar Mahadev Temple, Bhojpur	<ul style="list-style-type: none"> ▶ Lord Shiva temple, built during 11th century under Raja Bhoj. ▶ Built in Bhumija style (evolved form of Nagara style during Paramara period).
Gond Monuments of Ramnagar, Mandla	Architectural complexes built by Gond rulers consisting of Moti Mahal, Raibhagat ki Kothi, Begum Mahal etc.
The Historical Ensemble of Dhamnar	Rock cut site consisting of 51 monolithic Buddhist caves (5th-7th century CE) and hindu temple complex (Dharmarajeshwara temple) .

- ▶ Inclusion in tentative list is **first step towards nominating** a site for inscription on the UNESCO's World Heritage List.
 - ▶ World heritage is designation for **places of outstanding universal value to humanity**.
 - ▶ Currently, there are **42 UNESCO World Heritage Sites in India** (34 cultural, 7 natural and 1 mixed).

8.5.3. UNESCO's MOW Asia-Pacific Regional Register

- ▶ UNESCO's MOW Asia-Pacific Regional Register includes **Indian literary Works**
- ▶ Manuscript of three Indian literary works namely **Ramcharitmanas, Panchatantra and Sahādayāloka-Locana** have been included in **Memory of the World (MOW) Asia-Pacific Regional Register** along with 17 other works from region.
 - ▶ The decision was taken at the 10th meeting of the **Memory of the World Committee for Asia and the Pacific (MOWCAP)**, held at Ulaanbaatar, Mongolia.
- ▶ **About Literary Works**
 - ▶ **Ramcharitmanas**
 - ◇ Written in the **16th Century** by **Goswami Tulsidas**.
 - ◇ An epic poem written in **Awadhi language** and consists of **Seven Kāndas**.
 - ◇ **Poetic retelling** of the events of **Ramayana**.
 - ▶ **Panchatantra**
 - ◇ Written by **Pt. Vishnu Sharma** in **Sanskrit**.
 - ◇ One of the **oldest collection of surviving Indian Fables**
 - ◇ **Consists of five parts** and its most distinguishing feature is the **'Story within story'** structure.
 - ▶ **Sahādayāloka-Locana**
 - ◇ Written by **Acharya Anandvardhan** in **Sanskrit** and is a text of Indian Poetics.
 - ◇ Philosopher **Abinava Gupta** has written a commentary on it.

About MoW Programme



Launched in 1992 by UNESCO.







It consists of **three Registers** namely, **International, Regional and National Register**. International Register consists of several Indian entries namely Tamil Medical Manuscript Collection, Saiva manuscripts Rig Veda etc.



It aims to preserve world's documentary heritage, enable universal access to documentary heritage and **enhance public awareness** about documentary heritages.

8.5.4. GI Tag for 10 new products

▶ Geographical Indication (GI) tag was accorded to following products:

 Geographical Indication (GI) tag was accorded to following products: 	
 State	 Product and Description
Odisha	▶ Cuttack Rupa Tarakasi (Silver Filigree) ▶ It was incorporated into jewellery around 3500 BCE in Mesopotamia where it is practiced even today as Telkari work . ▶ It reached Cuttack from Persia through Indonesia .
Bengal	▶ Banglar muslin which is a traditional handloom craft made of cotton.
Andhra Pradesh	▶ Narasapur crochet lace products were brought by missionaries to Narsapur.
Madhya Pradesh	▶ Ratlam Riyawan Lahsun (Garlic)
Assam	▶ Majuli Mask and Majuli Manuscript Painting .
Tripura	▶ Risa Textile .
Telangana	▶ Hyderabad Lac Bangles .
Gujarat	▶ Kutch rogan craft a.k.a. Nirona ▶ Ambaji White Marble ▶ formed when limestone is re-crystallised under the earth's crust .

- ▶ A 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.
- ▶ **International Recognition:**
 - ▶ Under the **Paris Convention for the Protection of Industrial Property**, GI is covered as an element of **Intellectual Property Rights (IPRs)**.
 - ▶ Also covered under the **WTO's Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement**.








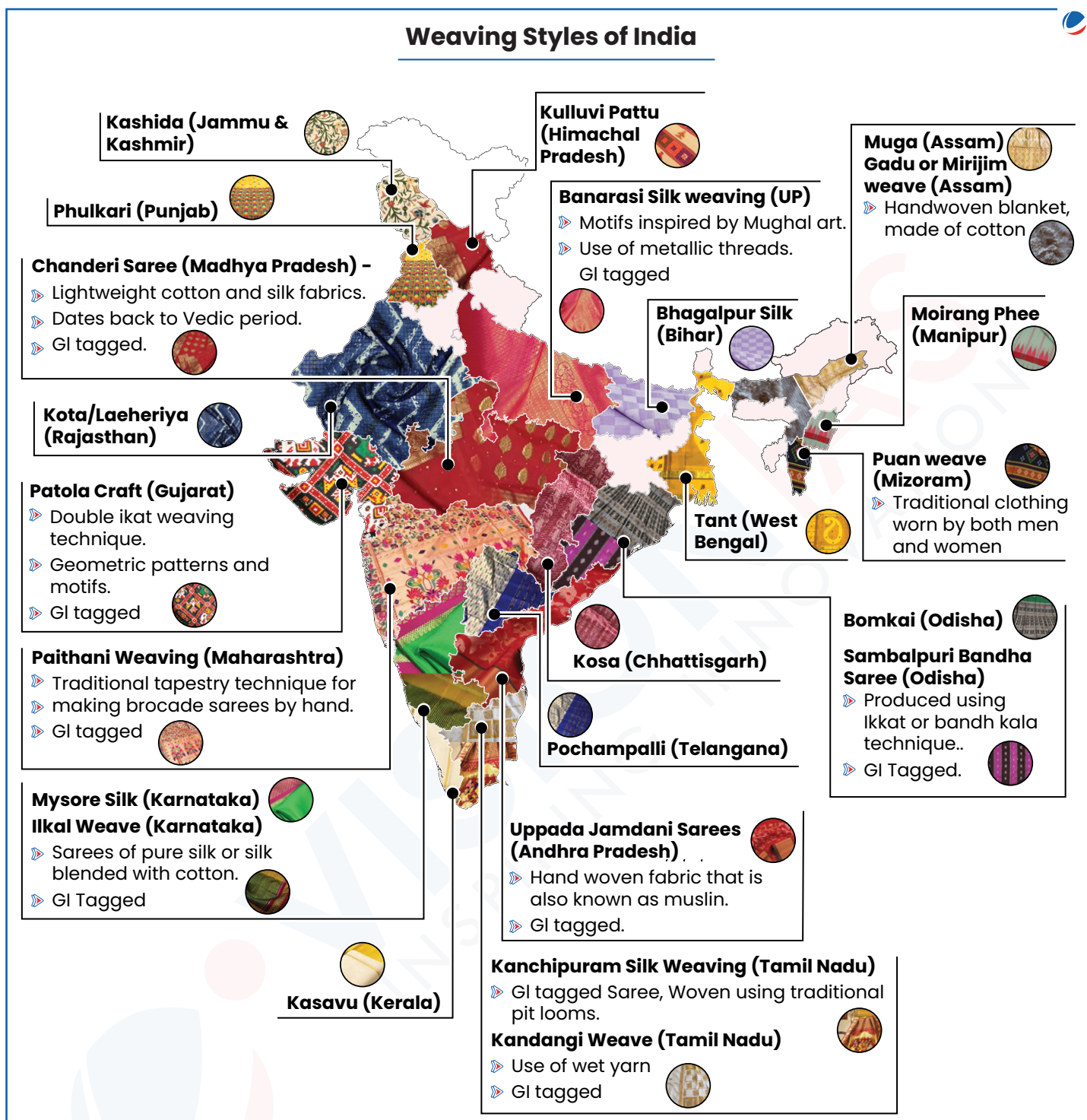
8.5.5. Weaving in India



CONTEXT

Recently on National Textile Day, tribute was paid to Indian weavers.

 Weaving in India 		
 Ancient India	 Medieval India	 Modern India & European Influence
<ul style="list-style-type: none"> ▶ Indus Valley Civilization (3300 – 1300 BCE): <ul style="list-style-type: none"> ▶ Evidence of cotton cultivation and textile production has been found in IVC. Also, terracotta figurines of IVC are usually draped in woven garments. ▶ Excavations at site of Mohenjo-Daro (C.2500 to 1500 BCE) revealed presence of dye with woven cotton fragments wrapped round a silver pot. ▶ Vedic Period: Rigveda (1500 – 500 BCE) also contains references to weaving having religious and cultural significance. <ul style="list-style-type: none"> ▶ A weaver in the Rigveda is described as vasovaya. ▶ Names: The male weaver (vaya) and female weaver x(vayitri). ▶ Post Vedic period: Epics like Mahabharat and Ramayana mention silk fabric and woolen clothing. <ul style="list-style-type: none"> ▶ Buddhist literature refers to different types of textile fabrics like linen (Khoman), cotton (kappasikam), silk (kosseyam), etc. ▶ Other related words found in the text are weavers (tantuvaya), place of weaving (tantavitatathanam), weaving appliances (tantabhanda) and loom (tantaka). ▶ Arthashastra refers to the superintendent of yarns (sutradyaksa) responsible for regulating yarn spinning. ▶ In later periods, Achaemenid Empire in north-western India introduced Persian motifs and weaving techniques in India. 	<ul style="list-style-type: none"> ▶ Mughal Empire (1526– 1857): Mughal emperors as patron of arts help opened Karkhanas (workshops) where textile production was carried out. <ul style="list-style-type: none"> ▶ In that era development of luxurious textiles like brocades, muslin, Malmal Khas (A muslin worn by Mughals) velvets happened. ▶ In western India, silk was mostly mixed with cotton. <ul style="list-style-type: none"> ▶ E.g. alacha fabric in Cambay, Gujarat. ▶ Tarikh-i-Rashidi, a medieval text by Mirza Dughlat Baig mentions practice of sericulture in Kashmir. ▶ Textile Industry grew substantially during medieval period and became largest industry under Mughals with a huge European market. 	<ul style="list-style-type: none"> ▶ Emergence of Industrial Revolution in England made it difficult for Indian textiles to compete with the machine made products. <ul style="list-style-type: none"> ▶ When English clothes entered India, condition of merchants of Indian textiles and weavers in India became worse because British cloth were cheaper. ▶ India lost its rich textile market and became only a supplier of raw cotton for England. This period is represented by drain of wealth from India to England.



Steps taken to Improve Condition of Weavers/Handloom sector:

- ▶ **National Handloom Development Programme (NHDP):** implemented by Ministry of Textiles from financial year 2021-22 to 2025-26.
 - ▶ It follows need-based approach for integrated and holistic development of handlooms and welfare of handloom weavers.
 - ▶ **Main Components of scheme:** Cluster Development Programme, Handloom Marketing Assistance, Weavers' Welfare and Mega Handloom Cluster.
- ▶ **Comprehensive Handloom Cluster Development Scheme (CHCDS):** For development of Mega Handloom Clusters in clearly identifiable geographical locations covering atleast 15000 handlooms.
- ▶ **Handloom Weavers' Comprehensive Welfare Scheme (HWCWS):** It is providing life, accidental and disability insurance coverage under the components Pradhan Mantri Jivan Jyoti Bima Yojana (PMJJBY), PradhanMantri Suraksha Bima Yojana (PMSBY) and Converged Mahatma Gandhi Bunkar Bima Yojana (MGBBY).

- ▶ **Raw Material Supply Scheme (RMSS):** Implemented by Ministry of Textiles throughout country to make available all types of yarn to Handloom weavers.
- ▶ **The Handloom Mark Scheme:** to provide assurance to the consumers about authenticity of handloom products.

8.5.6. World Craft City (WCC)

- ▶ World Crafts Council International (WCCI) has picked Srinagar to map its craft clusters before its final nomination as WCC.
 - ▶ Local crafts include Pashmina shawls, walnut wood carving, hand-knotted carpet, Kani shawl, Khatamband (ceiling design), Sozni craft (needle embroidery), Jalakdozi (chain stitch rugs), Namdha (handmade rug), Basholi Painting (depicting Vaishnavism), papier mâché etc.
- ▶ **About WCC**
 - ▶ Launched in 2014 by the WCCI.
 - ▶ It recognizes role of local authorities, craftspeople, and communities in cultural, economic, and social development worldwide.
 - ▶ Establishes a dynamic network of craft cities across the globe, aligning with the principles of the creative economy.
- ▶ WCCI is working on the recognition and preservation of traditional crafts across the globe.
- ▶ The current headquarters for the term (2021–2024) of WCCI is located in Kuwait. However, the Headquarters of WCCI changes according to different terms

8.5.7. Padta Bet

- ▶ Archaeological excavation reveals 5,200-year-old Harappan settlement at Padta Bet in Kachchh, Gujarat.
 - ▶ It is near Juna Khatiya, an Early Harappan necropolis (mass burial site).
- ▶ **Evidence of occupation from Early Harappan to Late Harappan periods:**
 - ▶ Pottery include Ceramic artefacts of novel kinds involving large storage jars, small bowls and dishes.
 - ▶ Artefacts including semi-precious stone beads made of carnelian and agate, terracotta spindle whorls, copper, lithic tools etc.
 - ▶ Remains of animal bones representing cattle, sheep or goat and edible shell fragments, thereby indicating animal domestication

8.5.8. New Archaeological Sites in Telangana

- ▶ Archaeologists have discovered 3 new archaeological sites in Telangana.
- ▶ **New Archaeological sites include:**
 - ▶ **Ooragutta:** An Iron Age megalithic site.
 - ▶ **Two new rock art sites at Damaratogu** in Gundala mandal of Bhadradri Kothagudem district.
 - ◊ **Devarlabanda Mula:** Has only depictions of animals and no humans or weapons.
- ▶ Usually in this region, a type of megalithic monument known as 'Dolmenoid Cists' are found.
 - ▶ Dolmenoid cists are chamber tombs which are semi-subterranean.
- ▶ Three basic types of megaliths: The chamber tombs, unchambered tombs, and megaliths not connected with burials.
 - ▶ Live a semi-nomadic life and have not been colonised at one place in a defined reserve fores

8.5.9. Digital Technology on Art Forms

CONTEXT

Recently, the fields of Art and Culture are changing dramatically in the rapidly changing digital age.

Role of Digital Technology in various Art Forms

- ▶ **Democratisation of Creativity:**
 - ▶ Aspiring artists can present their work to a worldwide audience with the use of easily accessible software, social media, and online galleries.

- ▶ **Facilitates cross-cultural interactions**, allowing users to engage with global audiences.
- ▶ **Virtual Projection of Art:** Galleries and museums have begun to offer virtual exhibitions and virtual tours.
 - ▶ Through **interactive multimedia elements, 2D, 3D, or 4D projections, virtual reality (VR) or augmented reality (AR)**, there is scope for creating and popularising masterpieces of Art with the help of technology.
 - ▶ The **Indian Digital Heritage (IDH) Project** was a unique initiative of the Department of Science & Technology (DST), digitally documents India's tangible and intangible heritage.
- ▶ **Generating value:** The art world has been reshaped by **Non-Fungible Tokens (NFTs)**, which allow artists to market their digital works as unique properties.
 - ▶ NFT art allows artists to **sell or rent their artwork beyond the physical world.**
- ▶ **Enhanced reward:** Digital Technology has enhanced artists rewards in many ways - **design innovation, increased access, convenience of working, instant sharing**, increased productivity, wider reach etc.
- ▶ **Preserving the traditional art:** Digital preservation techniques, such as digitisation, metadata management, and digital archiving, are essential for ensuring the long-term preservation.
 - ▶ Technology helped in **resurrection of Madhubani Painting, Chau dance and many more such forms.**

Concerns associated with Digital Technology in various Art Forms

- ▶ **Originality in Work:** As digital manipulation techniques become increasingly sophisticated, distinguishing between original artworks and digital forgeries or replicas becomes more challenging.
 - ▶ The proliferation of digital art online makes it difficult to discern the quality and authenticity of artworks, **leading to trust and credibility issues.**
- ▶ **Limited to some artists:** Digital art creation requires proficiency in digital tools and software, which may pose barriers for artists lacking training or resources.
- ▶ **Data Privacy issue:** Collecting and storing personal information, conducting financial transactions, and sharing creative content online carry risks that require robust **cybersecurity measures and data protection protocols.**
- ▶ **Ethical issues:** Ownership, copyright, and valuation of digital art raise ethical concerns as technology evolves in the art world.

Conclusion

Digital technology has transformed how art is made, delivered, and preserved. Adaptation and innovation are crucial to harnessing the full potential of the digital age in the entertainment industry.

8.5.10. Avars

- ▶ DNA analysis of ancient graves has revealed insights on the social life of Avars
- ▶ **About Avars**
 - ▶ **Nomadic people** who survived in eastern **central Asia** between 6th-9th century.
 - ▶ **Considered as successors of the Huns** by their way of life and warfare.
 - ▶ Followed strict **patrilineal descent** (father's line)
 - ▶ **Hired by the Byzantine Empire** to subdue other tribes
 - ▶ **Avoided inbreeding and practised limited intermarriage** with non-Avar neighbours.
 - ▶ Renowned among archaeologists for their **distinctive belt garnitures.**



8.6. TEST YOUR LEARNING

1. Consider the following:

Assertion (A): Temple Entry Proclamation in 1936, a landmark legal victory granting access to lower-caste individuals into temples.

Reason (R): Periyar launched the Vaikom satyagraha movement in Kerala in 1924.

- (a) Both (A) and (R) are true, and the reason is the correct explanation of the assertion
- (b) Both (A) and (R) are true, but the reason is not the correct explanation of the assertion
- (c) (A) is true, but (R) is false
- (d) Both (A) and (R) are false

2. Consider the following:

1. Ramayana written by Valmiki
2. Panchatantra written by Pt. Vishnu Sharma
3. Sahadayāloka-Locana written by Acharya Anandvardhan

How many of the above has/have been included in the UNESCO Memory of the World (MOW) Asia-Pacific Regional Register?

- (a) only 1
- (b) only 2
- (c) only 3
- (d) None

3. Consider the following pairs:

Statue	Person dedicated to
1. Statue of Valour	Lachit Barphukan
2. Statue of oneness	Sardar Patel
3. Statue of equality	Adi Shankaracharya

How many of the above pairs is/are correctly matched?

- (a) only one
- (b) only two
- (c) All three
- (d) None

4. Consider the following statements:

1. Geological Survey of India (GSI) recognizes, declares and maintains the Geo-heritage sites in India
2. Pandavula Gutta in Andhra Pradesh and Ramgarh Crater in Jharkhand were recognised as Geo-Heritage Sites recently.

Select correct answer from the codes given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

5. Who among the following tribes practice the deda, the traditional method of preserving seeds?

- (a) Lushai
- (b) Soligas
- (c) Murias
- (d) Santhals

Questions

Q1. What are 'monuments of national importance'? Discuss the challenges in protecting historical monuments. Suggest measures to protect them from destruction. (150 Words)

Q2. Discuss the contemporary relevance of the teachings of Mahavir Jain to the modern society. (150 Words)

ESSAY

ENRICHMENT PROGRAMME 2025

19 OCT, 5 PM

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ETHICS



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9.1. HAPPINESS



CONTEXT

UN Sustainable Development Solutions Network (SDSN) in partnership with Gallup, and Oxford Wellbeing Research Centre released World Happiness Report (WHR) 2024. Finland topped the ranking whereas India was ranked 126th out of 143 nations.

ANALYSIS



Happiness: A Multifaceted Pursuit with Far-Reaching Impacts

Happiness is a fundamental human pursuit and plays a crucial role at various levels of human existence.

- ▶ **Individual-Level Benefits of Happiness:** Happiness is closely linked to improved mental health, increased productivity, and stronger, more satisfying relationships.
- ▶ **Social-Level Impacts:** Happiness fosters a sense of belonging and social cohesion, lowering social isolation and crime rates whereas increasing civic engagement.
- ▶ **National-Level Implications:** Happiness is associated with political stability, the adoption of sustainable practices, and economic growth. E.g. integration of Gross National Happiness in planning.
- ▶ **Global Ramifications:** Greater global peace and cooperation, more equitable distribution of resources and reduced deprivation.

How do Ethical Values Cultivate Happiness?

- ▶ **Altruism and Compassion:** They lead to strengthening feelings of meaning, purpose, and overall well-being.
- ▶ **Integrity and Authenticity:** By aligning our actions with our values, can foster self-respect, confidence, and a sense of authenticity. This tends to promote happiness and life satisfaction.
- ▶ **Fairness and Justice and equality:** They help create a more harmonious and stable society by reducing sources of conflict, resentment, and unhappiness.
- ▶ **Self-Regulation and Discipline:** Emotional regulation can help people make healthier choices and manage stress more effectively.
- ▶ **Positive Relationships:** Prioritizing honesty, trust, and respect in relationships tends to foster more meaningful, supportive, and mutually fulfilling connections.

BRIEF BACKGROUND

What is Happiness?

There is no universally accepted definition of happiness, however, Ananda, or pure bliss, is an idea deeply rooted in Indian culture. It represents a profound and transcendent state of happiness, well-being and is considered ultimate goal of human existence.

How does money affect happiness?

- ▶ Money can provide instant gratification but cannot provide sustained fulfilment.

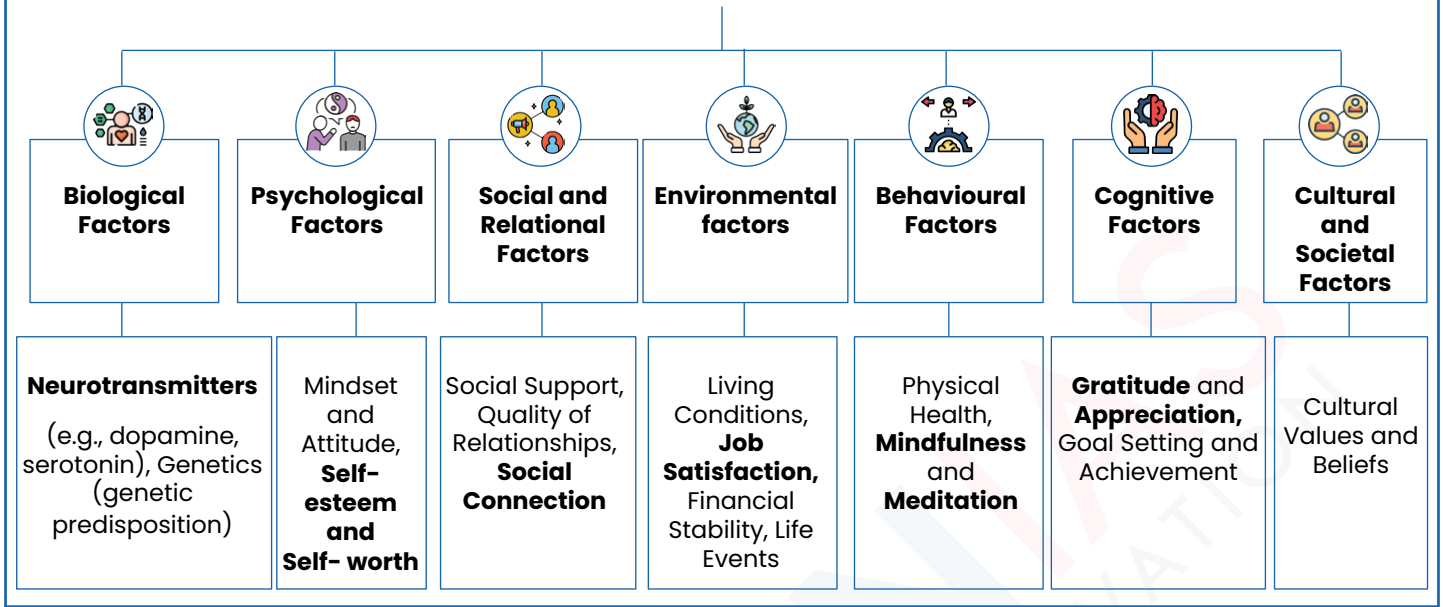
Different philosophical theories explaining happiness

- ▶ **Upanishadic tradition:** Ananda is one of three essential attributes of Brahman, the ultimate reality, along with Sat (existence) and Chith (consciousness), often expressed as "Sat-Chit-Ananda."
- ▶ **Epicureanism (Epicurus):** Happiness was complete absence of bodily and mental pains including desires for anything other than bare necessities of life.
- ▶ **Buddhism:** Happiness is achieved through cessation of desires and practice of mindfulness and compassion (Karuna).
- ▶ **Eudemonism (Aristotle):** Happiness is living virtuous and fulfilling life, actualizing one's potential.

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FACTORS THAT AFFECT HAPPINESS



Current Affairs Quarterly Revision (March to May 2024)

VISIONIAS
DAKSHA MAINS
MENTORING PROGRAM 2025

DAKSHA MAINS MENTORING PROGRAM 2025

(A Strategic Revision, Practice, and Enrichment Mentoring Program for Mains Examination 2025)

DATE	DURATION
11 OCTOBER	4 Months

HIGHLIGHTS OF THE PROGRAMME

- Highly experienced and qualified team of mentors
- Emphasis on score maximization and performance improvement
- Scheduled group sessions for strategy discussions, live practice, and peer interaction
- Personalized one-to-one sessions with mentors
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- Access to Daksha Mains Practice Tests
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9.2. BARE NECESSITIES AND SCARCE RESOURCES



CONTEXT

Recently, SC ordered all states and union territories to issue ration cards to 80 million migrants and unorganized workers under National Food Security Act 2013 which are considered basic necessities. However, sometimes Governments cannot fulfil basic needs in resource-scarce times presenting one of humanity's most fundamental ethical dilemmas.

ANALYSIS



What are Bare Necessities?

- ▶ Bare necessities are the **fundamental requirements** that are **necessary for human survival** and well-being.
- ▶ **Economic Survey 2020-21** introduced Bare Necessities Index (BNI) based on **five dimensions** – **water, sanitation, housing, micro-environment and other facilities.**

Why government is responsible for providing bare necessities?

- ▶ **Social Contract theory:** Citizens restrict certain freedoms in exchange for public services and security provided by the government.
- ▶ **Constitutional mandate:** Constitution of India mandates government to fulfil basic necessities of its citizens. E.g. **Article 39(a), 47 etc. Supreme Court has further increased the scope of fundamental right.** Ex. Right to life has been expanded to include Right to Food, etc.
- ▶ **Expanding Nature of rights:** Laws have evolved with needs of populace to increase threshold of bare necessities. For instance, Right to Education, **Right to Information, etc.**
- ▶ **Public goods:** The government is responsible and capable of providing basic necessities as they are public goods, benefitting society as a whole. E.g. clean water and sanitation.

What are Ethical Approaches for fulfillment of bare necessities by the government?

- ▶ **Justice-based approach:** Ensuring fair distribution of scarce resources equitably, minimizing exploitation.
- ▶ **Utilitarianism:** Prioritize resource allocation based on need and potential impact, aiming to maximize the benefits.
- ▶ **Capability Approach:** Enhancing individuals' capabilities to access education, healthcare & other essential services.
- ▶ **Rights-Based Approach:** Recognizes basic necessities as **fundamental human rights**

Ways to balance between bare necessities and scarce resources

- ▶ **Global public goods:** Global issues e.g. COVID-19 & refugee crises highlight **need for universal access to public goods.**
- ▶ **Prioritization and efficient allocation:** Encourage **sustainable practices** e.g. **Gandhiji's Sarvodaya.**
- ▶ **Principles to define bare necessities:** Principle of provisioning of public goods can be utilized to identify the core set of basic necessities. E.g. **Netherlands**
- ▶ **Technological innovation:** Efficient resource management, optimum utilization of limited resources.
- ▶ **Convergence of Resources:** Collaboration between government, civil societies, corporates and international institutions.

Stakeholders, their interests and associated Ethical Issues

Stakeholder	Role/Interests	Ethical issues.
Individuals and Communities	Survival with good health and well-being.	Inequity and Unjust distribution of resources.
Government	Policymaking, regulating resource allocation.	Lack of transparency and accountability
Civil Society	Providing aid and direct relief, Watchdog on government and corporate actions.	Dependence on external funding Priority to urgent needs
Corporations	Fulfilling corporate social responsibility.	Overexploitation of resources
International Organizations	Promoting Universal human rights	Power dynamics between nations

9.3. RELIGIOUS BELIEFS AND EVOLVING SCIENTIFIC ADVANCEMENTS



CONTEXT

Religious ideas are challenged by new knowledge and scientific advancements. Despite this, religion has an important role in people's lives. This dichotomy begs a question; can religious beliefs coexist harmoniously with scientific progress?

ANALYSIS



Scientific Advancements Challenging Religious Belief

Doubter is a true man of science. Scientific ideas have a transformative impact on long-held beliefs.

- ▶ **Life and death:** The process of life and death, considered to be uncontrollable once are challenged by the advancements in biotechnology. E.g. **Genome editing, three-parent babies.**
- ▶ **Evolution:** The theory of evolution by Charles Darwin (idea of Natural Selection) discredits several **religious beliefs** about the **origins** and development of human life on Earth.
- ▶ **Space: Big Bang theory** negates religious narratives of **formation of the Universe** as an act of God.

Scientific Enquiry: Limitations and Boundaries

- ▶ **Limitations of Empirical Evidence:** Despite leading to several new inventions, empirical evidence has certain limitations. E.g. Elements like **consciousness; afterlife** etc. cannot be empirically studied as they involve **personal experiences and subjective interpretation.**
- ▶ **Lack of focus on Ethics and conduct:** Scientific developments may provide information about the **cause or consequences of certain actions or behaviors**, but they cannot explain associated **moral values or ethical principles.** E.g. scientific development in genetic selection is against ethical aspects.

Way Forward: Reconciling Faith and Reason

- ▶ **Adopting Intellectual Humility:** It involves recognizing that there are gaps in one's knowledge and that one's current beliefs might be incorrect.
- ▶ **Dialogue and Cooperation:** It can be guided by the humanistic principles of inclusivity, respect for diversity, and the preservation of cultural heritage.
 - Scientific community must approach religious beliefs with **cultural sensitivity** and an appreciation for their profound impact on individuals and societies.
 - ◊ E.g. **Aristotle**, despite his contributions to scientific thought, also believed in the existence of an **"Unmoved Mover"** – a concept that aligned with the **notion of a divine creator.**
 - Religious institutions should not dismiss scientific findings outrightly, but **explore opportunities for reinterpreting religious texts and traditions in light of new evidence.**
- ▶ **Developing Critical Minds:** A balanced and nuanced exploration of religious beliefs and scientific advancements through **education.** E.g. developing **critical thinking skills** etc.

BRIEF BACKGROUND

Understanding Religious Belief System

- ▶ **Based on Faith:** Religious belief is shaped by the faith (deep conviction in the transcendent or divine) of the person. Faith **provides meaning, purpose, and a sense of connection** to the sacred.
- ▶ **Collective wisdom:** These beliefs often stem from **ancient texts, oral traditions, and spiritual experiences** that have shaped the **collective consciousness** of civilizations.

9.4. ETHICS OF FOOD SERVICE AND SAFETY



CONTEXT

Presence of **carcinogenic pesticide ethylene oxide** in several spice mixes of MDH and Everest was detected in Hong Kong, Singapore, and Maldives. These instances highlight poor standardization and weakening of Ethics in Food Industry.

ANALYSIS



Key principles of food service ethics

- ▶ **Justice: From a Social justice point of view**, ethics of food safety involves-
 - ▶ **Justice for Food Providers:** Food service workers often face issues like low wages, food insecurity, low standard of living etc.
 - ▶ **Justice for Consumers:** Access, Security and Affordability of safe and nutritious food are important issues that are often ignored.
- ▶ **Autonomy:** In decision-making for producers and distributors (**autonomy in Supply Chains**) and for consumers (**transparency via Labels**).
- ▶ **Non-maleficence:** Prevention of contamination, adulteration, transparent processing to ensure food safety.
- ▶ **Accountability and Transparency:** It involves responsibility for food safety, addressing customer feedback, and communication with stakeholders etc.

Stakeholders, their interests	
Stakeholder	Role/Interests
Consumers	<ul style="list-style-type: none"> ▶ Health and Wellness ▶ Equality, Social justice & fairness
Companies/ Businesses	<ul style="list-style-type: none"> ▶ Customer satisfaction, trust and Loyalty, Social Responsibility and Community Engagement
Government	<ul style="list-style-type: none"> ▶ Public policy & Regulation ▶ Ensuring high quality, nutritious, and safe food.
Society	<ul style="list-style-type: none"> ▶ Ethical food supply chain ▶ Affordability and Accessibility of food
International Organizations	<ul style="list-style-type: none"> ▶ Animal Welfare and Human rights ▶ Global Food Security and Environmental Protection

Ethical Dilemmas Involved in Food Service

- ▶ **Fixing accountability:** Who should take responsibility to **prevent and control foodborne diseases and outbreaks**?
 - ▶ 600 million people fall ill and 420,000 die every year from eating unsafe food. (WHO)
- ▶ **Financial Constraints vs. Food Safety:** How to balance **costs and benefits of food safety measures**, especially for **small-scale producers and processors**.
- ▶ **Protecting genuine stakeholders:** Protecting the **privacy of individuals or businesses** involved in foodborne incidents, without compromising the public interest or accountability.
- ▶ **Universal application of safety standards:** How to ensure that **food services and safety measures are fair and equitable**, not discriminating against certain groups based on socioeconomic status, culture, or geography.

Way forward

- ▶ **Nudging consumers:** By small changes in the environment of decision or "choice architecture" (**e.g. choices at a cafeteria**) to help individuals make beneficial choices. **E.g. Eat Right India Campaign**
- ▶ **Stakeholder's Capitalism:** Including stakeholders' perspectives in ethical decision-making. E.g. environmentalists, consumers etc.
- ▶ **Labelling:** Improved display of **information of contents** on labels for empowering consumers. E.g. **Label Padhega India Campaign**.
- ▶ **Food safety training and education:** Educating food handlers to prevent food contamination.
- ▶ **Triple bottom line (TBL) framework:** Ensures sustainability through **three dimensions of performance: social, environmental, and financial**.

Ensuring ethical standards in **food service and safety** is paramount for the **well-being of consumers, the sustainability of businesses**, and the health of our society. By embracing **transparency, accountability, and stakeholder engagement**, ethical complexities of the food industry can be solved while promoting a healthier and more equitable food system for all.

9.5. POLITICAL ETHICS AND CONFLICT OF INTEREST



CONTEXT

Recently, a Calcutta High Court judge and a senior IPS officer in West Bengal resigned from their posts and joined political parties. This has raised questions of propriety about independent functioning of constitutional authorities and bureaucracy and the conflict of interest in their duties.

ANALYSIS



Ethical implications of judges and bureaucrats joining politics

While there is **no constitutional bar** on politicians and bureaucrats joining politics, critics argue that they **jeopardize essential principles of judicial independence, bureaucratic neutrality, and public trust** in these institutions.

- ▶ **Separation of powers:** Legislative, executive and judicial branches of government are kept distinct for keeping **checks and balances**.
- ▶ **Conflict of interest:** Political aspirations may compromise autonomy and independence of a bureaucrat/judge while performing their official duties.
- ▶ **Judicial Impartiality:** Post-retirement affiliation with a political party **creates a strong perception of bias, harming credibility regardless of the judge's actual intentions**.
- ▶ **Bureaucratic neutrality:** Political affiliations of public servants can lead to **politicization of public services and distortions in implementation of policies**.
- ▶ **Erosion of public trust:** due to a perception of compromised fairness and impartiality.

Way Forward

- ▶ **Cooling-off Period:** It is suggested that there should be **at least two years cooling period** between retirement and joining politics/other appointments.
- ▶ **Code of Ethics for bureaucrats:** As recommended by the Second Administrative Reforms Commission (ARC - II), which would provide broad guiding principles of good behaviour and governance.
- ▶ **Resolving conflict of interest:** Public officials and judges should ensure resolution of any conflict of interest through **recusal, divestiture, and disclosure**. E.g. Judge's withdrawal from a case.
 - ▶ Following principles like – **nemo judex in causa sua** (no person shall be a judge in his own case.) and '**justice must not only be done but must also be seen to be done**'.
- ▶ **Adopting global best practices:** Netherlands regulates conflict of interest through **codes of conduct or codes of standards** while France regulates it through **mix of laws and codes**.

Stakeholders, their interests		
Stakeholder	Role/Interests	Ethical issues.
Judges/ Bureaucrats	Individual rights, pursuit of political aspirations, desire for public service, etc.	Maintaining impartiality, avoiding conflicts of interest, upholding integrity
Political Parties	Gaining experienced individuals, enhancing credibility by leveraging public image of judge.	Ensuring no undue favoritism, trust in public institutions, upholding democratic principles, etc.
Citizens	Impartial justice system, efficient and politically neutral bureaucracy etc.	Bias/favoritism in implementation of rule of law, erosion of trust in institutions
Government	Implementation of policies, ensuring credibility of institutions, having independent policy making capability, etc.	Preventing conflicts of interest, ensuring fair and impartial adjudication, separation of powers, etc.
Civil Society	Safeguarding public interest, promoting transparency and accountability in governance, etc.	Ensuring ethical conduct among public officials, raising awareness about conflict of interests

Arguments for cooling-off period	Arguments against cooling-off period
Promoting Public Trust, Protecting Institutional Integrity and Upholding Ethical Standards of impartiality	No Constitutional bar, Against democratic value of contesting elections and "Fear or Favor" Considerations

9.6. ETHICAL USE OF SOCIAL MEDIA PLATFORMS



CONTEXT

Recently, violations of Model Code of Conduct concerning use of social media in election campaigning has raised questions about lack of well-defined social media ethics in the context of the fast-evolving nature of social media.

ANALYSIS



Ethical debates concerning Social Media

- ▶ **Individuals v/s Social media platforms:**
 - ▶ **Privacy:** Lack of informed consent for usage, storage and sharing of personal data. E.g. **doxxing** of journalists.
 - ▶ **Discrimination:** Not ensuring **equitable and fair access** to minorities' voices. E.g. Social media campaigns for **anti-immigration sentiments**
 - ▶ **Fake news:** There is a **lack of proper verification** process and accountability due to the feature of anonymity.
- ▶ **Society v/s social media platforms**
 - ▶ **Polarization:** Social media creates **informational silos** for like-minded individuals.
 - ▶ **Blurring of Public and Private Sphere:** Due to intrusion of virtual sphere into real social sphere. E.g. Use of mobile phones during family dinners.
- ▶ **Regulatory ecosystem v/s Social media platforms:**
 - ▶ **National Interest v/s individual freedom:** Regulatory bodies favor content moderation for **protecting national security and dignity**, whereas the platforms consider it against the **freedom of speech** of the users.
 - ▶ **Transparency and accountability:** It is **difficult to fix or trace accountability** for content on platforms. E.g., Whatsapp's end-to-end encryption

Stakeholders and their Interests	
Stakeholder	Role/Interests
Users/ Customers/ Citizens	Access to quality digital services
Social Media Intermediaries/ Platforms	Quality Service Delivery, Profitability and financial growth
Political Parties	Increasing the reach towards the target voter base, electioneering
Government/ Regulatory ecosystem	Ensuring a level-playing field, Protecting rights of its citizens
International Organizations	Global consensus on ethical use of social media platforms

What are the principles for an ethical social media?

- ▶ **Due diligence:** E.g. PIB fact-check, **Confidentiality:** E.g. An informed consent for sensitive personal data.
- ▶ **Empathy, tolerance and Self-accountability** to uphold values like **fairness, equity, justice and non-neutrality**
- ▶ **Critical thinking:** It aids in negating passive **suppression of divergent views** on matters of important political or civic concern.

Way forward: Ideal conduct of stakeholders

- ▶ **Legal/ Regulatory ecosystem:** Need for a **facilitative methodology** for upholding social media ethics
- ▶ **Social media platforms:**
 - ▶ Need to balance **need to protect users and maintain community standards (public interest) while respecting users' freedom of speech and expression** to preserve their trust and loyalty.
 - ▶ Following **government guidelines for data storage and sharing** in aspects like sovereignty and integrity of India.
- ▶ **Political Parties:** Need to **follow guidelines and laws** concerning use of social media during elections **diligently**. Every political party should have an **internal Code of Ethics** and a **self-regulating mechanism** to ensure responsible conduct.
- ▶ **Society:** It is **collective responsibility** to hold social media platforms **accountable** in line with ethical principles.
- ▶ **Individuals:** Use social media responsibly and be **aware of the risks and ethical considerations** involved.

Conclusion

Organizations like Apple with its **iOS 14.5** have initiated giving more power to the users in terms of **opt-in for ad tracking**. X's (Twitter) **Civic Integrity Policy** is also a step in the right direction. By using social media thoughtfully and responsibly, we can all help to create a safer and more positive online environment.

9.7. ETHICS AND ENTREPRENEURSHIP



CONTEXT

Recently, a member of jury in 10th edition of 40 Under Forty highlighted that certain young entrepreneurs not only demonstrated professional & business acumen but also believed in giving back to society.

ANALYSIS



Ethical Issues faced by Entrepreneurs

- ▶ **Conflict of Interest:** Between maintaining profitability of company and social impact. E.g. Decline of Byju's due to poor financial decisions
- ▶ **Environment Responsibility:** environment responsibility is still not a considered as a key priority. E.g. In 2019, Reliance Industries was fined for ecological loss.
- ▶ **Adopting Wrong means:** E.g. Satyam Scam 2009 (accounting fraud)
- ▶ **Work Culture:** In order to complete task on time, many times, management pushes employees to work extra, creating dissatisfaction.

Ways to Integrate Ethical Principles into Entrepreneurship

- ▶ **Balancing Profit and purpose:** Social entrepreneurship is good example of this approach. E.g. eHealthPoint venture provides primary health consultations to rural or remote communities.
- ▶ **Stakeholder Engagement:** Entrepreneurs should encourage employees & customers to speak up about any ethical concerns or violations they observe. E.g. TATA Steel developed a robust stakeholder engagement process.
- ▶ **Ethical sourcing of raw materials:** It will help in curtailing exploitative and unfair trade practices at input stage. E.g. Ben & Jerry's renowned ice-cream manufacturer has a long-standing commitment to ethically source ingredients.
- ▶ **Formulating Code of Ethics/Conduct:** An ethical code outlines a set of principles and standards that guide ethical behaviour within an organization. E.g. Raymond adopted Code of Conduct and Ethics.

Stakeholders, their interests	
Stakeholder	Role/Interests
Entrepreneurs	Establishing successful business model, Cooperation from employees
Customer	Product & services at reasonable cost. eco-friendliness of products
Government/Regulatory Authorities	Creating positive environment for entrepreneurs Entrepreneurs should comply with law of land.
Employees	Good work culture
Business Partners/Dealers	Deals/agreement signed by entrepreneurs, needs to be implemented by them in letter and spirit .
Investors	High return from investments.
Community/NGO	Priority to social and environment responsibility along with profitability.

Key Guiding Principles for Ethical Entrepreneurship

Utilitarianism Ethics	▶ Advocates actions that foster happiness or pleasure and oppose actions that cause unhappiness or harm.
Deontology Ethics	▶ Immanuel Kant's Deontology ethics says that rational humans must scrupulously uphold their moral obligations , regardless of the result.
Virtue Ethics	▶ Emphasises that practicing qualities like honesty, courage, justice, charity, etc., one grows into an acceptable and righteous life.
Stakeholder Theory	▶ Theory argues that a firm should create value for all stakeholders, not just shareholders.

Conclusion

In the recent time, the trend of entrepreneurship has gained momentum in India. By this approach, they will able to maintain balance between their profitability and social impact. In the initial phase, it will increase cost of compliance, e-alignment of business processes etc. but in the long time it will ensure sustainable development.

9.8. COMPASSIONATE CAPITALISM



CONTEXT

Recently, Narayana Murthy raised concerns about large gap in income between top executives and lower-level employees in Indian companies and called for practicing compassionate capitalism to solve this issue. A report by Wealth inequality lab found that in India, top 1% of income earners received 22.6% of national income in 2022-23.

ANALYSIS



Moral Thinkers on Compassionate Capitalism

- ▶ **Buddhism's Pratityasamutpada (Dependent Origination):** This view holds that people are interdependent with each other and the Earth.
- ▶ **Categorical Imperative:** Kant emphasized treating every person as an end in themselves, not merely as means.
- ▶ **Gandhian Thought:** E.g. Gandhi ji's simple living, uplifting all (sarvodaya), and trusteeship.
- ▶ **Amartya Sen's Capability Approach:** Evaluates individual well-being based on people's capabilities and freedoms, not just monetary metrics.

Associated Ethical dilemma

- ▶ **Employee Welfare vs. Profit Maximization:** Ensuring fair wages and good working conditions may increase operational costs, potentially reducing profits.
- ▶ **Consumer Interests vs. Profit-Driven Products:** Producing higher-quality, safer products may result in higher costs, impacting profit margins.
- ▶ **Environmental Responsibility vs. Cost Efficiency:** Businesses might struggle to balance eco-friendly initiatives with maintaining competitive pricing.
- ▶ **Community Engagement vs. Shareholder Returns:** Investing in community projects and social causes can enhance a company's social responsibility image but might not provide immediate financial returns to shareholders.

KEY INFORMATION

About Compassionate Capitalism

- ▶ Compassionate capitalism aims to blend capitalist opportunity with principles of equitable wealth distribution from socialist thought.
- ▶ Compassionate capitalism merges Adam Smith's economic individualism with the socialist paradigms (equitable wealth distribution) of Karl Marx.

Capitalism and Compassionate Capitalism

Principles	Capitalism	Compassionate Capitalism
Wealth	Concentration of Wealth	Redistribution of Wealth
Profit	Profit to the Business	Profit to all Stakeholders
Resource	Exploitation of Resources	Sustainable use of Resources
Social Responsibility	No accountability towards society	Accountability to society for their decisions and actions.

Stakeholders and Compassionate Capitalism Practices

Stakeholders	Practices
Workers	<ul style="list-style-type: none"> ▶ Open and Flexible work cultures that values collaboration, innovation, and creativity. ▶ Equal opportunity to growth: e.g. Infosys' Employee Stock Ownership Plan (ESOP) democratizes wealth by granting company stock to employees.
Environment	<ul style="list-style-type: none"> ▶ Accounting environmental and ecological damages within the cost of doing business. ▶ Reducing pollution, adopting circular economic model and Minimizing consumerism:
Society	<ul style="list-style-type: none"> ▶ Corporate Social Responsibility (CSR): Statutory obligation under Companies Act, 2013. ▶ Redistribution of wealth generated from Development: For example, Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) that ensures development to mining affected areas.

Way Forward

True purpose of business is to uplift experience of existing. As tradition Capitalism does not appear to be helpful in meeting this cherished objective, there is need for moving towards Compassionate Capitalism. Idea has been in renewed focus but its seeds exist in our Constitution as well-Article 38 and Article 39 (c). These articles guide State to minimize the inequality of Income and concentration of wealth.

9.9. ETHICS OF PUNISHMENT



CONTEXT

Recently, a devastating accident took place in Pune where a luxury car being driven by a teenager, who belongs to an influential family, claimed the lives of two individuals. The Juvenile Justice Board in this case granted bail to the teenager and imposed a relatively lenient penalty. This raises ethical concerns associated with disparity in punishments.

ANALYSIS



Philosophies of Punishment and Ethical Dilemmas

- ▶ **Deterrence:** It suggests that threat of punishment discourages crime.
 - **Associated Dilemma:** Harsh punishments, potentially overshadowing rehabilitation, and restorative justice.
- ▶ **Incapacitation:** Focuses on **restricting offender** from society to prevent future crimes.
 - **E.g. Modern prison, capital punishment.**
 - **Associated Dilemma:** Concerns about **human rights, potential for abuse, etc.**
- ▶ **Retribution:** Aim of punishment is to right the wrong rather than to control crime and **nature of punishment is based on severity of offence.**
 - **Associated Dilemma:** Criticized as being **overly rigid, disproportionate and limited in its capacity** to change societal behavior.
- ▶ **Restoration:** Punishment aims to **restore harm caused to victim and community** by offender.
 - **Associated Dilemma:** Often be seen in **conflict with victim's perception of justice.**
- ▶ **Rehabilitation:** Helping individuals who have committed crimes change their behavior through interventions, treatment, therapy, education, and training in order to help them reenter society.
 - **Associate dilemma:** National fiscal restraints, public demand for harsher sentences etc.

Stakeholders and their Interests	
Stakeholders	Role/Interests
Victim	Expects fairness in trial, seeks justice, reassure security etc.
Offender	Fair treatment, Expect proportionality of punishment, reform his/her conduct etc.
Society	Reduction in crime, public safety, upholding social moral values, and dignified living.
Government	Maintaining law and order, Fairness in legal procedures etc.
Judiciary	Fair and impartial punishment, Restoring balance in the society and promote moral good.

Ethical issues in Indian Punishment System

- ▶ **Bias:** Biased against poor and marginalized, who are often unable to afford legal representation.
 - **NCRB data on Prison Statistics India 2022** reveals that the total number of undertrial prisoners from SC and ST communities is relatively higher.
- ▶ **Corruption:** This results in situation where justice is often delayed or denied.
- ▶ **Non-accountability:** India's culture of reconciliation can sometimes lead to a **reluctance to punish offenders**, where offenders are not held accountable.
- ▶ **Disparity in sentencing:** Sentencing has become judge-centric, resulting in disparities in sentencing for same crime.
- ▶ **Capital punishment:** Ethical dilemmas revolve around right to life, empathy, conscience, moral values etc.
- ▶ **Custodial torture:** Undermine principle of "innocent until proven guilty" and **violates accused's right to fair trial.**

Way Forward

- ▶ **Clear Sentencing Policy:** SC has noted that judge can **never have unrestrictive and unbridled discretion**, based upon his conscience formed through his understanding of society, without any guidelines in awarding a sentence.
- ▶ **Justified punishment:** Showing that benefits of such punishment outweigh its costs.
- ▶ **Rationalize punishments:** Revision of laws ensuring they are proportionate.
- ▶ **Rehabilitation approach:** It can be useful in restoring the balance between retribution and restoration of offenders.

9.10. TEST YOUR LEARNING

Questions

1. All human beings aspire for happiness. Do you agree? What does happiness mean to you? Explain with examples. (150 Words) (2014, GS IV)
2. Religion and science are not antithetical to each other. To what extent is this true? Critically analyse the relationship between religion and science in this context. (150 words)

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- ▶ Continuous Assessment: Daily assignment & weekly Mini Tests
- ▶ Access to Live as well as Recorded classes on your personal online Student Platform
- ▶ Includes Comprehensive, relevant and updated Study material
- ▶ Includes Personality Development Programme
- ▶ Duration: 12 months and 15 months (With Pre Foundation Program)
- ▶ Duration of each class: 3-4 hrs, 5-6 days a week (If need arises, classes can be held on Sundays also)



Live - online / Offline Classes

DELHI: 18 OCT, 5 PM

GTB Nagar Metro (Mukherjee Nagar): 12 NOV, 6 PM

BENGALURU: 5 DEC

JAIPUR: 16 DEC

HYDERABAD: 16 OCT

JODHPUR: 3 OCT

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*: Pre-foundation classes are designed to provide a strong foundation in core UPSC CSE subjects, utilizing NCERTs and basic textbooks. They serve as the initial step in the comprehensive preparation journey for the UPSC Civil Services Examination by providing conceptual clarity in core GS subjects such as History, Polity, Geography, Economy, and Environment. Further, Pre-Foundation Classes act as a transition platform toward the VisionIAS Regular Foundation Course Program, 2025.

ANSWER KEY

Polity

1	2	3	4	5
Answer: C	Answer: B	Answer: C	Answer: B	Answer: C

International Relations

1	2	3	4	5
Answer: D	Answer: D	Answer: A	Answer: C	Answer: A

Economy

1	2	3	4	5
Answer: B	Answer: D	Answer: C	Answer: A	Answer: D

Security

1	2	3	4	5
Answer: C	Answer: C	Answer: A	Answer: D	Answer: A

Environment

1	2	3	4	5
Answer: D	Answer: A	Answer: A	Answer: B	Answer: D

Social Issue

1	2	3	4	5
Answer: B	Answer: A	Answer: D	Answer: C	Answer: D

Science and Technology

1	2	3	4	5
Answer: C	Answer: B	Answer: C	Answer: D	Answer: A

Culture

1	2	3	4	5
Answer: C	Answer: B	Answer: A	Answer: A	Answer: C

LIVE / ONLINE

Classes also Available

Foundation Course GENERAL STUDIES

**PRELIMS CUM MAINS
2026, 2027 & 2028**

18 OCTOBER | 5 PM

 GTB Nagar Metro	12 NOVEMBER, 6 PM	
AHMEDABAD ADMISSION OPEN	BENGALURU 5 DECEMBER	BHOPAL ADMISSION OPEN
CHANDIGARH ADMISSION OPEN	HYDERABAD 16 OCTOBER	JAIPUR 16 DECEMBER
JODHPUR 3 OCTOBER	LUCKNOW 5 DECEMBER	PUNE ADMISSION OPEN

- ▶ Includes comprehensive coverage of all topics for all the four papers of GS Mains, GS Prelims, CSAT and Essay
- ▶ Access to Live as well as Recorded classes on your personal online Student Platform
- ▶ Includes Personality Development Programme
- ▶ Duration for 2026 Program: Approx 15 months
- ▶ Duration of each class: 3-4 hrs, 5-6 days a week (If need arises, classes can be held on Sundays also)

NOTE-Students can watch LIVE video classes of our COURSE on their ONLINE PLATFORM at their homes. The students can ask their doubts and subject queries during the class through LIVE Chat Option. They can also note down their doubts & questions and convey to our classroom mentor at Delhi center and we will respond to the queries through phone/mall.

Continuous Individual Assessment

Students are provided personalized, specific & concrete feedback and attention through regular tutorials, mini tests and All India Test Series

Read by All, Recommended by All

Relevant & up-to-date study material in the form of magazines compiled by a dedicated team of experts

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Receive one-to-one guidance on a regular basis to resolve your queries & stay motivated

All India Test Series

Opted by every 2 out of 3 selected candidates. The VisionIAS Post Test Analysis provides corrective measures and also continuous performance improvement

Never Miss a Class

Technological support to access recorded classes, resources, track your Absolute & Relative performance through your own student portal

Preparation Uninterrupted

Organize all your lectures and study material effectively & access them from anywhere, anytime

Heartiest Congratulations

to all Successful Candidates



1
AIR

Aditya Srivastava

16

in **TOP 20** Selections in **CSE 2023**

from various programs of **Vision IAS**



2
AIR

**Animesh
Pradhan**



5
AIR

Ruhani



6
AIR

**Srishti
Dabas**



7
AIR

Anmol



9
AIR

Nausheen



10
AIR

**Aishwaryam
Prajapati**

39
Selections

in **TOP 50**

in **CSE 2022**



1
AIR

**Ishita
Kishore**



2
AIR

**Garima
Lohia**



3
AIR

**Uma
Harathi N**

1
AIR



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Mukherjee Nagar, Opposite Punjab
& Sindh Bank, Mukherjee Nagar

GTB NAGAR CENTER

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above Gate No. 2, GTB Nagar
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